Central Washington University

2015-16

ACADEMIC YEAR UNDERGRADUATE CATALOG

Welcome to Central Washington University

Greetings,

I'm delighted to welcome you to the 2015-2016 school year. It is my pleasure to extend warm greetings to each new and returning student.

At CWU, you will benefit from personal attention in small classes by professors who value teaching as their highest priority. Because of our commitment to hands-on learning, you'll find that here, education is relevant, exciting, and inspiring.

Be assured, your success as a student is the focus and measure of everything we do. We work hard to provide you with diverse, personalized, and distinctive opportunities for learning. And, when your studies are done, for grand recreational adventures in skiing, hiking, biking or river rafting.

Join a club, lead in student government, volunteer in the community, or become a core member of a research team. If you do, you'll learn that CWU can enrich your educational experience beyond what you had imagined.

Central Washington University is located in the heart of Washington with glorious views of the Cascades. Our more than 10,000 students on campus in historic Ellensburg are joined by those at satellite campuses throughout the state. We welcome our online "Finish Line" students as well. Did you know that CWU provides more online degree programs than any other university in Washington?

During your time here, don't miss the performances, exhibitions, sporting events, and other activities on campus. I hope you will also explore the mountains, rivers, and historic communities in the Kittitas Valley. Here, you'll find a learning environment with a strong foundation in the principles of respect, support and encouragement. We believe that's essential to achieving individual excellence.

I look forward to meeting you. Please introduce yourself when you see me around campus at an event-or even in the grocery store!

Welcome to CWU. I am glad you have chosen this remarkable place.

Sincerely,

James L. Gaudino
President

Catalog Guidelines

The university catalog is prepared by Registrar Services and the Public Affairs teams.

This catalog and its contents shall not constitute a contract between Central Washington University and prospective or enrolled students.

The information contained in this catalog reflects the current policies and regulations of the university. However, the university reserves the right to make changes in its policies and regulations at any time. Accordingly, if policies or regulations of the university at any time conflict with information contained in the catalog, the policies and regulations will govern, unless expressly determined otherwise by the CWU Board of Trustees.

A file containing documents describing the university's accreditation and approval by accrediting agencies is maintained in the Office of the Provost and Associate Provost and may be viewed by any current or prospective student upon request.

Central Washington University is an AA/EEO/Title IX Institution.

Central Washington University's policies and practices affirm and actively promote the rights of all individuals to equal opportunity in education and employment without regard to their race, color, religion, creed, national origin, sex, sexual orientation, gender identity and gender expression, age, marital status, disability, genetic information, or status as protected veterans. CWU complies with all applicable federal, state, and local laws, regulations, and executive orders. Address inquires to the Administrator, Equal Opportunity and Professional Development and Title IX Coordinator, Bouillon 205, Ellensburg, WA 98926-7425, 509-963-2206; farmer@cwu.edu, www.cwu.edu/hr/equal-opportunity. Persons with disabilities may request reasonable accommodation by contacting Human Resources: 509-963-1202; DS@cwu.edu, www.cwu.edu/disability-support.

Registrar Services
Mitchell Hall
Central Washington University
400 East University Way
Ellensburg, Washington 98926-7465
509-963-3001

www.cwu.edu/registrar

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Information Directory

ONLINE ELECTRONIC CATALOG
www.cwu.edu/registrar/catalogs
The Online Electronic Catalog (OEC) is the university's official compilation for all curriculum. The OEC serves as the basis for major, minor, and program requirements for the academic year. For current policy and curriculum requirements, refer to the CWU online catalog.

This catalog provides a general guideline of courses offered by the university. The classes and programs described herein are implemented at the sole discretion of the college and are subject to change at any time without notice. Information contained on classes and programs are illustrative only and are not intended to create any contractual obligation or covenant with the university.

LIMITATION OF LIABILITY
The University's total liability for claims arising from a contractual relationship with the student in any way related to classes or programs shall be limited to the tuition and expenses paid by the student to the University Classes or programs. In no event shall the university be liable for any special, indirect, incidental, or consequential damages, including but not limited to, loss of earnings or profits.

INFORMATION DIRECTORY

Academic Advising: Business, University Centers, Online, and Transfer Outreach, Hertz 205	(509) 963-3523
Academic Advising: Arts, Humanities, Sciences, Education, and Professional Studies, Bouillon 205	963-3423
Academic Advising: Exploratory Advising (for undecided students), and STAR, Hertz 107	963-2722
Associated Students (ASCWU), Student Union and Recreation Center, 2nd Floor, room 236	963-1693
Career Services, Bouillon Hall, room 206	963-1921
Cashiers Office, Barge Hall, room 104	963-2224
Central Switchboard	963-1111
Conference and Catering Services, Munson Hall, Vantage room	963-1141
Continuing Education Office, Barge Hall, room 204	963-1504
Disability Services, Bouillon Hall, room 140	963-1202
Financial Aid, Barge Hall, room 115	963-1611
Graduate Studies and Research, Barge Hall, room 214	963-3101
International Studies and Programs, International Center	963-3612
James E. Brooks Library	963-1021
Office of Admissions, Mitchell Hall, first floor	963-1211
President's Office, Barge Hall, room 314	963-2111
Provost, Barge Hall, room 302	963-1400
Registrar Services, Mitchell Hall, first floor	963-3001
Student Employment	
• I-9 and W'4, Bouillon Hall, room 140	963-1202
• Regular Student Employment (non-work study), Bouillon Hall, room 140	963-1202
• Work Study, Barge Hall, room 115	963-3546
Student Financial Services, Barge Hall, room 104	963-3546
Student Counseling Clinic, corner of 11th and Poplar, near Meisner Hall	963-1391
Student Medical Clinic, corner of 11th and Poplar, near Meisner Hall	963-1881
Student Success, Bouillon Hall, room 204	963-1515
Transcript Line	963-1227
University Housing and New Student Programs, Button, 2nd Floor	963-1831
University Parking Services, Public Safety Building, 1211 N. D Street	963-2667
University Police Services, Public Safety Building, 1211 N. D Street	963-2959
Veterans Center, Bouillon Hall, room 206	963-3028

AVAILABILITY OF SAFETY AWARENESS INFORMATION
University Police and Parking Services is responsible for reporting crime statistics in compliance with the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act. Central's annual security report is available at www.cwu.edu/police. It contains information regarding crime prevention programs, the law enforcement authority of the University police, policies concerning the reporting of crime, crime statistics for the most recent three-year period and other information about security that is required by law. A paper copy of the information is also available upon request by writing to: Central Washington University, University Police and Parking Services, 400 East University Way, Ellensburg, WA 98926-7527.

Quarterly Calendars

FALL 2015 UNIVERSITY ACADEMIC CALENDAR

All deadlines are due by the close of business on that date. Information in this handbook may be subject to change.
If you have any questions, contact Registrar Services at 509-963-3001.

REGISTRATION AND CLASSES

April 27	Registration Assignment	Log into MyCWU to view enrollment appointment for web registration
April 27	Schedule Goes Live	View in MyCWU
April 27	Advising Begins	FALL 2015 advising
May 11-June 19	Registration	For continuing students (*During the assigned enrollment appointment)*
August 1	OPEN ENROLLMENT	Students may add/drop classes until change of schedule period ends.
September 9	Leave of Absence	Students not attending FALL quarter must submit request
September 17	**Faculty Development Day**	**Before classes start**
September 23	**CLASSES BEGIN**	**First day of classes for FALL**
September 29	Change of Schedule Period Ends	Add/Drop classes-*Drops completed prior to this date or by the close of business on this date will not appear on transcripts or have tuition assessed.*
September 29	TUITION AND FEES DUE	Check with the Cashiers Office or view your statement online for amount due. Student has 100 percent tuition liability if classes are not dropped by this date.
September 29	Audit and Credit/No Credit	Deadline to declare audit and credit/no credit
Sept 29-Oct 5 until midnight	CWU Payment Plan - Open Enrollment Period	Students may split their quarter charges in three easy payments instead of one. A $50 enrollment fee applies.
Sept 30-Oct 6	$25 Late Registration Fee	Instructor signature required to enroll
October 6	$50 Fee - Unpaid Tuition and Fees	A $50 late fee will be assessed on unpaid tuition-and-course-fee balances. Student has 100 percent tuition liability.
Oct. 7-Nov. 3	$50 Late Registration Fee	Instructor, Department Chair, and Dean signatures required to enroll
October 22	$100 Fee-Unpaid Tuition and Fees	A $100 late fee will be assessed on unpaid tuition-and-course-fee balances. Student has 100 percent tuition liability.
Nov. 4-Dec. 11	$75 Late Registration Fee	Instructor, Department Chair, and Dean signatures required
Nov. 9-Dec. 4	Registration for WINTER	See Winter 2016 calendar
November 11	Veterans Day	No classes/administrative offices closed
November 25-27	Thanksgiving Recess	No classes/administrative offices open November 25 No classes/administrative offices closed November 26-27
December 4	Course Challenge Form Deadline	Deadline to submit course challenge forms to Registrar Services
December 4	Classes End	Last day of class instruction
December 7-10	**FINAL EXAMS**	**See exam schedule**
December 10	End of Quarter	End of Quarter
December 15	Grades Due	10:00 p.m. deadline for instructors to submit grades via MyCWU
53	Instructional Days per Quarter	Includes final exams and study days

WITHDRAWAL DEADLINES

Oct. 22	Deadline for 50 percent refund with complete withdrawal
Nov. 6	Uncontested withdrawal period deadline
Dec. 4	Hardship withdrawal petition deadline
Dec. 4	Complete university withdrawal

GRADUATION DEADLINES

July 2	Deadline to apply for baccalaureate degree for FALL 2015
Sept. 23-29	Master's degree final folder check for FALL needs to be requested during first week of classes
Oct. 2	Deadline to apply for baccalaureate degree for WINTER
Nov. 27	Complete all master's degree requirements for FALL graduation

WINTER 2016 UNIVERSITY ACADEMIC CALENDAR

All deadlines are due by the close of business on that date. Information in this handbook may be subject to change.
If you have any questions, contact Registrar Services at 509-963-3001.

REGISTRATION AND CLASSES

October 26	Registration Assignment	Log into MyCWU to view enrollment appointment for web registration
October 26	Schedule Goes Live	View in MyCWU
October 26	Advising Begins	WINTER advising
Nov. 9- Dec. 4	Registration	For continuing students (*During the assigned enrollment appointment)*
December 14	OPEN ENROLLMENT	Students may add/drop classes until change of schedule period ends.
December 23	Leave of Absence	Students not attending WINTER quarter must submit request
January 5	**CLASSES BEGIN**	**First day of classes for WINTER**
January 11	Change of Schedule Period Ends	Add/Drop classes-*Drops completed prior to this date or by the close of business on this date will not appear on transcripts or have tuition assessed.*
January 11	TUITION AND FEES DUE	Check with the Cashiers Office or view your statement online for amount due. Student has 100 percent tuition liability if classes are not dropped by this date.
January 11	Audit and Credit/No Credit	Deadline to declare audit and credit/no credit
Jan. 11-Jan. 15 until midnight	CWU Payment Plan - Open Enrollment Period	Students may split their quarter charges in three easy payments instead of one. A $50 enrollment fee applies.
January 12-19	$25 Late Registration Fee	Instructor signature required to enroll
January 18	Martin Luther King Jr. Holiday	No classes/administrative offices closed
January 19	$50 Fee - Unpaid Tuition and Fees	A $50 late fee will be assessed on unpaid tuition-and-course-fee balances. Student has 100 percent tuition liability.
Jan. 20-Feb. 17	$50 Late Registration Fee	Instructor, Department Chair, and Dean signatures required
February 3	$100 Fee -Unpaid Tuition and Fees	A $100 late fee will be assessed on unpaid tuition-and-course-fee balances. Student has 100 percent tuition liability.
February 15	President's Day	No classes/administrative offices closed
Feb. 16-Mar. 11	Registration for SPRING	See SPRING 2016 Calendar
Feb. 18-Mar. 11	$75 Late Registration Fee	Instructor, Department Chair, and Dean signatures required
March 11	Course Challenge Form Deadline	Deadline to submit course challenge forms to Registrar Services
March 11	Classes End	Last day of class instruction
March 14-17	**FINAL EXAMS**	**See exam schedule**
March 17	End of Quarter	End of Quarter
March 22	Grades Due	10:00 p.m. deadline for instructors to submit grades via MyCWU
51	Instructional Days per Quarter	Includes final exams and study days

WITHDRAWAL DEADLINES

Feb. 3	Deadline for 50 percent refund with complete withdrawal
Feb. 19	Uncontested withdrawal period deadline
March 11	Hardship withdrawal petition deadline
March 11	Complete university withdrawal

GRADUATION DEADLINES

Oct. 2	Deadline to apply for baccalaureate degree for WINTER
Jan. 5-11	Master's degree final folder check for WINTER needs to be requested during first week of classes
Jan. 15	Deadline to apply for baccalaureate degree for SPRING
March 11	Complete all master's degree requirements for WINTER graduation

SPRING 2016 UNIVERSITY ACADEMIC CALENDAR

All deadlines are due by the close of business on that date. Information in this handbook may be subject to change.
If you have any questions, contact Registrar Services at 509-963-3001.

REGISTRATION AND CLASSES

February 1	Registration Assignment	Log into MyCWU to view enrollment appointment for web registration
February 1	Schedule Goes Live	View in MyCWU
February 1	Advising Begins	SPRING advising
Feb. 16-March 11	Registration	For continuing students (*During the assigned enrollment appointment)*
March 15	Leave of Absence	Students not attending SPRING quarter must submit request
March 21	OPEN ENROLLMENT	Students may add/drop classes until change of schedule period ends.
March 29	**CLASSES BEGIN**	**First day of classes for SPRING**
April 4	Change of Schedule Period Ends	Add/Drop classes-*Drops completed prior to this date or by the close of business on this date will not appear on transcripts or have tuition assessed.*
April 4	TUITION AND FEES DUE	Check with the Cashiers Office or view your statement online for amount due. Student has 100 percent tuition liability if classes are not dropped by this date.
April 4	Audit and Credit/No Credit	Deadline to declare audit and credit/no credit
April 4-8 until midnight	CWU Payment Plan - Open Enrollment Period	Students may split their quarter charges in three easy payments instead of one. A $50 enrollment fee applies.
April 5-11	$25 Late Registration Fee	Instructor signature required to enroll
April 11	$50 Fee - Unpaid Tuition and Fees	A $50 late fee will be assessed on unpaid tuition and course fee balances. Student has 100 percent tuition liability.
April 12-May 9	$50 Late Registration Fee	Instructor, Department Chair, and Dean signatures required
April 27	$100 Fee -Unpaid Tuition and Fees	A $100 late fee will be assessed on unpaid tuition and course fee balances. Student has 100 percent tuition liability.
May 2-June 22	Registration for SUMMER	See SUMMER Calendar
May 9- June 17	Registration for FALL	See FALL 2016 Calendar
May 10-June 10	$75 Late Registration Fee	Instructor, Department Chair, and Dean signatures required
May 18-19	Source Days	Instructional days - Research projects
May 30	Memorial Day	No classes/administrative offices closed
June 3	Course Challenge Form Deadline	Deadline to submit course challenge forms to Registrar Services
June 3	Classes End	Last day of class instruction
June 6-9	**FINAL EXAMS**	**See exam schedule**
June 9	End of Quarter	End of Quarter
June 11	COMMENCEMENT	Commencement Ceremonies - Ellensburg
June 12	COMMENCEMENT	Commencement Ceremonies - Kent
June 14	Grades Due	10:00 p.m. deadline for instructors to submit grades via MyCWU
52	Instructional Days per Quarter	Includes final exams and study days

WITHDRAWAL DEADLINES

April 27	Deadline for 50 percent refund with complete withdrawal
May 13	Uncontested withdrawal period deadline
June 3	Hardship withdrawal petition deadline
June 3	Complete university withdrawal

GRADUATION DEADLINES

Jan. 15	Deadline to apply for baccalaureate degree for SPRING
Mar. 29-Apr. 4	Master's degree final folder check for SPRING needs to be requested during first week of classes
April 8	Deadline to apply for baccalaureate degree for SUMMER
June 3	Complete all master's degree requirements for SPRING graduation

SUMMER SESSION 2016 UNIVERSITY ACADEMIC CALENDAR

All deadlines are due by the close of business on that date. Information in this handbook may be subject to change.
If you have any questions, contact Registrar Services at 509-963-3001.

REGISTRATION AND CLASSES

April 11	Schedule Goes Live	View in MyCWU
April 11	Advising Begins	SUMMER advising
May 2-June 22	Registration	Summer Session
June 20	**CLASSES BEGIN**	**Classes begin for six-week and full session**
June 22	Change of Schedule Period Ends	Add/Drop classes-*Drops completed prior to this date or by the close of business on this date will not appear on transcripts or have tuition assessed.*
June 22	TUITION AND FEES DUE	Check with the Cashiers Office or view your statement online for amount due. Student has 100 percent tuition liability if classes are not dropped by this date.
June 27-July 1	$25 Late Registration Fee	Instructor signature required to enroll
July 1	$50 Fee - Unpaid Tuition and Fees	$50 fee will be assessed on unpaid tuition and course fee balances. Stu- dent has 100 percent tuition liability.
July 2-Aug. 1	$50 Late Registration Fee	Instructor, Department Chair, and Dean signatures required
July 4	Independence Day holiday	No classes/administrative offices closed
July 19	$100 Fee -Unpaid Tuition and Fees	$100 fee assessed on unpaid tuition and course fee balances. Student has 100 percent tuition liability.
July 29	**Six-week Session Classes End**	Last day of class instruction for six-week session
August 2	Grades Due	Six-week session grades due by 10 p.m., submit via MyCWU.
August 19	**Full Session Classes End**	Last day of class instruction for full session
August 23	Grades Due	Full session grades due by 10 p.m., submit via MyCWU.

WITHDRAWAL DEADLINES

July 15	Deadline for 50 percent refund with complete withdrawal
July 15	Uncontested withdrawal period deadline
July 22	Hardship withdrawal petition deadline for six-week session
July 22	Complete university withdrawal for six-week session
Aug. 12	Hardship withdrawal petition deadline for full session
Aug. 12	Complete university withdrawal for full session

GRADUATION DEADLINES

April 8	Deadline to apply for baccalaureate degree for SUMMER
June 20-24	Master's degree final folder check for SUMMER needs to be requested during first week of classes
July 1	Deadline to apply for baccalaureate degree for FALL 2016
Aug. 12	Complete all master's degree requirements for SUMMER graduation

FALL 2016 UNIVERSITY ACADEMIC CALENDAR

All deadlines are due by the close of business on that date. Information in this handbook may be subject to change.
If you have any questions, contact Registrar Services at 509-963-3001.

REGISTRATION AND CLASSES

April 25	Registration Assignment	Log into MyCWU to view enrollment appointment for web registration
April 25	Schedule Goes Live	View in MyCWU
April 25	Advising Begins	FALL 2016 advising
May 9-June 10	Registration	For continuing students (*During the assigned enrollment appointment)*
August 1	OPEN ENROLLMENT	Students may add/drop classes until change of schedule period ends.
September 7	Leave of Absence	Students not attending FALL quarter must submit request
September 19	**Faculty Development Day**	**Before classes start**
September 21	**CLASSES BEGIN**	**First day of classes for FALL**
September 27	Change of Schedule Period Ends	Add/Drop classes-*Drops completed prior to this date or by the close of business on this date will not appear on transcripts or have tuition assessed.*
September 27	TUITION AND FEES DUE	Check with the Cashiers Office or view your statement online for amount due. Student has 100 percent tuition liability if classes are not dropped by this date.
September 27	Audit and Credit/No Credit	Deadline to declare audit and credit/no credit
Sept 27-Oct 3 until midnight	CWU Payment Plan - Open Enrollment Period	Students may split their quarter charges in three easy payments instead of one. A $50 enrollment fee applies.
Sept.28-Oct.4	$25 Late Registration Fee	Instructor signature required to enroll
October 4	$50 Fee - Unpaid Tuition and Fees	A $50 late fee will be assessed on unpaid tuition-and-course-fee balances. Student has 100 percent tuition liability.
Oct. 5-Nov. 1	$50 Late Registration Fee	Instructor and Department Chair signatures required to enroll
October 18	$100 Fee-Unpaid Tuition and Fees	A $100 late fee will be assessed on unpaid tuition-and-course-fee balances. Student has 100 percent tuition liability.
Nov. 2-Dec. 2	$75 Late Registration Fee	Instructor and Department Chair signatures required to enroll
Nov. 7-Dec. 2	Registration for WINTER	See Winter 2017 calendar
November 11	Veterans Day	No classes/administrative offices closed
November 23-25	Thanksgiving and Native American Heritage Day Recess	No classes/administrative offices open November 23 No classes/administrative offices closed November 24-25
December 2	Course Challenge Form Deadline	Deadline to submit course challenge forms to Registrar Services
December 2	Classes End	Last day of class instruction
December 5	**Study Day**	**Study Day**
December 6-9	**FINAL EXAMS**	**See exam schedule**
December 9	End of Quarter	End of Quarter (last day of finals)
December 13	Grades Due	10:00 p.m. deadline for instructors to submit grades via MyCWU
54	Instructional Days per Quarter	Includes final exams and study days

WITHDRAWAL DEADLINES

Oct. 20	Deadline for 50 percent refund with complete withdrawal
Nov. 4	Uncontested withdrawal period deadline
Dec. 2	Hardship withdrawal petition deadline
Dec. 2	Complete university withdrawal

GRADUATION DEADLINES

June 30	Deadline to apply for baccalaureate degree for FALL 2016
Sept. 21-27	Master's degree final folder check for FALL needs to be requested during first week of classes
Sept. 30	Deadline to apply for baccalaureate degree for WINTER
Nov. 28	Complete all master's degree requirements for FALL graduation

WINTER 2017 UNIVERSITYACADEMIC CALENDAR

All deadlines are due by the close of business on that date. Information in this handbook may be subject to change.
If you have any questions, contact Registrar Services at 509-963-3001.

REGISTRATION AND CLASSES

October 24	Registration Assignment	Log into MyCWU to view enrollment appointment for web registration
October 24	Schedule Goes Live	View in MyCWU
October 24	Advising Begins	WINTER advising
Nov. 7- Dec. 2	Registration	For continuing students (*During the assigned enrollment appointment)*
December 12	OPEN ENROLLMENT	Students may add/drop classes until change of schedule period ends.
December 21	Leave of Absence	Students not attending WINTER quarter must submit request
January 4	**CLASSES BEGIN**	**First day of classes for WINTER**
January 10	Change of Schedule Period Ends	Add/Drop classes-*Drops completed prior to this date or by the close of business on this date will not appear on transcripts or have tuition assessed.*
January 10	TUITION AND FEES DUE	Check with the Cashiers Office or view your statement online for amount due. Student has 100 percent tuition liability if classes are not dropped by this date.
January 10	Audit and Credit/No Credit	Deadline to declare audit and credit/no credit
Jan. 10-Jan. 17 until midnight	CWU Payment Plan - Open Enrollment Period	Students may split their quarter charges in three easy payments instead of one. A $50 enrollment fee applies.
January 11-17	$25 Late Registration Fee	Instructor signature required to enroll
January 16	Martin Luther King Jr. Holiday	No classes/administrative offices closed
January 18	$50 Fee - Unpaid Tuition and Fees	A $50 late fee will be assessed on unpaid tuition-and-course-fee balances. Student has 100 percent tuition liability.
Jan. 18-Feb. 15	$50 Late Registration Fee	Instructor and Department Chair signatures required to enroll
February 1	$100 Fee -Unpaid Tuition and Fees	A $100 late fee will be assessed on unpaid tuition-and-course-fee balances. Student has 100 percent tuition liability.
Feb. 13-Mar. 10	Registration for SPRING	See SPRING 2017 Calendar
Feb. 16-Mar. 10	$75 Late Registration Fee	Instructor and Department Chair signatures required to enroll
February 20	President's Day	No classes/administrative offices closed
March 10	Course Challenge Form Deadline	Deadline to submit course challenge forms to Registrar Services
March 10	Classes End	Last day of class instruction
March 13	**Study Day**	**Study Day**
March 14-17	**FINAL EXAMS**	**See exam schedule**
March 17	End of Quarter	End of Quarter (last day of finals)
March 21	Grades Due	10:00 p.m. deadline for instructors to submit grades via MyCWU
51	Instructional Days per Quarter	Includes final exams and study days

WITHDRAWAL DEADLINES

Feb. 2	Deadline for 50 percent refund with complete withdrawal
Feb. 17	Uncontested withdrawal period deadline
March 10	Hardship withdrawal petition deadline
March 10	Complete university withdrawal

GRADUATION DEADLINES

Sept. 30	Deadline to apply for baccalaureate degree for WINTER
Jan. 4-10	Master's degree final folder check for WINTER needs to be requested during first week of classes
Jan. 13	Deadline to apply for baccalaureate degree for SPRING
March 10	Complete all master's degree requirements for WINTER graduation

SPRING 2017 UNIVERSITY ACADEMIC CALENDAR

All deadlines are due by the close of business on that date. Information in this handbook may be subject to change.
If you have any questions, contact Registrar Services at 509-963-3001.

REGISTRATION AND CLASSES

January 30	Registration Assignment	Log into MyCWU to view enrollment appointment for web registration
January 30	Schedule Goes Live	View in MyCWU
January 30	Advising Begins	SPRING advising
Feb. 13-March 10	Registration	For continuing students (*During the assigned enrollment appointment)*
March 14	Leave of Absence	Students not attending SPRING quarter must submit request
March 20	OPEN ENROLLMENT	Students may add/drop classes until change of schedule period ends.
March 28	**Faculty Development Day**	**Before classes start**
March 29	**CLASSES BEGIN**	**First day of classes for SPRING**
April 3	Change of Schedule Period Ends	Add/Drop classes-*Drops completed prior to this date or by the close of business on this date will not appear on transcripts or have tuition assessed.*
April 3	TUITION AND FEES DUE	Check with the Cashiers Office or view your statement online for amount due. Student has 100 percent tuition liability if classes are not dropped by this date.
April 3	Audit and Credit/No Credit	Deadline to declare audit and credit/no credit
April 3-7 until midnight	CWU Payment Plan - Open Enrollment Period	Students may split their quarter charges in three easy payments instead of one. A $50 enrollment fee applies.
April 4-10	$25 Late Registration Fee	Instructor signature required to enroll
April 11	$50 Fee - Unpaid Tuition and Fees	A $50 late fee will be assessed on unpaid tuition and course fee balances. Student has 100 percent tuition liability.
April 11-May 8	$50 Late Registration Fee	Instructor and Department Chair signatures required to enroll
April 25	$100 Fee -Unpaid Tuition and Fees	A $100 late fee will be assessed on unpaid tuition and course fee balances. Student has 100 percent tuition liability.
May 1-June 21	Registration for SUMMER	See SUMMER Calendar
May 8- June 23	Registration for FALL	See FALL 2017 Calendar
May 9-June 2	$75 Late Registration Fee	Instructor and Department Chair signatures required to enroll
May 17-18	Source Days	Instructional days - Research projects
May 29	Memorial Day	No classes/administrative offices closed
June 2	Course Challenge Form Deadline	Deadline to submit course challenge forms to Registrar Services
June 2	Classes End	Last day of class instruction
June 5	**Study Day**	**Study Day**
June 6-9	**FINAL EXAMS**	**See exam schedule**
June 9	End of Quarter	End of Quarter (last day of finals)
June 10	COMMENCEMENT	Commencement Ceremonies - Ellensburg
June 11	COMMENCEMENT	Commencement Ceremonies - Kent
June 13	Grades Due	10:00 p.m. deadline for instructors to submit grades via MyCWU
52	Instructional Days per Quarter	Includes final exams and study days

WITHDRAWAL DEADLINES

April 26	Deadline for 50 percent refund with complete withdrawal
May 12	Uncontested withdrawal period deadline
June 2	Hardship withdrawal petition deadline
June 2	Complete university withdrawal

GRADUATION DEADLINES

Jan. 13	Deadline to apply for baccalaureate degree for SPRING
Mar. 28-Apr. 3	Master's degree final folder check for SPRING needs to be requested during first week of classes
April 7	Deadline to apply for baccalaureate degree for SUMMER
June 2	Complete all master's degree requirements for SPRING graduation

SUMMER SESSION 2017 UNIVERSITY ACADEMIC CALENDAR

All deadlines are due by the close of business on that date. Information in this handbook may be subject to change.
If you have any questions, contact Registrar Services at 509-963-3001.

REGISTRATION AND CLASSES

March 27	Schedule Goes Live	View in MyCWU
March 27	Advising Begins	SUMMER advising
May 1-June 21	Registration	Summer Session
June 19	**CLASSES BEGIN**	**Classes begin for six-week and full session**
June 21	Change of Schedule Period Ends	Add/Drop classes-*Drops completed prior to this date or by the close of business on this date will not appear on transcripts or have tuition assessed.*
June 21	TUITION AND FEES DUE	Check with the Cashiers Office or view your statement online for amount due. Student has 100 percent tuition liability if classes are not dropped by this date.
June 26-30	$25 Late Registration Fee	Instructor signature required to enroll
July 1-31	$50 Late Registration Fee	Instructor and Department Chair signatures required to enroll
July 3	$50 Fee - Unpaid Tuition and Fees	$50 fee will be assessed on unpaid tuition and course fee balances. Student has 100 percent tuition liability.
July 4	Independence Day holiday	No classes/administrative offices closed
July 17	$100 Fee -Unpaid Tuition and Fees	$100 fee assessed on unpaid tuition and course fee balances. Student has 100 percent tuition liability.
July 28	**Six-week Session Classes End**	Last day of class instruction for six-week session
August 1	Grades Due	10:00 p.m. deadline for instructors to submit grades via MyCWU
August 18	**Full Session Classes End**	Last day of class instruction for full session
August 22	Grades Due	10:00 p.m. deadline for instructors to submit grades via MyCWU.

WITHDRAWAL DEADLINES

July 14	Deadline for 50 percent refund with complete withdrawal
July 14	Uncontested withdrawal period deadline
July 21	Hardship withdrawal petition deadline for six-week session
July 21	Complete university withdrawal for six-week session
Aug. 11	Hardship withdrawal petition deadline for full session
Aug. 11	Complete university withdrawal for full session

GRADUATION DEADLINES

April 7	Deadline to apply for baccalaureate degree for SUMMER
June 19-23	Master's degree final folder check for SUMMER needs to be requested during first week of classes
June 30	Deadline to apply for baccalaureate degree for FALL 2017
Aug. 4	Complete all master's degree requirements for SUMMER graduation

History, Mission, Vision and Core Values

History
For almost 125 years, CWU has developed a distinctive expertise in preparing tomorrow's leaders to be exemplary in their professions. Since established by the Washington State Legislature in 1891 as Washington Normal School, CWU has persistently redefined and advanced the face of higher education in Washington State.

Mission
Student success is the focus and measure of everything we do.

Vision
CWU is a national leader with award-winning quality, an exemplary institution with high national rankings providing an affordable education in beautiful Kittitas Valley at the center of Washington State. We are first in the Northwest with signature programs in Education, Science, Music, and more, developing strong and creative leaders in a vastly changing global world.

Core Value
CWU believes in:

- Hands-on experiences in learning
- Affordability
- Diversity, inclusivity, equity
- Safe and supporting learning and living environments
- Unrestrained intellectual inquiry and exploration
- Small classrooms, individualized instruction, meaningful mentoring
- Transparency and collegiality
- Innovation, state-of-the-art tools and facilities

EQUAL OPPORTUNITY POLICIES
CWU's policies and practices affirm and actively promote the rights of all individuals to equal opportunity in education and employment without regard to their race, color, creed, religion, national origin, sex, sexual orientation, gender identity and gender expression, age, marital status, disability, genetic information, or status as protected veterans. The university administers an affirmative action program for employment purposes and complies with applicable federal, state, and local laws, regulations, and executive orders. Policy statements on affirmative action, gender equity, and sexual harassment, as well as discrimination complaint and resolution policy and procedures available at www.cwu.edu/resources-reports.

The person responsible for institutional compliance with most federal and state laws and institutional policies dealing with discrimination is Gail Farmer, Manager, Equal Opportunity and Affirmative Action, 509-963-2206 or farmer@cwu.edu. She also serves as one of the university's Title IX coordinators. Please contact Pam Wilson, Administrator, Disability Services for any questions or concerns related to disability-related laws and institutional policies, 509-963-2018 or wilsonp@cwu.edu. Human Resources is located in Bouillon Hall, room 140.

ACCREDITATION AND MEMBERSHIP
The university is accredited by the Northwest Commission on Colleges and Universities (NWCCU). Some programs have been accredited by specialized accrediting associations, including:

American Chemical Society
American Council for Construction Education
American Dietetic Association Commission on Accreditation for Dietetics Education
Association of Advance Collegiate Schools of Business
Committee on Accreditation of Educational Programs for the EMS - Professions
Council for Accreditation of Counseling and Related Education Programs
National Association of School Psychologists
National Association of Schools of Music
Technology Accreditation Commission of the Accreditation Board of Engineering and Technology

Student Success

The Office of the Dean for Student Success oversees the areas of Student Achievement, Student Development and Student Living as well as serves in an advising capacity to the Associated Students of Central Washington University. The Dean and staff coordinate the work of committees dealing with student personnel policies, student discipline, and student academic grievances.

STUDENT ACHIEVEMENT

Academic Achievement Programs

Student Support Services (SSS) is a federally funded TRIO program under the auspices of the U.S. Department of Education, as defined by the U.S. Department of Education. SSS provides opportunities for academic development, assists students with basic college requirements, and serves to motivate students toward the successful completion of their post-secondary education. Students who are first generation, low income, or who have a disability are eligible for the program on a space-available basis. The program may also provide grant aid to current, active, SSS participants who are receiving Federal Pell Grants and are of freshman or sophomore status. The goal of SSS is to increase the college retention and graduation rates of its participants and facilitate the process of transition from one level of higher education to the next. SSS is funded 80 percent by a federal grant from the U.S. Department of Education and 20 percent by CWU.

Educational Opportunity Center
Deciding where to go to college, figuring out how to pay for it, and completing all the necessary forms is complicated. The Educational Opportunity Center (EOC) is set up to help students gather the necessary information to make good decisions about their future educational plans and think clearly through the available options. EOC is available, principally, to help low-income adults, who are the first in their family to attend college, work through the admission process. For further information, call 509-574-6895 or e-mail at eoc_program@cwu.edu.

Academic Advising Exploratory:
Students undecided on a major and exploring options work with Academic Advisors in the Exploratory Office, located in Hertz 107 (phone: 509.963.2722). The Exploratory office also administers the Student Transitions and Academic Resources (STAR) program. STAR is an intensive academic support program that assists academically at-risk students in completing transitions into, and through, and out of the university.

Academic Advising - Arts, Humanities, Sciences, Education, and Professional Studies (AHSEP):
Located in Bouillon 205, the AHSEP Advising Office provides academic advising to students who have declared majors in the Colleges of Arts & Humanities, Sciences, and/or Education & Professional Studies (Phone: 509.963.3423).

Academic Advising - Business, University Centers, Online, and Transfer Outreach (BUCOT):
With administrative offices in Hertz 205, the BUCOT Advising Office provides academic advising to students who have declared a major in the College of Business, are enrolled at any of the University Centers or in an online program, and who are incoming transfer students (Phone: 509.963.1583).

Career Services
Career Services is a comprehensive career counseling and resource center designed to engage students as active participants in their career development from freshman year through alumni status. The central purpose of Career Services is to help students prepare for academic and career success. The office strives to serve the needs of individuals through these career-related classes, programs and events.

UNIV 103: For those who are not certain which major or career path is right for them, Career Services offers a two-credit course, Career Exploration, on the Ellensburg campus. It is taught each quarter. One-on-one counseling can achieve similar results over time if a student cannot take the class.

UNIV 301: This two-credit Career Management class helps students prepare for the transition from the classroom to the workplace. The focus of the course is on job search skills in pursuit of fulfilling employment.

Job Search Preparation: Career events are offered throughout the year to bring together CWU students and organizations that are seeking well-trained interns and graduates. On-campus interviews take place in Bouillon Hall, room 206, between students and a variety of businesses, government agencies, non-profit organizations, school districts, and the military.

Career Counseling: Career counselors help students make major and career decisions through online assessments and determining skills, strengths, values, and interests. To prepare for selecting a major, internship and career opportunities in the US and abroad, career counselors provide information on careers, developing strong resumes, CV's and cover letters, practicing effective interviewing skills, learning successful internship and career job search strategies, including how to negotiate salary. Focus is on designing your future and becoming a professional. Alumni experiencing career transitions are also welcome to meet with a career counselor.

Wildcat Career Network: Students and alumni seeking assistance with Career Services are strongly encouraged to

open an account on the job search engine at www.cwu.edu/career. Registration opens up the database of job and internship opportunities, and enables students to sign up for on-campus interviews and career events. There is no fee for this service. Counselors are available from 8 a.m. to 5 p.m. in 206 Bouillon Hall in Ellensburg, and at CWU-Lynnwood and CWU-Des Moines Centers.

Cooperative Education/Internships: Cooperative Education offers assistance to students wanting to earn credits for professional work experience while they are in school. Many departments require an internship as part of the major; others accept a limited number of hours toward graduation. An internship is an opportunity to combine career, social, and personal growth with the educational process. The student works with their department advisor and the Career Services Co-op office in 206 Bouillon Hall to prepare for the process that leads to a successful, credit-bearing academic/work experience.

Career Fairs and Events: The department organizes career fairs throughout the year as an opportunity to network with employers, learn dining etiquette, interview with businesses, and meet with faculty for major selection, review graduate school opportunities, and more. Check information on career fairs, workshops and events on www.cwu.edu/career.

Educational Placement Files: Education majors are required to open a confidential or non-confidential file with our department to assist in the job-search process. Please come into the department or check www.cwu.edu/career for placement file details.

Graduate School Preparation: Career Services assists students with the graduate school application process, including refining the CV or resume, providing feedback on the Statement of Purpose, taking the GRE, the graduate school interview, and seeking references.

GEAR UP
GEAR UP encourages ALL students to pursue and succeed in some form of post-secondary education and seeks to: increase parent involvement, professional development for teachers, community involvement, and collaboration with school staff. GEAR UP serves approximately 6,000 students from 10 school districts in central Washington. Participating students engage in university campus visits, college preparatory programs, academic support programs, and STEM related activities.

Learning Commons

The Learning Commons encourages student success by offering a wide variety of instructional resources and peer tutoring services. In partnership with the Library, the Learning Commons and Library Reference area constitute the Academic and Research Commons (ARC), located on the first floor of the Brooks Library.

Four key program areas are associated with the Learning Commons: 1) The Math Center provides academic support in quantitative skills for students in courses across the curriculum. Drop-in and scheduled tutoring sessions are available in the Learning Commons; 2) At the Writing Center, trained peer consultants work with students of all levels and disciplines, guiding them toward written communication that will be effective in a global and diverse environment. Consultants meet one-on-one with students in the Learning Commons and at the University Centers; 3) Supplemental Instruction (SI) provides free, out-of-class study sessions led by a CWU undergraduate student who has already taken and excelled in the course. SI sessions are open to all CWU students enrolled in the SI-targeted class, and attendance at SI sessions is voluntary and confidential; and, 4) Students enrolled in developmental coursework (Math 100A, 100B, 100C, and English 100T) are taught by Learning Commons faculty and regularly access tutoring services in the Learning Commons.

Ellensburg and Eastside Center students can contact the Learning Commons by phone (509.963.1270) or via email (umwdesk@cwu.edu). Westside Center students may contact the Learning Commons by phone (206.439.3800 x3827) or via email (westsidewc@cwu.edu).

Migrant Education Programs

College Assistance Migrant Program (CAMP)
The College Assistance Migrant Program (CAMP) provides financial and academic support services to freshman students from migrant and seasonal farm-working backgrounds. It is funded by a grant from the Department of Education, Office of Migrant Education. CAMP is designed to help students succeed as they begin their college careers by recruiting and assisting them through the CWU admissions process, and by providing them support during their freshman year. Eligible students receive a variety of services including scholarships, stipends, tutoring, study skills training, mentoring, career planning services, and cultural enrichment opportunities.

To qualify for the CAMP program the student must meet the following requirements:

- Be a U.S. citizen, permanent resident, or eligible non-citizen
- Have freshman standing (fewer than 44 quarter credits)
- Meet criteria to determine migrant or seasonal farm-worker status:
- Parent (or student, if independent) has worked for at least 75 days in the last 24 months in farm-work such as production of crops, dairy products, poultry, livestock, tree harvesting, or fish farming. Farm-work must be primary form of employment and be performed on a temporary or seasonal basis

- OR student has participated in the Chapter 1 Migrant Education Program
- OR student or parent qualifies for the WIA167 program

To apply for the CAMP Program call 509-963-1729 (toll free 866-298-4968 x1729) or download an application off the website at www.cwu.edu/camp.

High School Equivalency Program (HEP)

The High School Equivalency Program is a federally funded program that provides service to Migrant and Seasonal Farm working populations. The program conducts educational awareness, community outreach and recruitment throughout central Washington. The program recruits 125 program participants annually. All participants receive comprehensive GED preparation. This preparation consists of providing GED instruction, test preparation and tutoring services. In addition, students are provided with career development services and educational and or employment placement assistance.

Testing Services

CWU Testing Services provides support to CWU students, faculty, and staff, as well as the central Washington community. Information, including a list of exams and dates, is available from its offices in Bouillon Hall, room 125, at www.cwu.edu/testing, or by phoning 509-963-1847. CWU Testing Services administers over 25 exams and is an ETS/Prometric test center.

Exams offered include:

- Placement into CWU courses or programs (COMPASS and the Communication test)
- College Level Examination Program (CLEP) tests for challenging certain courses
- English proficiency tests for non-native speakers, e.g., Test of English as a Foreign Language (TOEFL), and Test of English for International Communication (TOEIC)
- Various certification and professional development exams including CASTLE, KRYTERION, Pan and Microsoft.
- Tests for other topics including the General Education Development (GED), Graduate Record Examination (GRE), Medical College Admissions Test (MCAT), Law School Admission Test (LSAT), etc.

STUDENT DEVELOPMENT

Campus Life

The Department of Campus Life is dedicated to enriching students' experiences outside the classroom by providing social, cultural, recreational, and educational programs, services, and apprenticeships. Campus Life is comprised of the functional areas including Campus Activities, Campus Life Administration, and Campus Life Publicity Center, KCWU 88.1 the 'Burg Radio Station, SURC Custodial & Maintenance, Student Union Operations & Scheduling, and University Recreation. Campus Life representatives serve on committees for campus events such as Discover! New Student Orientation, Wildcat Welcome Weekend, and Homecoming. Campus Life employs 200-plus students each year in paraprofessional positions, offers internships and practicum experiences, and provides a range of services for university departments, student organizations, and the community.

Campus Activities offers a variety of events including music, comedy, speakers, concerts, performances, and special events such as Homecoming, Family Weekend, Boo Central, Ware Fair, and Student Appreciation Day. They also offer a variety of development opportunities through the university's clubs and organizations.

KCWU 88.1 the 'Burg Radio Station seeks to educate, inform, and entertain the public while teaching students lifelong communication, public speaking, accountability, teamwork, and leadership skills. We seek to develop and present programming that represents a full spectrum of world culture, ethnicity, art, and expression.

The Publicity Center offers a full slate of services to promote campus events, programs and department while providing real world experience to student employees through hands on skill development, professional mentoring and portfolio development. The Publicity Center strives to deliver high quality services and award winning products to increase awareness and pride in CWU's student life programs; and to impact students' personal and professional development by providing an inclusive, creative and challenging environment in which to learn outside of the classroom.

Student Union Operations provides seamless, quality services through centralized scheduling, event coordination, and technical support of university facilities or all university and non-university events.

University Recreation is committed to offering recreation programs that provide personal and professional development for a diverse university community. Our nationally recognized facilities and services support the university mission by promoting an inclusive campus environment. Our programs contribute to the wholeness and wellness of our patrons while providing co-curricular activities that complement other avenues of learning and aid individuals in achieving balance and well roundedness. Through excellent customer service and care for the individual, University Recreation seeks to provide a sense of belonging that enhances retention for students, faculty, and staff.

Westside Student Life Programs supports student activities and programs which include leadership training and staff development, clubs and organization advisement, special programs implementation for events such as parents' weekend, homecoming, wildcat (new

student) week, multicultural and nontraditional student programs and advertising, promotion and publications of student activities events and programs. They also offer a variety of development opportunities through the university's clubs and organizations.

ASCWU - Student Government

The Associated Students of Central Washington University (ASCWU) is the student government board elected by the CWU student body to serve as policy-development officers. Executive responsibility is vested in the seven-member ASCWU-Student Government with the Associate Dean for Student Development serving as the primary advisor. As a vehicle from which students may share different views, the ASCWU is an integral part of the shared governance of CWU. The ASCWU-BOD recognizes and approves student clubs, student organizations, and student appointments to committees in order to serve and represent a variety of student needs and interest areas.

Student Union and Recreation Center (SURC)

the SURC is the community center of the university, providing services, conveniences, and amenities for all members of the CWU community and their guests. The Student Union portion of the SURC houses the following offices and departments: ASCWU- Student Government, Campus Life administration and Club Accounting, Campus Activities, Center for Leadership and Community Engagement, Center for Diversity and Social Justice, Connection Card, Dining Services Marketplace, Holmes Dining Room, Information Center, KCWU 88.1 the Burg radio station, Publicity Center, SURC Operations and Scheduling Services, SURC Box Office, Wildcat Shop, Wildcat Wellness Center, and a U.S. Bank branch. Facilities that may be reserved include a variety of meeting rooms, the SURC pit, and a 345-seat theater, a ballroom which can accommodate up to 1,000 people, and all the necessary equipment and technology to support a quality program or meeting.

The Recreation Center portion of the SURC houses University Recreation which includes administrative support for intramural sports, collegiate sport clubs, personal training, group fitness, Outdoor Pursuits & Rentals, climbing wall, challenge course, and summer kid’s camp. Use of the Recreation Center requires the payment of a quarterly membership fee. Students enrolled in six or more credits on the Ellensburg campus are automatically assessed the quarterly Recreation Center membership fee. Students taking fewer than six credits, or CWU staff and faculty members have the opportunity to purchase a membership in person at the Recreation Center.

University Recreation

University Recreation is committed to offering recreation programs that provide personal and professional development for a diverse university community. Our nationally recognized facilities and services support the university mission by promoting an inclusive campus environment. Our programs contribute to the wholeness and wellness of our patrons while providing co-curricular activities that complement other avenues of learning and aid individuals in achieving balance and well roundedness. Through excellent customer service and care for the individual, University Recreation seeks to provide a sense of belonging that enhances retention for students, faculty, and staff. Programs include intramural sports, collegiate sport clubs, personal training, group fitness, outdoor pursuits and rentals, climbing wall, challenge course, summer kid's camp, recreation center operations, and a myriad of special events including films, lectures, interactive programs, and instructional courses.

Intramural Sports (IM Sports) offers more than 20 different leagues per quarter ranging from the traditional, such as basketball, flag football, softball, and soccer to the non-traditional such as dodge ball, indoor Nerf football, and table tennis. Sports are offered in different ability levels (competitive or recreational) as well as different gender divisions (coed or open), for participation by a range of players. Students, staff, and faculty are eligible to participate in intramural programs.

Collegiate Sport Clubs allow opportunities for students, with mutual interests in a sporting activity, to represent CWU in intercollegiate competitive activities that are not available through the Department of Athletics. Each sport club is initiated, maintained, and managed by student members. Although the program is partially funded by student activity fees, fund-raising is an essential element of every club.

Personal training packages are available to all recreation center members. For a nominal charge, a personal trainer will develop a challenging workout routine specifically designed to meet an individual's fitness goals.

Group fitness classes are available to all recreation center members for a very small fee. From spinning to ballet, intense abdominal workouts to yoga, there's something for everyone.

Outdoor Pursuits and Rentals provides both guided trips and equipment rentals to support students' outdoor recreation desires. The fully staffed, 50-foot climbing wall in the Recreation Center offers bouldering and roped climbing, and certification courses in top-rope belay and lead climbing.

Challenge Course programming offers the opportunity to participate in team building activities to accomplish individual and group goals on both low-ropes elements and a state-of-the-art high challenge course. Our staff will provide everything your group needs to successfully participate in the challenge course experience, including equipment and instruction, as well as a pre-event meeting to determine your group's specific needs.

Camp C-Woo provides a quality day camp atmosphere for Ellensburg-area youth entering grades 1-5.

Center for Leadership and Community Engagement

David Wain Coon Excellence in Leadership Program
The David Wain Coon Excellence in Leadership provides leadership learning opportunities to all CWU students. Training opportunities include leadership retreats, workshops, conferences, and a broad collection of resources.

Over 2,000 students participate in CLCE programs each year. Current leadership programs include the Experience Leadership Project (a three-day retreat for first-year students), Cross-cultural Leadership Program, Leadership Quest (mini-retreats for all CWU students), the annual Leadership Conference, and the annual Winter Quarter Leadership Challenge. Students can also choose to live in the Kennedy Leadership House, join Omicron Delta Kappa (the national leadership honor society), and build their official CWU Leadership Transcript.

In addition to leadership programs and workshops, the CLCE collaborates with faculty from multiple departments to offer leadership courses. Currently, the Emerging Leaders course and Cross-Cultural Leadership program are credit-bearing opportunities. Additional leadership courses are currently being developed and proposed. The Center for Leadership and Community Engagement recognizes that every student has leadership capacity and will have ample opportunities to demonstrate leadership throughout their lifetime. Through CLCE programs, workshops, and resources, CWU students are equipped to make a positive difference within their communities. For more information, please contact CLCE by phone at 509-963-1524 or via e-mail at cel@cwu.edu.

Don and Verna Duncan Civic Engagement Program
Taking action, it's how you improve the world and yourself at the same time. The Don and Verna Duncan Civic Engagement Program provides professional, major-oriented experiences through community service initiatives. From short-term volunteering to intense capstone service programs, the CLCE encourages individuals to use their discipline-specific knowledge in order to address community-based social, political, environmental, and economic justice issues. Join the CLCE in supporting important issues while building your resume and your competencies in the process. To discover what opportunities are currently available, visit www.takeactioncwu.com or stop by room 256B in the SURC.

Student Medical and Counseling Clinic

Students registered for 6 or more credits pay a mandatory health and counseling fee (5 or more credits for summer session) and are thereby eligible for services. There are ancillary charges for some medical services (e.g., labs, x-rays, etc.). All students are encouraged to check with the clinic business office regarding ancillary fees and charges for medical services. There are no added charges for counseling services.

Services are offered at the Medical and Counseling Clinic building (southeast corner of the campus). The clinic hours are 8 a.m. to 5 p.m. Monday through Friday. Summer hours are 8 a.m. to noon and 1 p.m. to 3 p.m. when classes are in session. The Clinic is closed on weekends, holidays and during academic breaks. When the Clinic is not open, emergency medical services are available at Kittitas Valley Community Healthcare. The cost of hospital care is at the student's expense. A student accident and health insurance plan is available (through an independent vendor) and is recommended to help defray medical costs.

Appointments are taken by phone from Monday through Friday 7:30 a.m. to 5:00 p.m. Students are encouraged to call for appointments as early in the day as possible in order to accommodate their schedules.

The Student Medical Clinic (509-963-1881) is a complete out-patient/primary-care, on-campus facility available to registered students that have paid the medical and counseling fee. The medical clinic is accredited by the Accreditation Association for Ambulatory Health Care.

The medical staff provides routine and urgent-care services, including care for medical problems such as illnesses, injuries, and infections (e.g., colds, flu, and sexually transmitted diseases). It offers customary primary care services including routine physical examinations, sports physicals, travel exams and counseling, women's health services (e.g., pap smears, pregnancy testing, reproductive counseling), and diagnostic laboratory tests/X-rays. In keeping with the educational mission of the university, emphasis is placed on education regarding the prevention and treatment of illnesses.

The Counseling Clinic (509-963-1391) operates on the basis of a brief treatment model. Counseling services include individual, couple, and group counseling. Common student issues include transitional/adjustment strain, relationship difficulties, eating disorders, stress, anxiety, and/or depression. Group counseling opportunities routinely include coping with anxiety, therapeutic lifestyle change for depression, bipolar support, personal growth, and relationship difficulties. Special programs for campus groups are available upon request (e.g., education and outreach). Counseling services are private and confidential.

Veteran's Center

The Veteran's Center provides information and guidance for veterans, dependents, and others regarding questions and concerns on Veterans Education Benefits and the Center assists veterans in making the transition from the military to the classroom.

STUDENT LIVING

University Housing and New Student Programs
University Housing provides well-maintained housing facilities, with an emphasis on student development, as part of the university's academic environment, and works to augment classroom instruction with a learning environment that is supportive of students' educational goals, personal and interpersonal growth, and cultural awareness. Programs such as Discover! New Student Orientation, Wildcat Welcome Weekend, and Wildcat Connections First Six Weeks are part of new student programs. In addition, First Year Experience (FYE) and Sophomore Year Experience (SYE) programs are coordinated and promoted through University Housing and New Student Programs.

CWU is a residential university with most students living on or near campus. The residence halls and apartments can house 3,300 students. CWU's residence halls offer students a variety of quality living experiences and options.

The residences are within a few minutes' walk of any classroom, library, or dining hall, which offers considerable convenience and flexibility to students. Residence hall staff provides crisis intervention and educational, cultural, social, and community services programs, as well as coordinating behavioral problem-solving interventions in cooperation with the Dean of Student Success.

The residence halls offer a diverse selection of communities and environments. The residence halls, which house between 35 and 476 occupants, offer programs and environments to enhance classroom experiences. Furniture, basic FM-TV cable service, wireless internet, utilities, and coin-operated laundry facilities are also provided. Many halls have their own pool table, piano, or ping-pong table. All residence halls are smoke-free.

Living and Learning Communities (LLCs) are available for students interested in the following areas: Education, Science Talent Enhancement Program, Aviation, Music, Casa Latina, Future Business Students, Students for the Dream, International House, Leadership House, Outdoor Adventure and Environmental Sustainability, or for those participating in the Douglas Honors College. Students may request a residence hall offering a living-learning enrichment opportunity. Hall staff and faculty from these areas of interest collaborate to provide residents with educational and social activities that integrate their field of study, enhancing their residence hall experience.

Since college is a total learning experience, Central requires all freshmen who are single and under 20 years-of-age to live in the residence halls for one academic year. Running Start students under 20 years-of-age, regardless of class standing, must also fulfill the live-in requirement. Students requesting an exception to the policy must apply through University Housing and New Student Programs. Because of the academic success of on-campus students, the University also offers an incentive for sophomore students to live on campus.

CWU also maintains 398 apartments (studio, one, two or three bedrooms) designed for single students and those with families. The apartment complexes offer activities for residents that focus on their needs and priorities. Single student complexes feature programs and facilities that assist students in developing healthy, independent lifestyles. These programs might include wellness, self-defense, cultural awareness, lifestyle planning, career planning, and recreation. The communities in the family student complexes enjoy programming and activities tailored for the needs and interest of families and older students. Many activities for children and families are presented, such as holiday events, child safety awareness programs, domestic violence programs, and career planning.

At different times of the year, demands for apartments may exceed availability. For this reason, waiting lists are provided. Applications are accepted from students who have not been officially accepted for admission to CWU, but who plan to attend classes during the dates listed on their application forms. To be eligible for apartment housing, a student must be currently enrolled in and must maintain at least 10 credit hours of coursework.

Students who are required to live in residence halls are not eligible to live in the apartments. Each tenant is required to sign a lease, which provides for renting an apartment on a month-to-month basis. Written notice must be given at least 30 days prior to vacating an apartment. Pets are not allowed in any area of CWU housing. Central Washington University does abide by all state and federal laws pertaining to service animals in on campus housing.

Discover! New Student Orientation: New students with less than 45 credits, and all students who participated in Running Start, are required to attend an on-campus orientation and registration program. For students starting fall quarter, this program takes place on a variety of dates in July. For winter quarter students it is held in December and for spring quarter students it is scheduled in March. New Ellensburg campus students with 45 or more credits are urged to attend the transfer orientation. Orientation for transfer students coming fall quarter are held in July or August. For those students coming for winter or spring quarter, the orientations are held in December and March, respectively. Students attending a campus other than Ellensburg need to contact the appropriate university center for information about their orientation and registration programs.

Wildcat Wellness Center
The Wildcat Wellness Center is located in SURC 139. Services and programs delivered through the center

include: alcohol/drug education, prevention and referrals for assessment and treatment, Prime for Life classes, web-based alcohol and drug curriculum, peer education programs, sexual assault prevention and response coordination, and programs that promote positive health behavior and risk reduction behaviors.

The University has a comprehensive alcohol education and prevention program. Parental notification is one part of CWU's comprehensive sanctioning procedure for underage alcohol and marijuana use. CWU supports all local, state and federal laws pertaining to controlled substances and as such, cannabis is not allowed on any CWU premise.

Violence Prevention and Response Coordinator
Students impacted by sexual violence or other forms of harassment may call 509-963-3233 and leave a confidential message and/or drop by the Wellness Center at SURC 139. Services include confidential, referral, advocacy, information and crisis response for victims, survivors, and significant others. Those experiencing an emergency are still encouraged to contact 9-1-1.

There is also a peer education program sponsored by the Wellness Center and advised by the Wellness Center's health educator. It can be reached by phoning 509-963-3213. For additional information please visit www.cwu.edu/wellness.

Early Childhood Learning Center
The Early Childhood Learning Center (ECLC) provides early learning to the campus community serving children aged one-month to eight-years of age. There are two sites; 1900 Brooklane Village, Suite 100, serves children aged two years to eight years of age; Michaelsen Hall, room 109, serves children aged one month to 28 months. The program consists of early learning activities especially designed for young children; including music, language, physical activities, stories, science and math experiences, games, puzzles, blocks, and dramatic play. Nutritious meals and snacks are served throughout the day. Operating hours during the academic year are 7:15 a.m. to 5:30 p.m., Monday through Friday. Summer hours vary slightly according to need. Call 509-963-1744 or e-mail at eclc@cwu.edu for more information.

Office of Student Rights and Responsibilities
The Office of Student Rights and Responsibilities has responsibility for assisting students understanding university policies and procedures that support them. In addition, the Office of Student Rights and Responsibilities is responsible for holding students accountable to the student conduct code and taking reports that include behaviors of concern by other members of the University Community. This office is located in Bouillon 205. The Office of Student Rights and Responsibilities also houses the University Case Manager who assists students with referrals within the CWU campus and the Ellensburg Community. In addition, our office serves all CWU locations.

CWU Life

Dining Services

All students living in CWU residence halls are required to select a meal plan. There are five to choose from, and all are set up as a prepaid dining debit account, which allows for purchase of meals or snacks at any campus dining location. Students living off-campus may also purchase a meal plan for the convenience of dining and buying beverages and snacks on campus.

Dining Services' staff is dedicated to your dining satisfaction. Its mission is to provide exceptional food service and customer service to the campus community. This is evident in fresh, appetizing, and nutritionally balanced menus along with the hospitality offered at each of its distinctly different dining locations on campus. These include:

- Central Market Place, located in the SURC, offers a la carte service in six restaurants: Taglianno's Pizza and Pasta, Totally Tossed Salads, Lion's Rock Broiler, El Gato Loco, Pan Asia, and Wrap and Roll Deli Bar
- Holmes Dining Room, located in the SURC, offers an all-you-can-eat service for brunch/lunch and dinner
- North Village Café, located in Green Hall on the north side of campus, offers a la carte service for meals and snacks throughout the day
- Wellington's, a casual waited service open for lunch on the south side of campus in Tunstall Hall. It offers organic options and supports local growers.

You may also use your meal plan at any of CWU Dining Services' espresso bars or convenience stores:

- Backstage Coffee House located on the second floor of the Milo Smith Tower Theatre
- Cat Trax East Espresso and Smoothie Bar, Cat Trax West Espresso, and Cat's Convenience Store in the SURC
- Coach's Coffee House in the Wendel Hill Hall
- NVC Espresso Bar and NVC Store in the North Village Café and Store

Dining services are available on campus for breakfast, lunch, dinner, late-night meal service on weekdays, and for brunch and dinner on weekends.

If you have questions about the dining options available at CWU Dining Services, call 509-963-1591, or contact us via its web page at www.cwu.edu/~dining. Dining also has a Facebook page and can be found on Twitter.

Nutritious Foundations
Dining Services offers nutritious menu selections, based on the U.S. Department of Agriculture's food pyramid, to

support your healthy lifestyle. You're encouraged to adopt a diet rich in balance, variety, and moderation by exploring the nutrition foundation that Dining Services provides in all dining arenas.

Special Events
Several special dining events are offered quarterly to enrich your dining experience. Some of these events include the Octoberfest, a holiday season buffet, a seafood buffet extravaganza, theme and ethnic dinners, Cinco de Mayo, the Student Appreciation BBQ, and the commencement luncheon.

Employment Opportunities
Dining Services is the largest employer on campus, hiring between 250-350 students annually for part-time work. Consider joining the team where you will meet new friends and earn money.
Dining Services is a member of the National Association of College and University Food Services, and an active supporter of the academic mission of the university through participation in many out-of-classroom events and activities held throughout campus.

Honor Societies

Central Washington University maintains memberships in several national honor society chapters. Here is a list of those memberships.

Alpha Epsilon Rho: This is the national honor society for broadcasting. Founded in 1943 for the purpose of emphasizing superior scholarship and creative participation in telecommunication production and activity, it prepares its members for roles as responsible telecommunicators. Membership in Alpha Epsilon Rho is open to undergraduate and graduate students who are making electronic media studies one of their major academic interests and who meet high standards of scholarship.

Alpha Eta Rho: (AHP) This International Professional Collegiate Aviation fraternity acts as a bridge between aviation colleges and the aviation industry. AHP was established in 1929 by Earl W. Hill, an aviation instructor at the University of Southern California and, with help from students and faculty, was founded on April 10, 1929. It is the oldest professional aviation fraternity in history. AHP members serve the aviation industry in fields such as: Aviation Captains, NASA Engineers, Flight Attendants, Aircraft Mechanics, Aerospace Engineers, Corporate Pilots, and many more.

Alpha Kappa Delta: This is an international sociology honor society. Founded in 1920 and an accredited member of the Association of College Honor Societies, Alpha Kappa Delta is a non-secret, democratic, international society of scholars dedicated to the philosophy of Athropon Katamannthanein Diakonesin or "to investigate humanity for the purpose of service." AKD seeks to acknowledge and promote excellence in scholarship in the study of sociology, the research of social problems, and such other social and intellectual activities that will lead to the improvement of the human condition.

Alpha Phi Sigma: This is the nationally recognized honor society for students in the criminal justice sciences. The society recognizes academic excellence by undergraduates as well as graduate students of criminal justice. The honor society is open to undergraduate students who have a declared law and justice major or minor, have maintained a minimum GPA of 3.2 on a 4.0 scale in their cumulative and criminal justice class or rank in the top 35 percent of their classes, and have completed a minimum of four courses within the law and justice curriculum. Graduate students must have a minimum GPA of 3.4 on a 4.0 scale or rank in the upper 25 percent of their class, and have completed a minimum of four courses within the law and justice curriculum.

Alpha Sigma Lambda: This national honor society, established in 1946, provides the opportunity to recognize the special achievements of adult students. Alpha Sigma Lambda acknowledges adult students who accomplish academic excellence while facing competing interests of family, work, and community. Members must have earned a minimum GPA of 3.5 on a 4.0 scale. The CWU chapter of ASL is Psi Delta Omega and is advised by the Center for Student Empowerment. Invitations to join Psi Delta Omega are sent out at the beginning of each academic year, and induction ceremonies are held both at the Ellensburg campus and at one of the Puget Sound-area centers.

Beta Alpha Psi: This is a not-for-profit honor and service organization for accounting, finance and information systems students at AACSB-or EQUIS-accredited universities. Founded in 1919, the CWU chapter was installed in 2013. It provides opportunities for development of communication, leadership and professional skills, participation in community service, encouragement of ethical, social and public responsibility and interaction among students, faculty and professionals. Beta Alpha Psi requires its members to maintain at least a 3.0 GPA. It is recognized and respected by the business community as a premier collegiate organization.

Beta Beta Beta: TriBeta is a society for students, particularly undergraduates, dedicated to improving the understanding and appreciation of biological study and extending boundaries of human knowledge through scientific research. Since its founding in 1922, more than 200,000 persons have been accepted into lifetime membership, and more than 553 chapters have been established throughout the United States and Puerto Rico.

Chi Sigma Iota: Founded at Ohio University in 1985, CSI is an international honor society that values academic and professional excellence in counseling. We promote a strong professional identity through members (professional counselors, counselor educators, and students) who contribute to the realization of a healthy society by foresting wellness and human dignity.

Delta Pi Epsilon: This is a post-baccalaureate honor society for business educators. Its objectives are to improve business education through research, recognize exceptional research achievements, and publicize research in business education. Membership is open to business educators who meet scholastic criteria and exhibit a commitment to research in business education.

Eta Sigma Gamma: Since its inception in 1967, Eta Sigma Gamma, the National Health Education Honorary, has had a rich history of contributions to the profession of health education and health promotion. It was through the commitment of a group of dedicated professors and students at Ball State University that the first chapter of the honorary was established. Today, there are over 80 chapters representing thousands of students in colleges and universities around the United States.

Eta Zeta: This is the Department of Geological Science's chapter in the Earth Sciences national honor society, Sigma Gamma Epsilon. The purpose of the honor society is to recognize exceptional scholarship and professionalism among our geological science majors, and to foster student scholastic, scientific, and professional advancement. To become a member, a student must have completed at least 15 quarter hours in Earth Sciences courses, have a minimum 3.0 GPA in Earth Sciences courses, and have a minimum GPA of 2.67 in all university courses.

Gamma Theta Upsilon: Gamma Theta Upsilon is an international honor society in geography. Gamma Theta Upsilon was founded in 1928 and became a national organization in 1931. Members of Gamma Theta Upsilon have met academic requirements and share a background and interest in geography. Gamma Theta Upsilon chapter activities support geography knowledge and awareness. New members are inducted annually.

Kappa Delta Pi: The honor society in education, Kappa Delta Pi, encourages high professional, intellectual, and personal standards, and recognizes and honors outstanding achievement in the study of education. Membership is open to undergraduate students, graduate students, and faculty by invitation. New members are inducted quarterly.

Lambda Alpha: The Lambda Alpha National Collegiate Honors Society for Anthropology was founded on March 15, 1968 at Wichita State University in Kansas. To date there are over 170 chapters nationwide. Lambda Alpha (derived from the Greek *Logos Anthropou*, meaning "the Study of Man") was established for the purpose of encouraging and stimulating scholarship and research among students, faculty and others engaged in the study of anthropology. Lambda Alpha provides scholarships opportunities to student members (undergraduate and graduate).

Lambda Pi Eta: This is the national honorary society for undergraduates in communication. As an accredited member of the Association of College Honor Societies (ACHS), Lambda Pi Eta (LPH) has an active chapter at CWU's Department of Communication. LPH represents what Aristotle described in The Rhetoric as three ingredients of persuasion: logos (lambda) meaning logic, pathos (pi) relating to emotion and ethos (eta) defined as character credibility and ethics. Lambda Pi Eta recognizes, fosters, and rewards outstanding scholastic achievement while stimulating interest in the communication discipline.

Omicron Delta Kappa: The only National Leadership Honor Society was founded in 1914. Membership is based on exemplary character, responsible leadership and service in campus or community life, superior scholarship, genuine fellowship, and consecration to democratic ideals. Membership in Omicron Delta Kappa is awarded to undergraduate junior and senior students, to students of graduate and professional schools and colleges of the institution, to members of the faculty and administration, and to alumni. Election to membership is on the basis of merit, is irrespective of a person's affiliation with other organizations, and is without solicitation or propaganda, such as rushing or social pressure, to insure acceptance of the invitation to membership. Membership is as much an obligation and responsibility in citizenship as it is a mark of highest distinction and honor.

Omicron Gamma: This is the CWU chapter of Beta Beta Beta (TriBeta). The TriBeta is a society for students, particularly undergraduates, dedicated to improving the understanding and appreciation of biological study and extending boundaries of human knowledge through scientific research. Since its founding in 1922, more than 200,000 persons have been accepted into lifetime membership, and more than 553 chapters have been established throughout the United States and Puerto Rico.

Pi Sigma Alpha: (Mu Lambda chapter) This is CWU's honor society for students of political science. This is a national honorary, first organized in 1920, with more than 740 chapters throughout the country. Membership is based upon scholastic achievement and a genuine interest in the understanding of politics and political issues.

Phi Alpha Theta: This is a nationally recognized honor society founded in March 1921 at the University of Arkansas, and today it numbers over 900 chapters, representing 350,000 members. Central's Tau Iota chapter was chartered in 1972. Membership is composed of undergraduate and graduate students and professors who have been elected upon the basis of excellence in the study and writing of history. The society's objective is the promotion of the study of history by the encouragement of research, good teaching, publication, and scholarly interaction among historians.

Phi Kappa Phi: The national honor society of *Phi Kappa Phi* recognizes and encourages superior scholarship in all academic disciplines. Membership is open to

undergraduate students, graduate students, and faculty members by invitation, with election based on superior scholarship. New members are inducted each spring.

Phi Sigma Tau: This is the international honor society in philosophy. Its purpose is to recognize and encourage excellence in philosophic scholarship among students and faculty. Central's local chapter (Washington Alpha) meets periodically to discuss philosophic issues. Membership is based on scholastic attainments.

Psi Chi: This is the international honor society in psychology, founded in 1929 for the purpose of encouraging, stimulating, and maintaining scholarship in, and advancing the science of, psychology. Membership is open to graduates and undergraduates who are making the study of psychology one of their major interests and who meet the minimum qualifications. Psi Chi is an affiliate of the American Psychological Association and a member of the Association of College Honor Societies.

Salute: This is a national academic honor society recognizing student veterans and military personnel who have demonstrated outstanding performance in the academic setting. One of the primary goals of SALUTE is to acknowledge and recognize members who have shown courage, strength, leadership, excellence, and perseverance in their military endeavors and now are showing that same commitment to their academic careers.

Sigma Lambda Chi: The fundamental purpose of Sigma Lambda Chi is to provide recognition to outstanding students in construction curricula. Sigma Lambda Chi is the society that offers students the opportunity to be recognized locally and internationally for their academic accomplishments as a construction major.

Sigma Pi Sigma: This is the national physics honor society. It was founded in 1921 and now has over 500 chapters nationwide. It is a member of the Association of College Honor Societies and is affiliated with the American Institute of Physics and with the American Association for the Advancement of Science. Membership is open to undergraduate and graduate students and faculty members. Students elected to membership must maintain high standards of general scholarship and outstanding achievement in physics. Besides providing an incentive for all physics students to rise to excellence, the society also encourages physics interest and science literacy in the general public.

Theta Alpha Kappa: The only honor society devoted to religious studies. Theta Alpha Kappa granted Central Washington University a charter in 2007. Its overall purpose is to provide local and national recognition to students with high scholarship and an academic interest in the field of religious studies. In addition to promoting student interest in research and advanced study in the field, it provides opportunities for the publication of student research papers of merit through the Journal of Theta Alpha Kappa, encourages a professional spirit and friendship among those who have demonstrated an aptitude for excellence within the field, and popularizes interest in religious studies among the general collegiate and local community.

Wildcat Shop

The Wildcat Shop has everything you need right here on campus and its selling prices on textbooks are lower than 96 percent of all college stores in the country. It also has a strong textbook rental program for students. It carries:

- Textbooks (new, used, rental, and ebook)
- General reading and reference books
- Magazines
- Computer software (special prices for students)
- Computer hardware (special student prices)
- Electronics
- Clothing and gifts
- School and art supplies
- Greeting cards
- Dorm supplies
- Health and beauty aids
- Stamps
- Snack foods and more

It also provides laminating, binding, copying (color or black and white), mat board cutting, DVD and CD recording, Apple computer repair, and fax services.

Special order any book, computer, or electronic product, or supply, at no additional cost. For your convenience the Wildcat Shop buys back textbooks throughout the quarter. Contact the Wildcat Shop at 509-963-1311, or at cwubookstore.collegestoreonline.com/.

University Services

Archival Services
The Archives at Central Washington University was established in 2004 to act as the repository for official and unofficial records that document the history of the university. The Archives also serve as a regional repository to house, preserve, and promote the history of central Washington. It is located on the fourth floor of the James E. Brooks Library on the Ellensburg campus.

The primary objectives of the Archives is to collect, organize, describe, preserve, and make available university records and regional collections of permanent historical value. It also aims to support research, teaching, and public awareness of the rich heritage of central Washington and the university.

The Archives contain records, photographs, and artifacts produced by CWU or its predecessors: Washington State Normal School at Ellensburg (1891-1937); Central Washington College of Education (1937-1961); and Central Washington State College (1961-1977). The collection contains documents published by the university as well as materials produced by university administrators, faculty, staff, students, and alumni. The collection includes administrative reports, department and committee records, student publications, photographs, printed records, and the correspondence of former presidents, deans, and other university officials.

The regional manuscript collection, which is part of the Archives, consists of historically significant 19th- and 20th- century personal papers, business and organizational records, photograph collections, and other materials produced in central Washington by individuals, businesses, and organizations that reside, or have resided, in the region. One-of-kind unpublished works from the counties of Benton, Chelan, Douglas, Grant, Kittitas, Klickitat, Okanogan, and Yakima are represented in the collection. The collection includes materials relevant to the history and cultural development of central Washington.

Center for Diversity and Social Justice
It is the goal of the Center to promote equity, respect and social justice through our programs, structures, outreach and participation in the curricular, co-curricular lives of students, faculty and staff. Through programming an advocacy the center will work to build and nurture a campus community that understands and celebrates diversity, while facilitating inclusion at all levels of the university and supporting academic and creative expression. Our signature, thematic, and outreach programs include heritage months, Power and Privilege workshops, Safe Space workshops, and much more. We provide resources to students on a variety of topics including diverse populations, LGBT issues, gender issues and social justice issues. All students are invited to participate in the center's activities.

Center for Spatial Information and Research
The Center for Spatial Information and Research (CSIR) encourages, supports, and coordinates research projects for students and faculty using hardware and software technologies that gather and analyze "spatial" information to solve problems in the social sciences, natural sciences, and business. Geographic Information Systems (GIS), high-precision Global Positioning System (GPS), ground-penetrating radar, precision conventional laser surveying, and satellite image processing are some of the spatial technologies used by CWU faculty and students. Typical GIS applications include projects in resource geography, archaeology, field biology, geology, and planning. CSIR also relies on the Department of Geography's GIS laboratory, where a variety of undergraduate and graduate GIS courses are taught, and numerous large and small research projects are conducted using state-of-the-art computing systems.

CSIR encourages creative, interdisciplinary uses of spatial technology, and actively works with the private and government sectors to identify problems to which CWU personnel and equipment can provide effective solutions. CSIR's home page is at www.cwu.edu/spatial-information.

Central Transit
Central Transit is a transportation service created many years ago. Students expressed a need for a convenient and consistent busing service. Through the years CT grew and now operates through a partnership with many entitles including the City of Ellensburg and CWU.

CT connects students with the community as it offers convenient stops around campus and at popular shopping areas, restaurants and stores throughout the City of Ellensburg. For more information go to www.hopesource.us/routeMap.html.

Central Washington Archaeological Survey
The Central Washington Archaeological Survey (CWAS) is a research and public service office that is part of the Department of Anthropology. CWAS conducts archaeological investigations in the central counties of the state and promotes public involvement in the identification and protection of regional archaeological resources. CWAS involves faculty and students in research projects funded through external grants and contracts. CWAS cooperates with state and federal agencies, Native American tribes and nations, professional archaeologists throughout the state, and state and local archaeological societies in the study and preservation of central Washington's archaeological resources.

Disability Services
Disability Services (DS), and Human Resources (HR), in partnership with the university community, are dedicated to creating an inclusive campus that celebrates diversity and provides individuals with disabilities an equal opportunity to fully participate in and benefit from all

aspects of the employment and educational environments. Utilizing documentation of disability and information obtained in consultation with the student or employee, DS staff assesses the effects of a student's disability on his/her ability to access the educational process. HR staff assesses the effects an employee's disability has on his/her ability to perform the essential functions of his/her job. Based on this assessment, DS/HR staff identifies reasonable accommodations designed to ensure these individuals equal access to all facets of the University. Students or employees wishing to request disability accommodations are responsible for contacting DS/HR.

Examples of accommodations available to CWU students and/or employees with disabilities include, but are not limited to, textbooks and academic/employment materials in accessible formats (large print, Braille, electronic text, PC-read audio), alternative examination procedures, sign language interpreters, speech-to-text transcription, permission to audio-record lectures, note-taking assistance, early registration, priority snow removal routes, special classroom or workplace furniture, access technology and temporary disability parking permits.

DS also serves as a resource for student, faculty, staff, and the community regarding disability issues.

Multimodal Education Center
The Multimodal Education Center (MEC) embraces the vision that Technology Empowers Learning. We provide instructional and multimedia technologies, support, and training for all CWU students, faculty, and staff. Our goal is to create opportunities for exploration of emerging technologies, digital media, and innovative learning spaces. We can help you create multimedia projects, as well binders, posters, and bulletin boards. We have laptops, video cameras, and projectors for checkout, both Apple and PC computer labs, and an educational curriculum library. For more information visit us in Black Hall, call 509-963-3293 or visit the website at www.cwu.edu/ed-tech/.

Family Resource Center
The Family Resource Center (FRC) serves CWU, Ellensburg, and Kittitas County by utilizing a family perspective to enrich and improve the quality of individual and family life. It is located in Michaelsen Hall, room 328, and can be reached at 509-963-2785. It's also online at www.cwu.edu/~frc.

Geographic Information Systems Laboratory
The GIS laboratory contains up-to-date computer hardware and various software suites employed in the analysis of spatial data such as maps, aerial photos, satellite imagery, and digital terrain models. The laboratory provides a teaching and research facility for faculty and students from a variety of fields, including anthropology, archaeology, biology, geography, geology, land-use planning, resource management, and sociology. In addition, the laboratory offers contract and consultation services to public and private agencies for GIS applications. Additional information can be found at www.cwu.edu/geography.

Information Services
Information Services (IS) provides computer, communications, enterprise application and networking services to the Ellensburg campus and university centers located throughout the state. IS staff members work closely with all segments of the university to ensure that information technology is broadly developed, acquired, used, and available to all students, faculty, and staff. IS information is available on the web at www.cwu.edu/its and IS can be contacted at 509-963-2924. The Service Desk (formerly ITS Help Desk) can be contacted at 509-963-2001.

Faculty and students have easy access to computers and software in 23 general-purpose and discipline-specific computer labs spread throughout major academic buildings on campus. Every residence hall room is equipped with an Ethernet connection providing Internet services for those students that bring computers to campus and most residence halls have wireless access. Students, faculty, and staff who reside off campus can access CWU technology resources (i.e. e-mail, file services, etc.) via the Internet.

Wireless access to the CWU network and the Internet is available across the campus and via laptop checkout in the SURC and library. Information on wireless at CWU is online at www.cwu.edu/its-helpdesk/connecting-cwu-wireless-network.

James E. Brooks Library
The Brooks Library provides resources and services to stimulate intellectual curiosity and facilitate learning and research within the academic community. The library's personnel are engaged in the creation of materials collections that support the curriculum and the provision of access to those materials. More specifically, these activities include the collection and preservation of materials, user instruction and guidance, information retrieval, analysis and organization, global access to library and information resources, and collaboration with instructional faculty in developing programs, collections, and research.

Students and other library users have 24/7 Web-based access to over 1.3 million books, films, government documents, maps, audio recordings, videos, and DVDs on site in the Brooks Library. Additionally, the library provides similar access to more than 28 million information items from the academic libraries of the Northwest that belong to the Orbis Cascade Alliance. Full-text electronic and/or paper subscriptions to over 15,000 periodicals and academic journals are available electronically or on site.

Library staff are available to provide personal service to students 100 hours per week. The Academic and Research

Commons on the first floor provides spaces for students, faculty and staff to work collaboratively to enhance teaching and learning, and is staffed by librarians, and the Writing, Math and Tutoring centers. Group study areas and an open computer lab are available to those who visit the main library in Ellensburg. Students at the Centers have access to Library services and materials at the main library and libraries at the Des Moines and Lynnwood Centers. Also academic support is available through a toll-free phone number or e-mail and chat access to reference librarians. Internet connectivity for personal laptops is available on each floor of the Brooks Library and 73 laptops are available for checkout by students. The libraries' staff, services, and collections support the educational efforts of students, foster intellectual, social and ethical development, and assist students in locating, using, and evaluating information to equip them for independent, lifelong learning.

Multimodal Education Center
The Multimodal Education Center (MEC) embraces the vision that Technology Empowers Learning. We provide instructional and multimedia technologies, support, and training for all CWU students, faculty, and staff. Our goal is to create opportunities for exploration of emerging technologies, digital media, and innovative learning spaces. We can help you create multimedia projects, as well binders, posters, and bulletin boards. We have laptops, video cameras, and projectors for checkout, both Apple and PC computer labs, and an educational curriculum library. For more information visit us in Black Hall, call 509-963-3293 or visit the website at www.cwu.edu/ed-tech/.

Student Employment
The university supports the employment of current students, recognizing the reciprocal benefits of their work. Employment of students provides them the opportunity to gain valuable work experience and assists them with the financing of their education. Student employees are a valuable source of labor and spirit for the university.

We work to ensure that each student enjoys his or her CWU work experience and that employers have the resources needed to employ, mentor, and support student employees. The role of Human Resources is to facilitate connections between students and employers so that students can fund their educational expenses, obtain valuable work experience, and build career portfolios

Student Employment posts notices for on and off campus job openings (including summer job opportunities) on the CWU job board at jobs.cwu.edu For additional information about Student Employment visit the our website at www.cwu.edu/student-employment Contact us at 509-963-1202 or seo@cwu.edu or come see us in the Human Resource Office in Bouillon Hall, Room 140.

University Police and Parking Services
University Police and Parking Services (UPPS) provides police service to the Ellensburg, WA campus of CWU. UPPS operates 24 hours per day, 7 days a week, providing commissioned and state certified officers with complete arrest and investigatory authority. The department employs fully commissioned police officers by the state of Washington, parking enforcement officers, and various clerical support staff and student employees.

UPPS works closely with neighboring law enforcement agencies. "Blue-light" emergency telephones are installed in or adjacent to many parking lots and walking paths throughout the campus. Each phone has an emergency button and a two-way speaker that directly connects to KITTCOM.

UPPS employs students in a program called Courtesy Assistance Team or CAT. CAT provides walking companions from campus buildings to parking lots or residence halls. CAT employees also check doors to buildings and walk through buildings that are open.

Throughout the school year we give 60-75 crime prevention programs and have been invited to present "active shooter response" to numerous classes. We routinely work with the student newspaper and radio station, as well as other media, to provide safety tips and timely warnings of criminal activity.

Central Transit provides transportation from campus to various locations in the city of Ellensburg.

Our mission is to provide a safe and secure environment for our community through education and enforcement. "Educate, Prevent, Protect"

Emergency Phone: 911
Non-emergency: 509-925-8534
Business Phone: 509-963-2959
Fax: 509-963-2750
Monday through Friday, 8 a.m.-5 p.m.
Courtesy Assistance Team (CAT) 509-963-2950

Veteran Center
The Veterans Center is located in the Bouillon Hall, room 206. Students wishing to receive education benefits from the Department of Veterans Affairs (DVA) must contact the Veterans Center office. Notification is NOT automatically sent to the DVA when a veteran or other eligible person enrolls. For more information, call 509-963-3028 or visit the website at www.cwu.edu/veterans.

University Centers

Central Washington University has seven campus locations in addition to the residential campus in Ellensburg. The University Centers offer upper-division (300- and 400-level) and graduate-level coursework leading to baccalaureate and master's degrees. The University Centers are designed for students who have completed their Direct Transfer Agreement (DTA) associate degree or most of their general education requirements. Day and evening classes are offered to accommodate the needs of time- and place-bound students. Visit us at www.cwu.edu/welcome/cwu-campus-locations.

For more information about the University Centers, contact Melanie Palm, Director of Operations, University Centers and Continuing Education, at 509-963-1407 or PalmM@cwu.edu.

UNIVERSITY CENTER POLICIES

Admission
Students interested in entering a university center program may submit an application at www.cwu.edu/admissions.

Registration
Continuing students follow the same procedures as noted in the registration part of this handbook. Be sure to study the procedures for MyCWU. Students not admitted to a center program must register in person during open enrollment. Non-matriculated students may register for classes on a space-available basis.

Advising
General transfer advising and specific program advising is available by contacting your university center for an appointment. Final official transcripts must be received for articulation of all transfer courses.

Tuition
See current tuition rates and fees or refer to the Registrar Services home page at www.cwu.edu/registrar. Continuing Education courses are offered on a self-support basis. The self-support tuition schedule is separate from full-time tuition and fees. Visit the Continuing Education web site at www.cwu.edu/ce/. Tuition and fees are subject to change.

Student Services
Information for services that accommodate physical- and learning-disabled students, career placement, or counseling is available by contacting your specific university center.

Financial Aid
Students attending a university center are eligible to apply for financial aid. You can apply online at www.fafsa.ed.gov. For more information about financial aid, visit www.cwu.edu/financial-aid. All students must submit the Free Application for Federal Student Aid (FAFSA) to begin the process.

Veterans
Information on veterans' benefits is available through the Veterans Center on the Ellensburg campus, by calling 509-963-3028, or by emailing va@cwu.edu.

Library
Access to library services is available to students and faculty at the university centers through the CWU Brooks Library, which is available by logging on to www.lib.cwu.edu/. Assistance in acquiring reference materials may also be obtained by calling 800-290-3327. On-site library resource centers are also located at CWU-Des Moines and CWU-Lynnwood.

Textbooks
Textbooks may be purchased through the Wildcat Shop at cwubookstore.collegestoreonline.com. You may also inquire at your individual center for specific information.

Final Exam Schedule
University Centers' final exam dates are different from the Ellensburg campus schedule. University Center instructors establish their own finals calendar. Therefore, University Center students should check with the instructor to verify the appropriate date and time or refer to the syllabus.

Office Hours and Parking
Contact the University Center office regarding office hours as times may vary for each center. Parking permit questions can also be directed to your University Center office.

CWU-Des Moines
At Highline Community College
Higher Education Center, Building 29
2400 South 240th Street
P. O. Box 13490
Des Moines, WA 98198
206-439-3800

Degree Programs:
- BS Accounting
- BS Business Administration
  Specializations in:
  Finance
  Human Resource Management
  Leadership and Management
  Marketing Management
  Supply Chain Management

- BAEd Early Childhood Education/Elementary Education

- BAEd Early Childhood Education/Middle Level Math
- BAEd Early Childhood Education/TESL
- BS Electronics Engineering Technology
- BAS Information Technology and Administrative Management
  Specializations in:
  Administrative Management
  Cybersecurity
  Information Technology

- BS Interdisciplinary Studies - Social Sciences
- BA Law and Justice
- BA Psychology
- MS Law and Justice
- MEd Master Teacher
- MEd School Administration
- MPA Professional Accountancy

Minors:
- Business Administration
- Economics
- Law and Justice
- Psychology
- Sociology
- Sports Business

Other:
- Principal Certification
- Supply Chain Management Certificate

CWU-Everett
At Everett Community College
Gray Wolf Hall
2000 Tower Street
Everett, WA 98201
425-259-8900

Degree Programs:
- BAS Information Technology and Administrative Management
- BS Interdisciplinary Studies - Social Sciences
- BA Psychology - *Online Only*
- BA Sociology - *Online Only*

CWU-Lynnwood
At Edmonds Community College
Snoqualmie Hall
20000 68th Avenue West
Lynnwood, WA 98036
425-640-1574

Degree Programs:
- BA English: Writing Specialization
- BA Law and Justice
- BA Psychology - *Online Only*
- BA Sociology - *Online Only*
- BAS Information Technology and Administrative Management
- BS Accounting
- BS Interdisciplinary Studies - Social Sciences
- BS Bachelor of Science Paramedicine - *Online Only*
- BS Business Administration
  Specialization in Marketing Management
- BS Information Technology and Administrative Management (BS-ITAM) - *Online Only*
- MA Master of Education Higher Education - *Online Only*
- MA Master of Education Literacy - *Online Only*
- MA Master of Education Instructional Leadership - *Online Only*
- MA Master of Education School Administration - *Online Only*
- MPA Professional Accountancy
- MS Master of Science in Health and Physical Education: Athletic Administration Specialization - *Online Only*
- MS Master of Science in Health and Physical Education - *Online Only*

Minors:
- Accounting
- Business Administration
- Economics
- Law and Justice
- Psychology
- Sociology
- Sports Business
- Retail Management and Technology - *Online Only Over Two Summers*

Other:
- Supply Chain Management Certificate
- Global Literacy Development Certificate - *Online Only*
- Reading Endorsement - *Online Only*
- Library Media Endorsement - *Online Only*

CWU-Moses Lake
At Big Bend Community College
Advanced Technology and Education Center
7662 Chanute Street, Room 1843
Moses Lake, WA 98837
509-793-2384

Degree Programs:
- BS Aviation Management
- BS Professional Pilot
- BS Interdisciplinary Studies-Social Sciences
- BA Psychology - *Online Only*
- BA Sociology - *Online Only*
- BAS Information Technology and Administrative Management - *Online Only*

CWU-Pierce County

at Pierce College, Ft. Steilacoom
Olympic 330
9401 Farwest Dr.
Lakewood, WA 98498
253-964-6636

Degree Programs:
- BS Business Administration - Supply Chain Management
- BAEd Elementary Education - Literacy Minor
- BAEd Elementary Education - Early Childhood Education (double major)
- BAEd Elementary Education - choice of minor: Science, Sociology, or Psychology
- BS Interdisciplinary Studies- Social Sciences
- BAS Information Technology and Administrative Management
  - Specializations in:
    - Administrative Management
    - Cybersecurity
    - Information Technology (Hybrid)
- BS Information Technology and Administrative Management
  - Specializations in:
    - Administrative Management
    - Retail Management and Technology
- BS Social Services
- BA Sociology - *Online Only*

Minors:
- Administrative Management - *Summer Online Only*
- Law and Justice
- Psychology
- Retail Management - *Summer Online Only*
- Social Services
- Sociology

CWU-Wenatchee
at Wenatchee Valley College
Higher Education Center
1300 Fifth Street
Wenatchee, WA 98801
509-665-2600

Degree Programs:
- BAEd Elementary Education
- BS Interdisciplinary Studies-Social Sciences
- BAS Information Technology and Administrative Management - *Online Only*
- BA Psychology - *Online Only*
- BA Sociology - *Online Only*

CWU-Yakima
At Yakima Valley Community College
Deccio Higher Education Center
1000 South 12th Avenue, Room 107
P.O. Box 22520
Yakima, WA 98907
509-574-6894

Degree Programs:
- BAEd Elementary Education
- BS Interdisciplinary Studies - Social Sciences
- BAS Information Technology and Administrative Management - *Online Only*
- BA Psychology - *Online Only*
- BA Sociology - *Online Only*

Undergraduate Admissions

General Information
Central offers admission to qualified students as they apply. All applicants must submit a completed CWU online or paper admissions application (the online application is preferred) along with a non-refundable application processing fee of $50. To apply online visit www.cwu.edu and click on Apply Now.

Freshmen applicants that apply for fall quarter will be notified of an admissions decision within four to six weeks. The priority application date for fall quarter application for freshmen and transfer students is March 1. Applications received after March 1 will be processed on a space-available basis. For the most current information and admissions deadlines for other academic quarters, please visit www.cwu.edu/admissions.

Freshmen Applicants
Freshmen applicants (students currently enrolled in high school or high school graduates who have earned fewer than 40 college credits after high school graduation, including Running Start credits) must send official copies of all high school and college transcripts, as well as ACT or SAT scores, to the Office of Admissions.

Applicants with a 3.4 cumulative GPA **or higher** and have satisfied the CADR requirements (see below) will be automatically admitted regardless of ACT or SAT score*. Admission Essay is not required.

**Applicants must still submit an ACT or SAT test scores as they are used for placement in English and Math course at CWU.*

Applicants with a 3.39-3.00 cumulative GPA who have satisfied the CADR requirements will be considered for admission based on grades AND test scores.

For applicants with CADR deficiencies, Admissions will take into account, grade trends, course rigor, senior year course schedule, and ACT/SAT scores. The optional Admissions Essay is recommended.

Applicants with a cumulative GPA of 2.99-2.00 and/or CADR deficiencies will be considered through CWU's holistic Comprehensive Review Process. In this process we consider your responses to essay questions, grade trends, course rigor, senior year course schedule, and

ACT/SAT scores. The optional Admissions Essay is recommended.

The Admission Essay is optional and encouraged for students within the 3.39-2.00 GPA range. See Comprehensive Admissions Review Process foe essay questions.

To be considered for admissions, students must have at least a 2.00 cumulative GPA in high school and any applicable college work.

College Academic Distribution Requirements (CADR)

CADR refers to college admission criteria established by the Washington Student Achievement Council (WSAC). Each school district determines which of its courses meet CADR guidelines. Students are encouraged to take additional courses above and beyond the minimum CADR requirements listed below.

English: 4 credits (including 3 credits of literature and composition)
Math: 3 credits (including algebra I, algebra II and geometry, senior year math-based quantitative course: 1 credit) (Acceptable courses include algebra I, algebra II, geometry, pre-calculus and above, math analysis, statistics, applied math, appropriate career and technical courses, or an algebra-based science course such as chemistry or physics. If you take and pass pre-calculus, math analysis of calculus prior to your senior year, you're exempt from this requirement.
Social Science: 2 credits
Lab Science: 2 credits (one credit required in an algebra based lab science)
World Language: 2 credits of the same world language, Native American language or American Sign Language
1 credit of fine, visual, or performing arts, or electives from any of the other required CADR areas

Central Washington University recommends that students take additional courses beyond the minimum to prepare them for university-level work.

College Credit Earned While in High School

Regardless of the number of college credits completed or if an Associate Degree is earned, students earning college credit while in high school, including coursework taken during summer after graduation, will be considered freshmen for admissions purposes. Running Start students and others with college credit are eligible for all freshmen scholarships and must live on campus for their first year. CWU accepts most college credit earned while in high school, including programs such as:

- Advanced Placement (AP)
- College in the High School
- College Level Examination Program (CLEP)
- CWU Cornerstone
- International Baccalaureate (IB)
- Running Start

Home-school Applicants

A home-schooled student is any applicant who will complete their high school coursework at home and will not receive a diploma from an accredited high school. An applicant is qualified for freshman admission if they:

- Present evidence of their completion of the academic CADR courses by submitting an official home-school transcript. Transcripts must be signed by a parent or guardian in order to be official.
- Submit ACT or SAT scores
- Provide the GED as proof of high school completion. A GED is not required but may be submitted for eligibility for Federal Financial Aid and to participate in varsity athletics.
- Submit any official college transcripts (if applicable). Regardless of the number of college credits completed, students earning college credit in high school will be considered freshmen for admissions purposes as long as they do not take coursework after graduation from high school (excluding summer).

All home-schooled students will be reviewed by the Comprehensive Review Process on an individual basis.

Transfer Applicants

Transfer students who have earned 40 or more college-level credits (27 semester credits) must send official copies of all college transcripts to the Office of Admissions. Generally, transfer students who have completed at least 40 college-level transferable credits with at least a 2.5 cumulative GPA will be admissible. Students who have completed college-level math and English and those who have completed a Direct Transfer Associated degree (DTA) will do better in the comprehensive review process. A current list of DTA degrees is available online at www.cwu.edu/registrar. For current information and application deadlines, visit www.cwu.edu/admissions.

If your GPA is below 2.5 from any previous college attended, you are required to answer the application essay questions, and your application will go through the comprehensive review process. The admissions review committee takes into account your grade trend, the number of transferable credits you have completed, and type of coursework completed, including college-level English and math completion.

Comprehensive Admissions Review Process

Central recognizes that many factors affect grades and test scores, so the university utilizes a comprehensive admissions review process. Freshmen applicants whose cumulative GPA is 2.99 or below and/or who are missing any of the high school CADR requirements, or transfer applicants whose GPA is below 2.5 from any previous

college attended, are encouraged to submit the optional essay portion of the admissions application. The application will go through the comprehensive review process.

The essay questions, included on both the online and printed version of the application, are:

- How have your past experiences influenced your academic record?
- What are you presently doing to ensure your academic success?
- What are your academic goals and how will CWU help you accomplish these goals?

You are encouraged to include your involvement and leadership contributions in your home, school, or community in your essay.

Other students who may be reviewed through the comprehensive review process include those who have not completed high school, earned a General Education Development (GED) certificate, as well as students 25 or older who have poor academic histories and have not attended school recently. Applicants may be required to complete supplemental application forms and/or submit additional information or essays.

International Students

Central welcomes qualified students from other countries. Students demonstrating the greatest potential for success at the university level may be admitted after a thorough review and evaluation of their entire academic background.

Because educational systems vary widely around the world, there is no single, uniform admission requirement for international students. However, they must meet the following minimum requirements for admission purposes:

1. Completion of the academic coursework and national examinations necessary to satisfy admission requirements to colleges and universities in their native country.

2. Competency in English is required before an I-20 can be issued. If English is not their first language, competency in English must be demonstrated through one of the following:

   - English Composition Courses

   Receive a 3.0 (B grade) in each of two college-level English composition courses from an accredited United States college or university. Contact the Office of Admissions at international@cwu.edu to find out what courses are acceptable.

   - Undergraduate English as a Second Language (UESL) Program Recommendation

   Receive a recommendation from CWU's UESL Program after successful completion of their highest level. CWU also offers Conditional Admissions to students who meet all of the requirements other than English proficiency. For more information and application materials visit www.cwu.edu/~esl.

   - Test of English as a Foreign Language (TOEFL)

   Receive a TOEFL score meeting the following criteria:
   A score of 525 or above-Paper-based TOEFL
   A score of 195 or above-Computer-based TOEFL
   A score of 71 or above-Internet-board TOEFL

   - Test of International English Language Testing System (IELTS)
   Receive a IELTS score of 6.0

Students who originate from one of the following countries are considered to have met English Proficiency Standards: Australia, Ireland, New Zealand, United Kingdom, and English-speaking provinces of Canada. These students are exempt from furnishing proof of English proficiency documents.

International students transferring from U.S. institutions must have a minimum grade point average of 2.5 in transferable college level courses and meet the academic requirements for college entrance in their native country.

Please Note: Though not required for admission purposes, adequate financial support, verified by the Confidential Financial Statement form and a current bank letter or scholarship award, is required of all international applicants.

There are three ways of applying to Central Washington University:

1. Apply online. With this option you will submit your application electronically with the online application form and pay your $50 application fee electronically using a credit card.
2. Download and print copies of required application forms. Links to down-loadable forms in PDF (Portable Document File) format are found online on the CWU Web site. Once completed, your forms and supporting documents should be returned to the CWU Office of Admissions in person or through the mail.
3. Request needed forms be sent to your address.

Contact the CWU Office of Admissions at admissions@cwu.edu with your request. Once completed, your forms and supporting documents should be returned to the CWU Office of Admissions in person or through the mail.

All supporting documents should be sent a minimum of 90 days in advance of the quarter for which the applicant seeks admission.

Students who submit international college or university transcripts must have an official course-by-course translation. Evaluation may be done by university personnel or one of the following foreign credential evaluation companies:
Foundation for International Services (FIS) Inc. at www.fis-web.com/cwu.
World Education Services (WES) www.wes.org/students/index.asp.

Re-admission of Former Students

Students who interrupt their CWU studies for one or more quarters (excluding summer) must re-apply for admission to the university and pay the application fee. For more information, check the admissions Web site at www.cwu.edu/~admissions. If the student has attended any institution during his or her absence from CWU, the student must send official transcripts of all post-CWU coursework to the Office of Admissions at the time they re-apply. Eligibility for re-admission will be based on prior academic performance at the university and any courses completed since last attending CWU. If a student left on academic or disciplinary suspension, they should contact the Dean of Student Success for reapplication instructions 30 days prior to the start of the quarter for which the student is applying.

Confirmation of Admission

Students who are offered admission to the university must confirm their intention to enroll by logging on to MyCWU and using the Accept/Decline button in their Admissions Toolbox. This will begin the orientation, registration, and advising process. The university will not withdraw an offer of admission for fall quarter until after May 1. Students who have not confirmed may be denied admission after that time if enrollment limits have been reached. Students who choose not to accept offers of admission must notify the Office of Admissions in writing or use the same Accept/Decline button in their Admissions Toolbox to decline the offer of admission. An offer of admission is only valid for the academic quarter indicated in the acceptance letter. A student who chooses not to accept an offer of admission may reapply for a subsequent quarter.

Withdrawal of Offer of Admission

Offers of admission may be withdrawn by the Office of Admissions if a student's academic work between the time of application and the quarter for which the student has applied results in the student not meeting the admissions criteria.

Non-matriculated Student Application

Students who are not seeking degrees or certificates may be allowed to enroll in courses as non-matriculated students. These students do not need to go through the regular admissions process, but should apply through Registrar Services and may be allowed to register on a space-available basis. Credits earned as a non-matriculated student may not be used to satisfy degree or certificate requirements unless the student applies and is accepted as a matriculated student, in which case a maximum of 45 credits may be applied. Exceptions may be made for non-matriculated students in collaborative certificate programs.

Students who have previously attended Central as matriculated students and have not obtained a degree, and students who have applied and been rejected for undergraduate matriculated status will not be allowed to enroll as non-matriculated students. Non-matriculated students are not eligible for most financial aid, veteran's benefits, or other services regularly provided for matriculated students.

High School Enrichment Program

Students who have not yet graduated from high school may be allowed to enroll as non-matriculated students for courses that they need to advance academically, provided that such academic opportunities are not readily available to them elsewhere.

To be eligible for the High School Enrichment Program, students must have demonstrated superior academic performance or preparation in the area of study for which they are applying. High School Enrichment Program applicants must submit official copies of their high school transcript. Some courses may require that the student submit ACT, SAT, or COMPASS scores in order to qualify for placement into those courses. In addition, they must complete the High School Enrichment application that is available from Registrar Services, and obtain the approval of their high school principal, the course instructor, and Registrar. Regular tuition and fees apply. For further information, please call 509-963-3001 or email reg@cwu.edu.

Central Visitation Program

The Central Visitation program is a student-run program designed to give prospective students an insight into campus life from a student's perspective. Our staff is trained to know all aspects of CWU. The staff understands that visiting campus is one of the most important steps in the college decision-making process.
The Central Visitation program offers a variety of programs to help you explore CWU:

- Campus Tour: Campus walking tours are offered Monday through Friday at 10 a.m. and 2 p.m. Weekend tours are offered Saturday at 11 a.m. by appointment only. Check the Web site for a list of available dates. Tours check in at the CWU Welcome Center and will be shown where to park and where the full tour of campus begins. Tours are expected to last at least one hour and 15 minutes depending on the size of the group.

Please remember to wear appropriate shoes and clothing for the time of year.

- Cat Tracks: Cat Tracks is a day-long, comprehensive visit to CWU. This student-run program is a great way to experience campus life firsthand while learning about a specific program. Space is limited so be sure to sign up early.

Our Central Sampler program offers an extended overnight visit to campus for prospective students. CWU Sampler is designed to give the prospective student a 2-day, 1-night experience on the Central campus. Students have the opportunity to experience:

- Overnight Stay in our Residence Halls including 2 meals
- Tours of the Campus, Dining Hall and Residence Halls
- Admissions Office Welcome and Q and A Sessions with Current Students
- Options to schedule pre-arranged meetings with Admission Counselors, Academic Department representatives and/or Student Support Services staff members
- An Official CWU Welcome Packet

For the most current information, dates, and times, visit www.cwu.edu/admissions or call 509-963-1262.

Transfer Credit

Equivalency Guides and Policies

Central Washington University accepts a maximum of 135 total transfer credits from regionally accredited four-year schools, including a maximum of 105 total credits from regionally accredited community colleges. Credits are evaluated by Registrar Services based on official transcripts. Credits earned in courses numbered 100 and above are generally accepted toward total transfer credits provided the courses require university-level study.

Transfer courses equivalent to CWU courses will apply toward the baccalaureate degree exactly as do the CWU courses for which they are being substituted. Equivalency is established by a course review from the appropriate academic department. Other transfer courses that have not been established as exact equivalents may transfer as general electives and may also be allowed in the degree program with approval from the appropriate academic department chair and, as appropriate, college dean.

Colleges that operate on semester basis give semester credits. Equivalent quarter credits are semester credits multiplied by one and one half.

Credits earned at institutions which are not fully accredited by a regional accrediting association are not accepted. Consideration for exception to this policy may be made by written petition to the dean of the appropriate college after earning a minimum of 45 credits at Central with a cumulative GPA of at least 2.5.

The university recognizes college credit from a number of sources, including Advanced Placement (AP), College Level Examination Program (CLEP), International Baccalaureate (IB), and military educational experience or correspondence credit. Up to 45 quarter credits from these programs may be counted toward graduation.

The university endorses the Policy on Inter-College Transfer and Articulation among Washington public colleges and universities published by the Washington Student Achievement Council. The policy deals with the rights and responsibilities of transfer students, and the review and appeal process in transfer credit disputes. Contact Registrar Services for more detailed information.

Academic associate degrees which are part of the Direct Transfer Agreements (DTA) between the university and Washington community colleges will meet the general education requirement of a bachelor's degree. Community colleges offer several kinds of associate degrees, therefore, students who plan to transfer to the university should check with their counselors to make sure they are enrolled in the appropriate direct transfer degree program.

Associate of science degrees with transfer agreements between the university and Washington community colleges will meet the general education requirements of a bachelor's degree when students complete additional courses at CWU. Transfer students without a transferable associate degree from a Washington community college wishing to complete such a degree must complete it by the time they have completed 45 credits or within one calendar year, whichever comes later, after initial enrollment at Central in order for the AA degree to satisfy the general education requirements at Central. A student cannot earn an associate degree and bachelor's degree in the same quarter.

Academic associate of art degrees from a public community college outside of Washington State, accredited by the Northwest Commission on Colleges and Universities (NWCCU), will meet the general education requirements of a bachelor's degree. Approved degrees are noted on the Registrar website (http://www.cwu.edu/registrar/transfer-equivalencies-policies).

Students transferring to CWU from another Washington State public baccalaureate institution, whose General University Requirements or General Education Requirements were complete at the sending institution, will also satisfy all of the CWU General Education Requirements, provided official documentation is received from the sending institute and certified by CWU.

Advanced Placement Credit

Students may receive credit for advanced placement with a grade of S, depending upon the scores achieved on the College Entrance Examination Board Advanced Placement Test (AP). Students must request that their AP test scores be sent to the Registrar Services at Central. **Scores of 3 or higher on Advanced Placement Examination will be awarded as free electives for departments without specific policy.**

Department	AP Score	CWU Credit
Art 2D	3, 4, 5	Department Electives.
Art 3D	3, 4, 5	Department Electives.
Art History	3, 4, 5	Credit for Aesthetic Experience.
Biology	3	Credit for BIOL 101.
	4, 5	Credit for any two of BIOL 101, 181, 182, 183.
Chemistry	3	Exempt from CHEM 181, 181LAB; credit awarded upon successful completion of CHEM 182.
	4	Exempt from CHEM 181, 181LAB, 182, 182LAB credit for both courses awarded upon successful completion of CHEM 183 and CHEM 183LAB.
	5	Credit for CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB.
Computer Science A	3, 4	Credit for CS 110.
Computer Science A	5	Credit for CS 110, 111.
Computer Science AB	3, 4	Credit for CS 110, 111.
Computer Science AB	5	Credit for CS 110, 111, 301.
Economics		
Micro Economics	3	Credit for ECON 201.
Macro Economics	3	Credit for ECON 202.
English		
Lang and Comp	3, 4, 5	Credit for ENG 101.
Lit and Comp	3, 4, 5	Credit for ENG 105.
Environmental Science	3, 4	Credit for ENST 201.
	5	Credit for both ENST 201 and ENST 202.
World	3	Credit for 251.
Languages (all)	4	Credit for 251, 252.
Maximum 15 total cr.	5	Credit for 251, 252, 253.
Human Geography	3, 4, 5	Credit for GEOG 108
U.S. History	3	Credit for either HIST 143 or 144.
	4	Credit for either HIST 143 or HIST 144, with exemption for majors in the other. (Majors will be required to take an additional 5 credits of upper-division U.S. History.)
	5	Credit for HIST 143 and HIST 144.
World History	3	Credit for either HIST 102 or 103.
	4, 5	Credit for either HIST 102 or HIST 103 with exemption for majors in the other. (Majors will be required to take 5 additional credits in upper division non-Western history.)
European History	3, 4, 5	Credit for Perspectives on World Cultures.
Calculus AB	3, 4, 5	Credit for MATH 172.
Calculus BC	3, 4, 5	Credit for MATH 172 and 173.
Math Statistics	3, 4, 5	Credit for MATH 311.
Music Theory	3, 4, 5	Department Electives.
Physics B	4, 5	.
Physics 1	4, 5	Exemption from PHYS 111, 111LAB.
Physics 2	4, 5	Exemption from PHYS 112, 112LAB, 113, 113LAB.
Physics C		
Mechanics	4, 5	Exemption from PHYS 181, 181LAB, 182, 182LAB.
Electricity and Magnetism	4, 5	Exemption from PHYS. 183, 183LAB.
Political Science		
	3	Political Science elective.
American Govt or Comparative Politics	4	Credit for POSC 101.
American Govt	5	Credit for POSC 210.
Comparative Politics	5	Credit for POSC 260.
Psychology	4	Credit for PSY 101.

College Level Examination Program

Students will be awarded college-level quarter credits with a grade of S for each score at the 50th percentile on the College Level Examination Program (CLEP) humanities, social science/history and natural sciences examinations. These credits will meet the general education requirements in the appropriate areas. Students may also be awarded credit for subject examinations as determined by appropriate academic departments at the time of application for credit.

No more than 45 total quarter credits through CLEP or other sources of nontraditional credit may apply to graduation requirements. CLEP credit is not awarded for English.

College Level Examination Program
CLEP Test Scores for Central Washington University at the 50th Percentile or Above.

	Percentile	Score	CWU Area of Credits Awarded
Calculus w/Elem. Funct.	50th	50	Math 172 and Math 173
Chemistry	80th	63	Chemistry 181, 181LAB
College Mathematics	50th	50	Basic Skills Math
Economics	50th	50	Economics Lower Division
Or Macroeconomics			
Or Microeconomics			
Human Growth and Development	50th	50	Psychology 314
Humanities	50th	50	Literature and the Humanities
Info Systems and Computer Applications	50th	54	Computer Science 101
Intro to Psychology	50th	50	Psychology 101
Intro Ed. Psychology	50th	50	Psychology 315
Intro to Sociology	50th	50	Sociology 107
Natural Sciences	50th	50	Fundamental Disciplines of Phys and BIOL Sciences
Social Science and History	50th	50	Perspectives on the Cultures and Experiences of the US
Western Civilization I	50th	50	History 101
Western Civilization II	50th	50	History 102 or 103
US History I	50th	57	History 143
US History II	50th	54	History 144
World Languages		**Level I**	**Level II**
French Language		50 151, 152 & 153	62 French 251, 252 & 253
German Language		50 151, 152 & 153	63 German 251, 252 & 253
Spanish Language		50 151, 152 & 153	63 Spanish 251, 252 & 253

*CLEP Spanish cannot meet major or minor requirements in the World Language department.

International Baccalaureate

Central recognizes the International Baccalaureate (IB) program as a coherent, challenging course of study and responds individually to each participant's IB transcript for award of college credit. Students may be awarded credit for completing individual areas of study within the program. IB students should submit official transcripts to Registrar Services, which will review the program of study and examination scores with the appropriate department chair. No more that 45 total quarter credits through IB or other sources of nontraditional credit may apply toward graduation requirements.

IB Department		**Exam**		**Score**		**CWU Equivalent**
Biology		HL		5 or 6		BIOL 101
		HL		6+		BIOL 181, 182, and 183
Chemistry		SL		4+		CHEM Elective
		HL		4+		CHEM Elective
		HL		5		CHEM 181 and 182
		HL		6+		CHEM 181, 182, and 183
English		HL		3+		English 101
World Language		SL		3 or 4		World Language 151
		SL		5+		World Language 151 and 152
		HL		5		World Language 251
		HL		6		World Language 251 and 252
		HL		7		World Language 251, 252 and 253
History:		HL		5+		History 101 and (see below)
Americas				5+		History 386
Africa				5+		History Elective/SB-A or SB-B
W. South Asia				5+		History Elective/SB-A or SB-B
E. Southeast Asia				5+		History Elective/SB-A or SB-B
Europe				5+		History Elective/SB-A or SB-B
Philosophy		Theory		Essay		PHIL 201
Physics		HL		5+		PHSY 111, 111L, 112, 112L, 113, 113L
Psychology		HL		5+		PSY 101
SL= Standard Level						
HL= High Level						

Must have High School certificate or degree posted on transcript for credits to be accepted.

Credit for Military Service
Upon submission of Official Military Transcripts, matriculated students may receive up to 30 lower division elective credits, not to exceed 105 credits, for completion of military educational experience as recommended by the American Council on Education. No more that 45 total quarter credits through IB or other sources of nontraditional credit may apply toward graduation requirements.

Non-U.S. College/University Credit
Credit will be accepted from non-U.S. institutions of higher education when (1) it has been earned at an institution linked to CWU either by a bilateral or consortial (e.g., International Student Exchange Program (ISEP) agreement, or when an institution has been certified by the CWU Office of International Studies and Programs as a legitimate, recognized institution of higher education (tertiary level) within a particular country; (2) the student has received a passing grade recognized by the institution; and (3) an official record or transcript has been received by the university.

Degrees Offered
Central Washington University offers the following undergraduate degrees:

Bachelor of Applied Science
Bachelor of Arts
Bachelor of Arts in Education
Bachelor of Fine Arts
Bachelor of Music
Bachelor of Science

Students wishing to earn a BA, BAS, BEd, BFA, BM, or BS degree must complete (1) the general education program; (2) a concentration of at least 60 credits which may be satisfied by a specified major, or a specified major and minor, or a specified major and courses in other fields as prescribed by the major department; (3) electives in sufficient quantity to include 60 upper-division credits to bring the total quarter credits to 180; and (4) other degree requirements as specified in the catalog under Graduation Requirements. Department fields of study are listed by major, minor, or specialization by college on the undergraduate programs offered. Minor concentrations are offered in many fields.

Students wishing to earn a BAEd degree must complete (1) the general education program; (2) a major in Early Childhood Education, Elementary Education or Special Education and minors, when appropriate; (3) the professional education foundation courses; (4) 180 total quarter credits (including 60 upper-division credits); and (5) other general degree requirements as listed under the College of Education and Professional Studies and Graduation Requirements sections in this catalog. Students may select any university minor; however, students are strongly encouraged to select an endorsable teaching minor.

Tuition and Fees

General Tuition and Fees
General tuition and fee rates are established by the State Legislature and miscellaneous fees are set by the CWU Board of Trustees. The tuition rates shown below are an estimate. **All tuition and fees are subject to change without notice.**

Tuition rates for 2015-2016 are not available at this time.

Undergraduate and post-baccalaureate students registering for 10-18 credits:
Quarterly tuition fees for residents of the state of Washington $2,647
Quarterly tuition fees for nonresidents of the state of Washington $6,489

Undergraduate and post-baccalaureate students registering for nine credits or less:
Resident: Each credit, $264.70
Minimum of $529.40
Nonresident: Each credit, $648.90
Minimum of $1,297.80

Graduate (Master's Degree) students registering for 10-18 credits:
Resident graduate: $2,958.00
Nonresident graduate: $6,617.00

Graduate (Master's Degree) students registering for nine credits or less:
Resident graduate: Each credit, $295.80
Minimum of $591.60
Nonresident graduate: Each credit, $661.70
Minimum of $1,323.40

Students registering for more than 18 credits:
Undergraduate and post-baccalaureate,
Resident: Each credit over 18, $242.41
Nonresident: Each credit over 18, $626.61
Resident graduate: Each credit over 18, $273.51
Nonresident graduate: Each credit over 18, $639.41

Continuing Education Tuition and Fees
All courses taught through the Office of Continuing Education are self-supporting. The waiver for veterans, university staff and senior citizens does not apply. Full fee-paying students must make additional payments at the rate established for each continuing education course in which they enroll.

Resident and Nonresident Status
Washington State law concerning resident classification for tuition and fee purposes, RCW 28B.15.012 et seq., requires that a student "(a)(i) have established a bona fide domicile in the state of Washington, primarily for purposes other than educational, for at least one year immediately prior to the beginning of the quarter for which he or she registers at the university, and (ii) be financially independent, or (b) be a dependent student, one or both of whose parents or legal guardians have maintained a bona fide domicile in the state of Washington for at least one year prior to the beginning of the quarter for which the student registers at the university." The term "domicile" denotes a person's true, fixed, and permanent home and place of habitation. It is the place where he or she intends to remain, and to which he or she expects to return when he or she leaves without intending to establish a new domicile elsewhere.

Any change of residency status for a given quarter must be based on written evidence provided by the student on a residency classification questionnaire on or before the first class day of the quarter for which a change of residency is sought. Questionnaires are available through Registrar Services. The burden of proof in all cases rests with the student.

In accordance with RCW 28B.15.014, certain nonresidents are exempted from paying nonresident tuition and fees. To be eligible for such an exemption, a nonresident student must provide documented evidence that he or she resides in the state of Washington, and (a) holds a graduate service appointment, designated as such by the university, involving not less than 20 hours per week; (b) is employed for an academic department in support of the instructional or research programs involving not less than 20 hours per week; or (c) is a faculty member, classified staff member, administratively exempt employee holding not less than a half-time appointment, or dependent child of such a person.

Out-of-state Applicants
To qualify as a Washington State resident, a student must be a U.S. citizen or have permanent resident (resident alien) status. A student must also be either independent and have established a permanent home in the state of Washington for purposes other than education at least 12 months prior to enrollment. Verification will be requested.

The spouse or dependent of a person who is on active military duty, stationed in Washington, can be classified as a resident, for tuition paying purposes, by submitting proof of military assignment. A student cannot qualify as a Washington resident if s/he (or parent, in the case of a dependent) has attended college as a resident of another state within a year prior to enrollment; has received financial assistance from another state, including reciprocity awards, within a year prior to enrollment; or possesses a current out-of-state driver's license, vehicle registration or other document which gives evidence of being domiciled in another state. For further information, contact Registrar Services at 509-963-3001.

Residency questions should be directed to Registrar Services. Residency requirements are subject to legislative change.

Senior Citizens
Senior citizens are encouraged to take advantage of the large variety of courses offered at the university. Persons 60 years of age or older may register as an auditor the first day of class on a space-available basis with permission of instructor. The fee is $5 for a maximum of two courses, not to exceed six credits. Any person utilizing this provision taking more than six credits must pay an additional $25 tuition charge. Credits may not be applied toward meeting requirements for any degree or for increments on any wage or salary scale. Waivers are not available during summer quarter.

Veterans Conflict Grant

Not available summer quarter.
Central Washington University (CWU) offers a Veteran Conflict Grant (amount of available grant is determined each academic year) with the following limitations and requirements:

1. Admission to CWU.
2. DD-214 Member 4 copy showing Honorable Discharge (all grants are awarded on information that that Department of Defense (DOD) codes on each DD-214).
3. Veteran must be a Washington State Resident.
4. Veteran must complete the FAFSA-Financial Aid Application each year.
5. Minimum enrollment must be halftime (6 credits)
6. **The Veteran of Foreign Conflict Waiver/Central Grant can be received for up to 225 quarter credits.**

This grant replaces all other military conflict waivers awarded in the past by CWU. For further information, contact the Veterans Center at 509-963-3028 or e-mail va@cwu.edu or check the website at: www.cwu.edu/veterans.

Children and Spouse of Totally (100%) Disabled or POW/MIA or Deceased Eligible Veterans or National Guard Members

Tuition Waiver: The Washington State legislature established this waiver to honor active and reserve veterans, National Guard members and their dependents. This is a mandatory tuition waiver for the children and spouse of totally disabled or POW/MIA or deceased eligible veterans or National Guard Members. Children, Spouse and Veteran must be Washington State residents.

- Child and spouse of an eligible veteran or National Guard member who became totally disabled;
- Child and spouse of an eligible veteran or National Guard member determined to be a prisoner of war or missing in action;
- Child and spouse of an eligible veteran or National Guard member who lost his or her life;
- Child and spouse must complete the FAFSA-Financial Aid Application each year;
- The Washington State Disabled Veteran Dependent Tuition Waiver can be received up to 200 quarter credits or in the case of the child, until they turn 27 years old.

Child is defined as a biological child, adopted child, or stepchild.

For more information, contact the Veterans Center at 509-963-3028 or email va@cwu.edu, or check the website at www.cwu.edu/veterans.

Washington State Employee Tuition Waiver
Educating the citizens of Washington State is integral to Central Washington University's mission. CWU encourages and supports its employees, as well as non-CWU state employees and others as allowed by law, to continue their education as prescribed through this educational benefits policy. Central Washington University provides educational benefits for Central Washington University faculty, exempt, and classified staff, non-CWU state employees, members of the Washington National Guard, and veterans (as defined by 41.04.005 RCW) who are not eligible for educational benefits from the Veteran's Administration. Eligible employees (CWU and state) must hold appointment to a half-time or more position. In addition, civil service employees must have permanent status (i.e., passed their probationary period). Faculty and exempt employees who are employed half time or more and are expected to be employed for more than six months are eligible on the first day of employment. Eligible CWU employees may take up to eight (8) credit hours of course work per quarter. Washington National Guard, veterans, and non-CWU state employees may take up to six (6) credit hours of course work per quarter. Faculty who are hired on a quarter-to-quarter basis will become eligible beginning with the second consecutive quarter of half-time or more employment. For the purposes of this section, employment of faculty in spring quarter and the following fall quarter may constitute consecutive employment.

Employees who are not eligible for the tuition and fee waiver are: faculty on courtesy appointments; retired faculty, staff, and exempt personnel; and undergraduate and graduate assistants, associates, or others holding positions with student status. An employee who has met university admission requirements and filed proof of eligibility with the Office of the Registrar no less than 15 working days prior to the beginning of each academic term may take up to eight credit hours of coursework for a nominal fee each quarter (summer excluded). Enrollment is subject to space availability only. Enrollment in a closed or wait-listed course under this waiver is prohibited. Refer to CWU academic policy: www.cwu.edu/resources-reports/cwup-2-20-090-waiver-tuition-and-fees for further information.

Tuition Refund Schedule
A continuing student will receive a 100 percent refund of tuition and fees if a complete withdrawal from the university occurs prior to the sixth day of the quarter.
A student will receive a 50 percent refund of tuition and fees if a complete withdrawal from the university occurs on or after the sixth day of the quarter and within 30 calendar days of the beginning of the quarter.

There is no refund of tuition and fees if withdrawal from the university occurs after the 30th calendar day of the quarter.

There is no refund for individual class withdrawals after the change of schedule period.

Tuition and fees may be refunded to students unable to complete coursework as a result of being called to active duty in the Armed Forces of the United States.

Miscellaneous Fee Schedule

Fees are subject to change for the 2015-2016 academic year.

Application for Admission Fee: $50.

Athletic Fee: $56 mandatory fee per quarter for all students. Students with less than 10 credits will be assessed $5.60 per credit. This fee supports student athletics and provides free admittance to all events. Ellensburg campus only.

Audit Fee (without credit): A student enrolling in a course as an auditor is charged regular fees.

Background Check Fee: In order to participate in certain programs/majors a student must arrange for and obtain a criminal background check from the appropriate law enforcement agency. Information regarding the process, requirements, and costs can be obtained through the department offering the program/major.

Breakage Fee: Students enrolled in certain courses are required to pay for any equipment they break. Fees are variable according to the item broken.

Central Transit Fee: $3, mandatory fee per quarter for all Ellensburg students. This provides bus transportation throughout town.

Credit by Examination Fee: Students applying to challenge a course will be assessed a nonrefundable fee of $15 per credit, with a minimum of $30 per course challenge.

Graduation Application Fees: The fee for a baccalaureate degree is $50. The fee for degree reapplication is $20. An additional $12 will be assessed for concurrent degrees and an additional fee of $17 per diploma when requesting more than one diploma for multiple majors.

Health and Accident Insurance: Group insurance is optional. An additional premium will allow student dependents to be covered by medical facilities other than the student health center, which is reserved for student use only. For further information, inquire at the Cashier's Office.

International Studies Application Fee: A fee of $50 per student per quarter for students participating in study abroad or exchange programs.

Late Fee: Students failing to pay their tuition in full by the published deadline are assessed a $50 and $100 late fee.

Late Registration Fee: Students will be charged a $25 per course fee for registration from the sixth through the 10th day of instruction; a $50 fee per course for the 11th day through the 30th day of instruction; and $75 per course after the 30th day. Permission to add courses will still require signature of the instructor or the department chair and the college dean after the 10th day of classes.

Master's Thesis Binding Fee: Students submitting a thesis as part of the requirements for the Master's degree pay a fee of $75 for binding of three copies of their thesis. Two copies are deposited in the library and one copy is given to the student. Students not wishing a copy for themselves will be assessed $50. Any students wanting more than one copy for themselves must make their own binding arrangements for the extra copies.

Parking: Students using the university's parking facilities must purchase a campus parking permit.

Recreation Center Fee: $102 mandatory fee per quarter for all Ellensburg campus-based students enrolled for six credits or more.

Registration Cancellation Fee: Students who register and do not drop their classes prior to the change of schedule period, and have extenuating circumstances that result in a refund of tuition will be assessed a $50 cancellation fee.

Student-in-Training (Liability) Insurance: In order to register for certain courses, a student must arrange for individual student-in-training (liability) insurance purchased either through the CWU business office or through some other agency. Information regarding types of coverage available may be obtained from the department chair or program director.

Student Medical and Counseling Clinic Fee: $88 mandatory fee per quarter for all Ellensburg campus-based students enrolled for six credits or more. Students can see a physician for free regardless of insurance status. Students only pay for testing costs. In order to get this fee waived students must live outside of town or be a CWU employee or staff member.

Student Lobby Fee (WSL): $1, mandatory fee per quarter for all students. This fee supports student lobbying for CWU needs in Olympia.

Supply and Equipment Fees: Students enrolling in certain courses are charged for supplies and equipment not furnished as part of the course.

SURC Building Fee: $69 mandatory fee per quarter for all Ellensburg campus-based students enrolled for 10 credits or more. Students with less than 10 credits will be assessed $6.90 per credit. Students with one credit will be assessed the same as the two credit fee, $13.80. This building is OWNED by the STUDENTS. This fee pays for operational costs such as utilities and monthly lease. When the building was built students voted to pay the cost of the building and that cost is continued through every year that the debt is not paid off.

Technology Fee: $30, mandatory fee per quarter for all students. Students with less than 10 credits will be assessed $ 3.00 per credit. Pays for student's ability to use computers, software, and print on campus.

Transcript Fee: $10 for each copy. $18 for on demand, express mail or FAX copies. All fees are due in advance. A $2.25 credit card fee may apply if ordering through the clearinghouse.

Tuition Nonpayment Fee: Students who have not paid full tuition by the 30th calendar day of the quarter will be assessed a $100 tuition nonpayment fee. A hold will be placed on their student record and they will be liable for 100 percent of tuition and fees. Students will receive notification to their CWU email account. Students must have their student account cleared prior to registering for future quarters.

Web-based Course Fee: $40 per class will be assessed for all Web (WW) courses.

Wellness Fee: $ 11, mandatory fee per quarter for all Ellensburg students. The wellness center promotes healthy decision making and prevention services, confidential support for issues related to alcohol/drugs/sexual violence. It also provides training for students to handle these sorts of situations. In order to waive this fee, students must live outside of town or be a CWU employee or staff.

Financial Obligation
Registering for classes or receiving services for which payment is required will create a CWU account and constitutes a contractual financial obligation according to the rules and regulations of the State of Washington. The student or other CWU account holder agrees to pay for all charges incurred at Central Washington University including but not limited to tuition and fees, housing and dining charges, university store purchases, day care charges, financial aid over-awards, and other miscellaneous charges or fines for services received at the recreation center, the medical and counseling center, the library, parking, special events, or any other CWU service offering. It is the student's or account holder's responsibility to ensure that his/her account is kept current and that payments are made by the published due dates to avoid additional charges. Charges that are not paid by the due dates may be assessed late fees, a 1% interest charge, and all university services may be suspended including admission to or registration with the university, conferring of degrees, and issuance of academic transcripts.

Furthermore, the University or its representative will make reasonable attempts to collect any past due charges by letter, phone, email, or any other reasonable method including text messages as required by the State of Washington.

Enrolled students will receive an email notification when the billing statement is available to view online or a monthly statement if the account holder is not an enrolled student. The account information can only be released to the account holder. Statements are located online through MyCWU account.

Any unpaid balance to the University that is not being paid through a satisfactory payment arrangement, will be placed with an external collection agency and will be subject to additional collection fee of up to 33% of the original debt as allowed by the State of Washington. In addition, if the account goes to litigation, it may be assessed additional attorney and legal fees of up to 40% of the original debt. Accounts placed with outside collection agencies may be reported to all three credit bureaus (Equifax, TransUnion, and Experian).

Financial Aid and Scholarships

Financial Aid
Each year approximately 80 percent of CWU students receive financial aid. To be eligible for federal aid a student must be a U.S. citizen, a permanent resident, or eligible non-citizen.

Financial aid is available to matriculated students seeking a degree or certification in an eligible program. Most financial aid programs require a minimum of half-time enrollment, which is 6 credits at the undergraduate level and 5 credits at the graduate level. Students who have a first baccalaureate degree and are not admitted to a master's program will be classified as a post-baccalaureate student. Post-baccalaureate students are eligible for federal loans.

Students must apply and be accepted for admission to the university (matriculated) to receive financial aid. Students and their families must complete a Free Application for

Federal Student Aid (FAFSA). Paper copies are available in the Financial Aid Office and at most high schools or libraries. The web version is available at www.fafsa.ed.gov.

The application should be submitted to the federal processor as soon as possible after January 1. March 15 is the cutoff date for priority consideration for limited gift aid. Accurate preparation of the FAFSA and timely response to all requests for additional information or documentation are critical.

Students who have been admitted to the university and have listed Central Washington University Title IV code #003771 on the FAFSA will have a student financial aid file delivered to the university electronically. Once that file has been reviewed and verified, the student will receive an award letter.

The award letter will indicate the estimated student budget, the federally determined expected family contribution, and an offer of aid including the type and amount. You must accept or cancel your aid on My CWU. Loans are disbursed quarterly in equal amounts. If you have not already signed a master promissory note, you may sign electronically at www.studentloans.gov.

Students are expected to maintain "good academic standing" while receiving financial aid. A minimum CWU cumulative GPA of 2.0 is required for undergraduates after two years of attendance; post-baccalaureates are required to maintain a 2.0 cumulative GPA; and a minimum cumulative GPA of 3.0 is required for graduate students. Financial aid recipients are required to make reasonable progress toward a degree.

Additional financial aid information is available in the Financial Aid Office, Barge Hall, and room 115; and through the Financial Aid Counselors at certain University Center, at 509-963-1611, finaid@cwu.edu, or on the CWU Financial Aid home page at www.cwu.edu/financial-aid.

Scholarships

Scholarships are gifts of money which do not have to be repaid. Central Washington University's Financial Aid Office (Ellensburg Campus, Barge Hall, room 115) makes available the most recent scholarship application information on the Scholarship page of the CWU website. The CWU General Scholarship Application for the 2015-2016 academic year opens October 1st, 2014 and closes on March 1st, 2015. Make sure to apply online through your MyCWU account using the path *MyCWU>Campus Solutions>Self Service>Scholarship Application*.

Scholarship eligibility is based on a variety of criteria including, but not limited to, academic proficiency, specialized talent, community service, leadership, and financial need. College and departmental selection committees as well as the Financial Aid Office select scholarship recipients. To be fully considered for all scholarship opportunities students should complete the FAFSA (Free Application for Federal Student Aid), www.fafsa.ed.gov, and any college or departmental scholarship applications for which the student is eligible that are available in the Financial Aid Office. In addition, students with talent in athletics, art, music, and/or theatre should contact the department(s) directly for specific audition or exhibition opportunities. Most institutional merit aid is awarded to meritorious students who submit a FAFSA. Need is not always a criteria.

Community-sponsored scholarships include awards for which the recipients are chosen by organizations outside the university. Each organization establishes its own eligibility criteria and application process. More information can be found at the scholarship website www.cwu.edu/scholarships or by contacting the organizations directly. Recipients are to inform the CWU Financial Aid Office if they are receiving an award from a community organization. Checks should be made payable to "Central Washington University." Include student's name and identification number. Send to the CWU Financial Aid Office, 400 East University Way, Ellensburg, WA 98926-7495.

Scholarships are considered an educational funding source and may change a student's eligibility in other institutional, state or federal aid programs.

Academic and General Regulations

Academic Advising

All students are expected to seek, and the university is expected to provide appropriate advising resources. These resources include academic advisors for first-year and undecided students, professional and faculty major advisors, online and transfer advisors, special program advisors, career counselors, advising seminars, workshops, and publications. Academic advising for first-year and undecided students is available at the Exploratory Advising office, located in Hertz 107. Incoming transfer students may contact transferadvisor@cwu.edu to receive initial advising. Professional advising for the Colleges of Arts and Humanities, Sciences, and Education, and Professional Studies is available in the Academic Advising office in Bouillon 205, College of Business advising is located in Shaw Smyser 128. Students pursuing an online major need to contact onlineadvisor@cwu.edu to make contact with their professional advisor. Faculty advisors are available in their respective departmental offices and are also responsible for providing major program advising. Students are encouraged to seek additional academic counsel from various faculty concerning specific areas of interest.

All students are required to meet their assigned academic advisor at the following prescribed points throughout their academic career.

- Every quarter until they have earned over 45 credits. Students will meet with advisors who will assist them with class selection toward major declaration and major admission requirements, as well as appropriate completion of General Education Requirements.
- The quarter after they have earned their 90th credit. Students meet with major advisors to review and discuss major and overall graduation requirements and to develop a degree completion plan.

In addition, students who have not declared their major by the time they have earned their 75th credit or have not completed their Basic Skills General Education Requirements are required to meet with an advisor before they can register for the next quarter.

Admission to Major

All students are expected to seek, and the university is expected to provide appropriate advising resources. These resources include academic advisors for first-year and undecided students, professional and faculty major advisors, online and transfer advisors, special program advisors, career counselors, advising seminars, workshops, and publications. Academic advising for first-year and undecided students is available at the Exploratory Advising office, located in Hertz 107. Incoming transfer students may contact transferadvisor@cwu.edu to receive initial advising. Professional advising for the Colleges of Arts and Humanities, Sciences, and Education, and Professional Studies is available in the Academic Advising office in Bouillon 205, College of Business advising is located in Shaw Smyser 128. Students pursuing an online major need to contact onlineadvisor@cwu.edu to make contact with their professional advisor. Faculty advisors are available in their respective departmental offices and are also responsible for providing major program advising. Students are encouraged to seek additional academic counsel from various faculty concerning specific areas of interest.

All students are required to meet their assigned academic advisor at the following prescribed points throughout their academic career.

- Every quarter until they have earned over 45 credits. Students will meet with advisors who will assist them with class selection toward major declaration and major admission requirements, as well as appropriate completion of General Education Requirements.
- The quarter after they have earned their 90th credit. Students meet with major advisors to review and discuss major and overall graduation requirements and to develop a degree completion plan.

In addition, students who have not declared their major by the time they have earned their 75th credit or have not completed their Basic Skills General Education Requirements are required to meet with an advisor before they can register for the next quarter.

Registration

Currently enrolled students may register for courses by using MyCWU, the web registration system. Registration for new and readmitted students will take place during new student orientation.

Registration for new or readmitted students that did not register during the new student orientation or continuing students that did not register during their designated enrollment appointment, can register during the open enrollment period.

Students may change their schedule during the designated change of schedule period. Students are encouraged to use the MyCWU web registration system to complete all registration transactions.

Registration, in-person, by telephone, or web, obligates students for payment of all tuition and fees. If tuition is not paid by the due date, students will be liable for late fees and for any other reasonable collection costs and charges.

Consult the university calendar or contact the university

center administration office to determine exact dates for early registration, open enrollment, tuition deadlines, and the change-of-schedule period.

Academic Credit
The rule for determining academic credit is: one credit represents a total time commitment of three hours each week of the quarter. A regular load of 15 credits requires 45 hours of work per week. The total time includes class time, studying, conferring with the instructor, writing, performing laboratory work, exercising, or performing any other activity required of students. A minimum of 180 credits is required for a degree.

CWU operates on a quarter system and grants quarter credit. Other colleges operate on a semester basis (i.e., divide the academic year into two parts, exclusive of summer) and give semester credits. Quarter credits can be multiplied by two-thirds to determine equivalent semester credits. Semester credits can be multiplied by one-and-one-half to determine equivalent quarter credits.

Course Numbering and Class Standing
Courses are numbered sequentially from 100 through 700. Those numbered 100 are pre-collegiate and credits earned in such courses are not accepted toward meeting degree requirements. Undergraduate courses are numbered 101 through 499 and graduate courses are numbered 501 and above. Courses numbered 500 are professional development courses and are not accepted toward meeting degree requirements.

Lower Division

Freshman	101 through 199
Sophomore	200 through 299

Upper Division

Junior	300 through 399
Senior	400 through 499

Students may enroll in courses one year ahead of their present status except when otherwise specified in the course description. A student's class standing is determined by the number of credits earned and/or accepted upon transfer. The following table lists the credits required for each class:

Freshman	0-44.9
Sophomore	45-89.9
Junior	90-134.9
Senior	135 or more

Students holding bachelor's degrees are considered post-baccalaureate, if the student is pursuing a second degree or CWU certification program. Students that are admitted to a master's degree program are considered graduate students. Satisfying graduation requirements depends not only on the number of credits completed (a minimum of 180), but also on completion of all other degree requirements.

Student Study Load
Full-time and part-time students are determined by the number of credits for which they register. Full-time undergraduate is 12 credits or more. Three-quarter time undergraduate is 9-11 credits. One-half time undergraduate is 6-8 credits. Full-time graduate is 10 or more credits. One-half time graduate is 5-6 credits.

Undergraduate:
15 credits - Standard undergraduate load
18 credits or fewer - No permission required
19-20 credits - Major advisor and major department chair approval required, or Advising Center for undeclared majors.
Over 21 credits - Major advisor and major department chair approval as well as the appropriate college dean.
A 2.8 or higher cumulative GPA is recommended for students seeking an overload.

Graduate:
15 credits - Normal graduate load
16 credits or less - No permission required
17-19 credits - Major department chair or dean approval required
20 or more credits - Dean of Graduate Studies and Research approval required

Proficiency Requirements
Students will be assessed for placement into ENG 101 and MATH 101 and above upon entering CWU. Students with deficiencies in English usage/reading or mathematical computation must correct them prior to enrolling in ENG 101 or MATH 101 and above. Students should review requisites for courses listed in the catalog. Not having the appropriate pre- or co-requisite may result in being disenrolled.

Seniors in Graduate Courses
Seniors may enroll in graduate-level courses (501 and above) with the approval of both the instructor of the course and the department chair. Credit earned in these courses may meet undergraduate or graduate program requirements, but not both. Students wishing to designate the course for graduate credit must obtain approval from the dean of Graduate Studies and Research.

Auditing a Course
Students eligible to enroll in a course for credit may enroll as an auditor provided space is available and permission is secured from the instructor prior to registration. To receive credit for an audited class, students must enroll for credit in and repeat the same course in a subsequent quarter. Students are assessed full tuition for audited courses. Instructors may not compel auditors to write papers or take examinations, but may insist upon other course requirements. Instructors may request that the college dean withdraw the auditor from the course if these requirements are not met. Students receive neither credit nor grades for audited courses. Course participation requirements are set by the faculty member responsible for the course.

Concurrent Enrollment
Credit for work taken while simultaneously enrolled at CWU and other educational institutions may be transferred to Central. Any student who has obtained an F-1 visa from CWU must obtain permission from the executive director of the Office of International Studies and Programs (or designee) prior to enrolling in any other institution.

University Catalog Choices and Limitations
The official Online Electronic Catalog (OEC) is the university's compilation for all curriculum. Undergraduate catalogs are valid for five years, and may be found at www.cwu.edu. A student should expect to complete general education requirements as listed in the OEC current at the time of first enrollment at either Central or a community college in the state of Washington (provided he or she transfers directly to CWU from the community college and has not attended another four-year institution). The student should also expect to meet the specific requirements of the departments for majors and minors in the OEC current at the time he or she is accepted by the department into the major or minor program.
Graduate students admitted to the master's degree program may use the catalog they are admitted under or the current one.

Leave of Absence
Students will automatically be granted one term leave of absence for fall, winter or spring quarter without reapplying for admission as long as they were enrolled in the previous academic term. A student may petition for consecutive terms of leave by submitting a leave of absence form to Registrar Services. The request may be granted if the following conditions are met:

1. The petition must be submitted at least two weeks prior to the start of the term for which the student is seeking leave.

2. The petition demonstrates that attendance would present an exceptional hardship or loss of opportunity for the student.

Students who are on leave are permitted to register for classes as continuing students at the designated time.

A student who attends another college or university while on a leave of absence must submit an official transcript from the school by the end of the term in which they return to CWU.

Graduate students need to contact the Graduate Studies office at 509-963-3103 for leave of absence information.

Withdrawal from a Course
Peremptory (uncontested) withdrawals will not be permitted after the first six weeks of instruction. Students who withdraw after the change of schedule period from 25 percent or more of the coursework for which they have registered for two or more quarters each academic year are subject to dismissal. Students who have been dismissed under this policy may not enroll for courses without submitting an approved plan of study signed by an academic advisor to the Office of the Provost/Senior Vice President for Academic Affairs. To continue enrollment, the student must satisfactorily complete all credits enrolled during the first quarter of readmission. Students who do not meet this requirement will not be allowed to register for one calendar year.

Peremptory withdrawals will be noted on the student's transcript with "+W." Class rosters will reflect the +W for students who have used their peremptory withdrawal.

Withdrawals after the sixth week of instruction will be granted only for reasons of hardship and then only upon written petition to and written approval by the registrar. The student must contact the course instructor and obtain the faculty member's signature on the hardship withdrawal petition. The signature serves merely to acknowledge the petition and implies neither support nor rejection of the request. The registrar may consult with affected faculty when evaluating a petition and will notify the instructor if the hardship withdrawal has been approved. Hardship withdrawals will be noted on the student's transcript with an "HW" (hardship withdrawal). Hardship withdrawals from individual courses will not be permitted during or after the final examination period.

Conversions of incompletes to withdrawals must be petitioned as if they were hardship withdrawals. They may be changed only upon petition to the registrar. Withdrawals will not be included in calculating grade point averages. There are no tuition refunds in cases of withdrawal from individual courses.

Withdrawal from the University
A student may withdraw from the University for Reasons of illness or other extenuating circumstances at any time prior to finals week. An official withdrawal form is available at Registrar Services or university center offices. A student may not withdraw from the university during finals week except with approval of the registrar. A complete withdrawal from the university will be noted on the student's transcript with a "W." The registrar will notify affected faculty members when a student has withdrawn from the university. Students who plan to leave the university must complete the official withdrawal form, and may need to have an exit interview. Failure to

do so may result in failing grades. There is no refund of tuition and fees if total withdrawal occurs after the 30th calendar day of the beginning of the quarter. See refund policy for specific details.

Military Exigency Withdrawal
Students who have been called into military service of the United States due to a national emergency will be eligible for withdrawal from the university or the granting of credit. The policy does not apply to regular National Guard or Reserve duty or to annual active-duty requirements.

- Students who must withdraw from the University during the first third of the quarter will be granted a total University withdrawal (W).
- Students who must withdraw from the university during the second third of the quarter may request either an uncontested withdrawal (+W) or an incomplete (I) in each course with specified deadline for completion to be determined by the dean in consultation with the instructor or a total university withdrawal from all courses (W).
- Students who must withdraw from the university during the last third of the quarter may request an uncontested withdrawal (+W) or an incomplete (I) or credit if the coursework is satisfactory, to be determined by the dean in consultation with the instructor or a total university withdrawal from all courses (W). If credit is awarded, the instructors must report either a letter grade or a satisfactory (S) for each course depending upon the quality of the student's work. If credit is received and the course(s) complete(s) all requirements for the baccalaureate degree, the degree will be awarded.
- Students being called to active duty will be placed on a leave of absence until their return, at which time they will be reactivated, so they will not need to re-apply to the university or pay the application fee. Students should contact Registrar Services when they are ready to return to Central to ensure a smooth transition.
- In all circumstances, students will be expected to attend classes up to fifteen (15) calendar days prior to induction.
- Students need to contact Registrar Services or their university center office as soon as possible to complete the appropriate paperwork, and to submit a copy of the Federal Activation Orders.

Grading Policies and Regulations
"Grade Points" are assigned to each grade as follows:

Letter Grade	GPA Credit	Transcript Explanation	Definition of letter grade/Policy statement
A A-	4.0 3.7	Excellent	Meets all objectives of the course and fulfills all requirements; performs at a level that reflects excellence
B+ B B-	3.3 3.0 2.7	Good	Meets all objectives of the course and fulfills all requirements; performs at a high level
C+ C C-	2.3 2.0 1.7	Satisfactory	Meets all objectives of the course and fulfills all requirements; performs at a satisfactory level
D+ D D-	1.3 1.0 0.7	Marginal Pass	Makes progress toward meeting the course objectives; fulfills course requirements at a substandard level
F	0	Failure	Fails to meet the course objectives; does not fulfill course requirements

The following symbols are also used. No "grade points" are assigned.

CR	Credit
NC	No Credit
S	Satisfactory
U	Unsatisfactory
AU	Audit
W	Complete withdrawal from The university
+W	Uncontested withdrawal from A course
HW	Hardship withdrawal from A course
I	Incomplete
IP	In Progress
NR	No grade reported
NS	No show

All grades are frozen upon award of degree.

Financial aid may be affected by certain grades and/or grading symbols. It is incumbent upon students to be aware of the impact of all grades on their financial aid. Financial aid information policies are available from the Financial Aid Office.

Incomplete Grade
The "I" grade is used when the student was not able to complete the course by the end of the term, but has satisfactorily completed a sufficient portion of it and can be expected to finish without having to re-enroll in it. The instructor will designate what a student must do to complete the course and set a specific date up to one

calendar year for the completion of the coursework.

If the work is not completed within one (1) calendar year from the last day of the quarter in which the "I" was received, the registrar will automatically convert the "I" to an "F." However, instructors may require the work to be completed prior to the end of the calendar year. In these cases the registrar will convert the grade according to the date indicated by the instructor. It is the student's responsibility to contact the professor and make arrangements to complete the course.
To earn a grade, a student must complete the work for the course as prescribed by the instructor by the indicated date on the incomplete. Students may not re-register for a course in which they receive a grade of incomplete.

All incomplete changes exceeding the one calendar year limit, including extensions, must be submitted by the instructor to Registrar Services for approval.

In-progress Grade
For undergraduate students, the "IP" grade is used when the student was not able to be evaluated by the end of the term, usually because instruction is not yet completed. "IP" is used for special circumstances within programs such as aviation, international studies, and cooperative education.

For graduate students, "IP" is used for thesis, and project study, that normally extend beyond a single term.
All uses of the "IP" grade must be submitted to and approved by the registrar. A letter grade is issued when the course is completed and recorded by the registrar, upon receipt of the Change of Grade form submitted by the instructor. If a grade is not submitted to the registrar within one calendar year, the "IP" will automatically be changed to "F" by the registrar.

Grade Point Average
Grade point averages will be calculated by dividing grade points earned by the credit hours attempted. Here is a typical example:

Course	Credit Hours	Grade	Grade Points Earned
MUS 104	3	C+	(2.3 x 3) 6.9
HIST 143	5	B-	(2.7 x 5) 13.5
PSY 300	5	C	(2.0 x 5) 10.0
COM 207	4	B	(3.0 x 4) 12.0
Totals	**17**		**42.4**

Dividing 42.4 by 17 gives a grade point average of 2.49. In computing cumulative grade point averages, only work attempted at Central will be included in the computation, with the following exception: cumulative grade point average for students in the Teacher Certification Program will include all coursework from all colleges attended. Within the major, minor, and professional education option, grades earned in all allowed courses are used.

Credits earned at other institutions are accepted in meeting degree requirements according to the limits described under bachelor's degree requirements. Graduation with distinction honors shall be based on the GPA of all credits earned at Central and all transfer credits accepted by CWU.

Credit/No Credit Option
Students are urged to use the credit/no credit option as a way to explore academic areas of interest. All students except first-quarter freshmen and students on academic probation may select one class per quarter under this option. A maximum of 15 credits earned in credit/no credit courses may be allowed toward the 180 required for the bachelor's degree.

The courses must be selected from free electives; they must not be courses in general education, major or minor concentrations, or the professional education sequence. Students may designate the course as credit/no credit until the end of the change of schedule period. Courses may not be repeated on a credit/no credit option.

Credits earned under the credit/no credit options are not included in computing the grade point average. The grade recorded on the student's transcript will be "CR" if the course grade is C- or above; if below C-, the entry will be "NC."

Statute of Limitation on Grade Changes
Grade changes may be filed until the end of the quarter following the one in which they were recorded. Spring quarter grades may be changed until the end of the fall quarter.

Grade Reports
A report of the final grades assigned in courses will be available on MyCWU at the end of each quarter. Students may request a hard copy be mailed by contacting Registrar Services or their university center office.

Honor Roll
Undergraduates who achieve a grade point average of 3.5 or higher will be named to the honor roll. To be eligible, a student must complete a minimum of 12 graded credits in the quarter earned. Central will provide honor roll recipient names to student's hometown based on the student's permanent address listed on MyCWU at the end of the quarter. If a student has placed a directory restriction on their record through MyCWU, the hometown newspaper will not be notified of his/her honor roll status. Post-baccalaureate and master students are not eligible for the honor roll. The honor roll status is listed on your unofficial transcript and is posted two to three weeks after grades on the web located at www.cwu.edu/registrar/honor-roll

Grade Appeal Procedure
Students who believe they have been improperly graded should first attempt to resolve the matter with the instructor. If resolution is not achieved, the student may appeal the grievance to the department chair. Failing resolution at that level, the grievance may be submitted to the college dean. Finally, if the grievance is not resolved at the dean level, the student may petition for a hearing with the board of academic appeals. For details, contact the Office of Student Success in Bouillon Hall, room 204 or by calling 509-963-1515.

Repetition of Courses
Some CWU courses are approved for repetition with credit awarded each time the course is taken and passed. Such approval is indicated in the course description in the university catalog. Full tuition is assessed for all repeated courses. Other courses may be repeated under the following conditions:

- Students are allowed to take a course a second time. Students attempting to take the same course a third time may do so only with permission of the course instructor and the department chair. Unless otherwise designated as repeatable, courses may not be taken more than three times without permission of the dean of the college and department chair.
- Credit will be awarded only once, including credit for transfer courses that are repeated at Central.
- When a course is repeated, only the last grade earned will be used in the computation of the cumulative and major grade point averages. All grades will remain in the student's official record.

Any CWU course repeated at another institution is subject to the following requirements:

- May be transferred in for CWU credit.
- Will be used in calculating both the CWU and the transfer GPA.

Scholastic Standards
Academic standards are established by the faculty. The dean of student success has responsibility for implementing these standards. A student's academic standing appears on the quarterly grade report or unofficial transcript located on MyCWU. Questions about academic standing should be directed to the Office of Student Success (Bouillon Hall, room 204).

Good Standing: A student is in good standing when both the quarterly and cumulative grade point averages (GPA) are 2.0 or higher.

Academic Warning: A student who has been in good standing will be placed on academic warning when the GPA for the previous quarter is below 2.0.

Academic Probation: A student who has been on academic warning will be placed on academic probation if either the quarterly or cumulative GPA is below 2.0.

Academic Suspension: A student who has been on academic probation will be placed on academic suspension if the GPA for the previous quarter is below 2.0. If the GPA for the previous quarter is 2.0 or above, but the cumulative GPA remains below 2.0, the student will remain on academic probation.

Immediately after grades are submitted, the dean of student success or designee(s) reviews the academic files of all suspended students and makes one of three decisions:

- The student may be allowed to register for one more quarter with an academic standing of probation.
- The student may be allowed to submit a petition presenting evidence of circumstances beyond the student's control which adversely affected the student's performance during the preceding quarter(s). If the petition presents convincing evidence of such extenuating circumstances, the student may be referred to the academic standing committee. The committee will hear the student's case and may decide to allow the student to enroll for one more quarter on academic probation.
- The student may be denied enrollment for one year, following which a written petition for readmission must be presented to the dean of student success; however, readmission is not guaranteed.

A letter will be sent to the student informing him or her of the dean's decision.

Academic Forgiveness
An undergraduate student may petition the registrar in writing for academic forgiveness if all of the following criteria are met:

1. The student returned to CWU after an absence of at least five years;
2. The student's CWU cumulative GPA at the time of leaving CWU was below 2.0; and
3. The student has earned at least a 3.0 GPA in at least 45 credits since returning to CWU.

If academic forgiveness is granted, the previous credits and grades at CWU will remain on the student's transcript but will not be used in the calculation of the cumulative GPA, and the student will be placed on good standing. Only the grades earned since returning to CWU will be used in computing the CWU cumulative GPA.
The student may request a review of the registrar's decision by the board of academic appeals and academic standing. A petition for academic forgiveness may be granted only once. Unless academic forgiveness is granted, the GPA at CWU will include all CWU grades for

all courses. The forgiveness policy does not extend to calculating GPA of major or to honors.

Class Attendance and Participation
Instructors may require regular class attendance. The first day of the quarter is the first day of instruction listed in the university calendar. An instructor may drop a student from the class by notifying the registrar if the student has failed to attend the class by the end of the third day of the quarter or the first class meeting if the class does not meet during the first three days of the quarter. Students enrolled in web courses should make a post on blackboard/Canvas within the first three days of classes to endure they are not dropped for non-attendance. Students are responsible for checking their schedules by the fifth day of class to ensure their class schedule is correct.

A student who does not meet course prerequisites may be required to drop the course. Instructors are not required to offer makeup work for missed classes, including those missed during the change of class schedule period, regardless of student course enrollment status.

Sponsors of university-approved activities requiring absence from campus will prepare and sign an official list of the names of those students who plan to be absent. It is each student's responsibility to present a copy of the official list to the appropriate instructors and make arrangements prior to the absence(s). Instructors are encouraged to make accommodations.

Members of the university community directing or arranging such activities must adhere to the following guidelines:

a. Scheduling of such activities shall not overlap with official final examination periods.
b. Scheduling of such activities shall not require an absence of more than three (3) consecutive class days.
c. Scheduling of such activities shall be announced to the students' far enough in advance for them to plan to fulfill course requirements.
d. Seeking permission for an exception lies with the sponsor and not with the student(s).

Athletic Participation
Central Washington University athletics is governed by the rules of the NCAA Division II and the Great Northwest Athletic Conference. Further information on those rules is available through the Athletic Office, or the office of the faculty athletic representative. University academic requirements for participation require the student athlete to meet the requirements of those athletics organizations as well as:

- Maintain a 2.00 a cumulative grade point average at all times
- Not be in probation status
- All incoming freshmen and transfer students must complete HED 205 - Drugs and Sport by the end of their third year (or junior status) in order to remain eligible for participation in varsity sports.

Course Challenge (Credit by Examination)
Under certain circumstances, the university may award credit or waive requirements based on course challenges or prior learning experience. Matriculated students enrolled on a full-time basis may challenge any course which appears on the current course challenge list. The following rules apply:

- A course challenge application form, available in Registrar Services, must be completed.
- A fee of $15 per credit, with a minimum of $30 per course, must be paid.
- The challenge is conducted according to procedures established by the appropriate department.
- The result of the course challenge is recorded as "S" or "U" on the transcript and is not used in computing GPA.
- The application to challenge a course will be denied if credit for the course has been received previously at this or another college, the course was previously failed, the student previously withdrew from the course, the course was previously unsatisfactorily challenged, audited or if registration was canceled.
- Credit by examination will not be allowed toward meeting the residence study requirements by the university (see Graduation Requirements section).
- Graduate students who have been admitted to a graduate program must obtain permission from the dean of Graduate Studies and Research, their advisor and the course instructor to challenge it.

Course Challenge List
Special courses such as Individual Study, Special Topics, Cooperative Education, Workshops, and Seminars may not be challenged for credit.
Accounting: no courses are offered for challenge
Aerospace Studies: no courses are offered for challenge
Administrative Management: 201 and 271
Anthropology: all undergraduate courses with chair's approval
Art: all undergraduate courses with chair's approval, except 101
Aviation Management and Aviation Professional Pilot: all courses with departmental approval
Biological Sciences: no courses are offered for challenge
Chemistry: all undergraduate courses, except laboratory courses
Communication: no courses are offered for challenge
Computer Sciences: all undergraduate courses with chair's approval
Early Childhood Education: no courses are offered for

challenge
Economics: no courses are offered for challenge
Education: all undergraduate courses with chair's approval
English: no courses are offered for challenge
Engineering Technologies, Safety, and Construction: all undergraduate courses with chair's approval
Environmental Studies: no courses are offered for challenge
Ethnic Studies: all 100 and 200 level courses with the director's approval
Family and Consumer Sciences: FCSA 280
Finance: no courses are offered for challenge
Geography: no courses are offered for challenge
Geology: no courses are offered for challenge
Health Education: HED 101
History: 101, 102, 103, 143, and 144
Humanities: 101, 102, and 103
Information Technology: 101, 228, 248, 258
Law and Justice: no courses are offered for challenge
Management: no courses are offered for challenge
Mathematics: all undergraduate courses numbered above 170
Military Science: all 100 and 200 level courses.
Music: all undergraduate courses except applied lessons, class lessons, and performing groups
Nutrition: NUTR 101, 240, 240LAB, 340, 340LAB, 341, 345, 348, 440, 440LAB, 441, 442, 443, 444, 445, 446, 447, and 448
Paramedics: EMS 245, 250, 440, 441, 443, 444, and 451
Philosophy: all undergraduate courses
Physics: no courses are offered for challenge
Political Science: no courses are offered for challenge
Psychology: all undergraduate courses with the chair's approval
Recreation and Tourism: no courses are offered for challenge
Religious Studies: all undergraduate courses
Safety Education: no courses are offered for challenge
Social Science: no courses are offered for challenge
Sociology: all 100 and 200 level courses with the chair's approval
Theatre Arts: no courses are offered for challenge
World Languages: all undergraduate courses with chair's approval

Course Substitutions
Students may petition the appropriate department chair if they wish to substitute courses within degree requirements. The course used for substitution must be similar in content to the required course. The substituted course(s) credits may not reduce the total required credits. Permit to Substitute form can be obtained from Registrar Services.

Academic Appeal
The student should be aware that procedures have been established to hear complaints regarding academic matters. The board of academic appeals exists to guarantee due process for academic grievances involving students, faculty, staff, and administrators. The academic appeals policy is established by the faculty senate and is administered by the dean of student success.

Required Participation in Assessment Activities
Students are required to participate in assessment activities at several points during their academic careers. They will be assessed for placement into English 101, Math 101, and above upon entering CWU as first-year students. Students with deficiencies in English usage/reading or computation must correct them prior to enrolling in ENG 101 or MATH 101 and above, respectively. Departments may establish their own requirements as long as they meet or exceed university standards. Departments may also require students with deficiencies to correct them before being accepted into their major.

Unless otherwise stated, all courses at CWU are taught in English.

Once accepted, international students may be evaluated by the ESL staff to determine whether additional English-as-a-Second-Language coursework will be required during attendance at CWU.

Students will participate in an assessment of intended student outcomes of the general education program. End-of-major assessments are required prior to graduation.

Graduation Requirements

Students are eligible for awarding of a bachelor's degree when they fulfill the following requirements.

Credits

- A minimum of 180 quarter credits is required for a baccalaureate degree; students should note, however, that some bachelor's degrees have requirements in excess of 180 credits. Central allows a maximum of 135 quarter (90 semester) credits to transfer from regionally accredited four-year institutions, including no more than 105 quarter (70 semester) credits of lower division (100-200 level) coursework from a regionally accredited community college. Additional coursework that exceeds this amount may be used to meet specific requirements, but additional credits will not be allowed to count toward the 180 credit requirement for graduation.
- A minimum of 60 credits of upper-division study is required. Upper-division courses are numbered 300 and 400. Credits earned in study at the lower division (courses numbered 100-299) will not be allowed toward meeting this requirement.
- Students must study on the university campus, through CWU online course, or at an established university center at least three quarters and earn a minimum of 45 credits. Credits earned through industrial experience, military experience, or through credit by examination may not be used to meet residency requirements.
- Up to 45 credits may be counted from course challenge or other prior learning assessments.
- Transfer students must earn a minimum of 10 credits in the major and, if a minor is declared, 10 credits in the minor from CWU.
- Cooperative education courses will apply toward graduation requirements, but in no case will a student be allowed to count more than 10 credits at the 290 level nor more than 20 total credits toward graduation requirements. No more than 10 credits are accepted in transfer. No more than eight credits may be applied to a graduate degree. Cooperative education courses may be repeated if field experience learning objectives and activities are distinctly different from previous work or field experience.

Degree Components

- The general education program must be completed as defined in the university catalog.
- Students transferring from Washington State community colleges holding the appropriate academic direct transfer associate degree will have met the general education program requirements.
- Completion of all requirements for a major as specified by the appropriate department, as defined in the university catalog, is required.
- Completion of a minor is required when the major is less than 60 credits. In that case the total credits of the major and minor must total a minimum of 60 credits.
- World language requirement: students seeking the Bachelor of Arts (BA) degree must complete one year college/university study of a single World language or have completed two years high school study of a single World language.
- All professional education programs require completion of professional education courses in addition to completion of the major requirements.
- A student may be awarded more than one baccalaureate degree (BA, BAEd, BFA, BMUS, and BS) at the same time provided that requirements of both the degree programs have been completed. Double majors within the same baccalaureate program do not constitute separate baccalaureate degrees. In disciplines offering multiple baccalaureate degrees with identical or similar names, e.g., BA or BS in Biology, only one degree will be awarded. Exceptions to this policy require approval by the department chair and the appropriate dean.
  Source URL: http://www.cwu.edu/resources-reports/cwup-5-90-050-graduation-requirements-bachelor%E2%80%99s-degrees

Scholastic Requirements

Graduation and graduation with honors are based on credits and grade point averages (GPA) earned at the time the degree is awarded. When a degree is awarded the academic record is frozen and no grade changes may be performed. Final responsibility for meeting graduation requirements resides with the student.

- In order to graduate, students must have achieved a cumulative grade-point average of at least 2.0 (C) in courses taken at CWU.
- Students must also have achieved a cumulative grade point average of at least 2.25 in the major and 2.0 in the minor field of study. All courses fulfilling the major and minor requirements, including courses accepted in transfer, are used in computing the major and minor GPA.
- Before a degree is awarded students must be in good academic standing and cannot be on academic suspension.

- Specific degree and professional certification programs may have more stringent degree requirements than those specified above.

Teacher Preparation Program

- Cumulative grade-point average of at least 3.0 for the last 45 graded credits, OR an overall (all colleges attended) cumulative grade point average of 3.0.
- Grade point average of at least 2.5 for major, minor and professional education sequence.

Application for Degree

Degrees are not automatically awarded when requirements are completed. It is the responsibility of the student to apply for the degree in Registrar Services. Application for the bachelor's degree must be submitted by the second Friday of the quarter preceding the quarter in which the degree is to be completed. Complete instructions and deadlines are available in Registrar Services and through university center offices. Step-by-step instructions may be found at www.cwu.edu/registrar/degree-checkout.

Final responsibility for meeting graduation requirements and deadline dates resides with the student.

Exceptions to university graduation requirements must be petitioned to the registrar. An exception approval may be obtained from the general education committee, department, or program chair and college dean where appropriate. Exceptions to majors or minors and Teacher Certification Programs must be approved by the appropriate department chair and college dean or designee.

Commencement Participation

Students who have met graduation requirements during the current academic year, summer through winter quarters, and those expecting to meet the requirements during the current spring quarter or upcoming summer session, may participate in the spring commencement ceremony.

Students must complete the online commencement registration form located on the Wildcat Shop's home page at cwubookstore.collegestoreonline.com prior to the published commencement participation deadline. Students should also review the information on the commencement website located at www.cwu.edu/commencement for the most current information on the commencement activities and procedures.

Students participating in commencement exercises must wear commencement regalia approved by the commencement committee. Exceptions to commencement procedures are approved by the commencement committee.

Students anticipating graduation the summer quarter following commencement exercises may participate in the commencement ceremony. Candidates for summer graduation who wish to participate in the spring commencement ceremony prior to issuance of a degree must submit an application for graduation prior to the spring quarter deadline and complete degree requirements by the end of summer quarter. Candidates who have applied for their degree the summer following the June commencement ceremony are not eligible for honors distinction nor will their degree be published in the commencement book until the following academic year.

Graduation with Distinction

The following conditions must be met in order to be considered for graduation with distinction:

- At least 75 of the credits required for the degree must be earned at Central with a minimum of 60 credits in courses taken on the A-F grading scale.
- Credits earned by course challenge, CLEP, and other national examinations, military experiences or courses, non-college courses, and industrial experience will not be allowed toward the 75-credit eligibility requirement.
- Honors shall be based on the GPA of all credits earned at Central and all transfer credits accepted by CWU.

Baccalaureate honors are awarded to recipients of a first bachelor's degree according to the following standards:

3.5 to 3.69 - cum laude
3.7 to 3.89 - magna cum laude
3.9 to 4.00 - summa cum laude

Cum laude, magna cum laude, and summa cum laude will be noted on the recipient's diploma and university transcript.

For spring quarter degree candidates, the registrar will calculate the top percentage for the declared spring degree candidates based on the end of winter quarter data. Commencement honor tassels will be determined based upon the most recent data available. Final determination of honors will be made after the spring quarter graduation ceremony when all grades are recorded.

Students completing degree requirements during the summer, will not be eligible for honors recognition until the following spring commencement ceremony.

Other Distinctions

- At least 75 of the credits required for the degree must be earned at Central with a minimum of 60 credits in courses taken on the A-F grading scale.

President's Scholars are those students who have cumulative GPAs in the top one percent of their respective college class. That GPA is calculated by existing university policy.

Dean's Scholars are those students who, in the current academic year, have cumulative GPAs in the top 5 percent of their respective college class (but not including the top 1 percent). GPA is calculated by existing university policy.

NOTE: Individual study majors will be computed with the College of Arts and Humanities majors.

Concurrent Baccalaureate Degrees
A student may be awarded more than one baccalaureate degree (BA, BAEd, BAS, BFA, BM, and BS) at the same time provided that requirements of both degree programs have been completed. Double majors within the same baccalaureate program do not constitute separate baccalaureate degrees except in cases where the second degree requires 60 or more credits that do not satisfy any degree requirements of the first degree.

In disciplines offering multiple baccalaureate degrees with identical or similar names, such as BA and BS in biology, only one degree will be awarded. Exceptions to this policy require approval by the department chair and appropriate dean.
Source URL: http://www.cwu.edu/resources-reports/cwup-5-90-0403-concurrent-baccalaureate-degrees

Second Baccalaureate Degree
Qualified students seeking second baccalaureate degrees are admitted to post-baccalaureate status; this does not mean, however, that they are enrolled in an "advanced degree program." To receive a second baccalaureate degree, students must complete: (1) all degree requirements not satisfied by the previous degree, and (2) a minimum of 45 quarter credits from Central.

Second baccalaureate students must be accepted into a degree or certificate program by the time they have earned 25 credits beyond their last degree. Once a degree objective has been declared, second baccalaureate students must develop graduation plans with academic advisors. Academic department chairs may grant extensions beyond the 25-credit limit. Second baccalaureate degree students follow regulations applicable to undergraduates.

Second baccalaureate degree students may request from the department that any requirement of a minor be satisfied by the initial bachelor's degree earned provided that the requirements of the minor were completed in prior course work.

CWU reserves the right to review a post-baccalaureate student's transfer work to determine fulfillment of requirements.

Policies and Procedures

Policies and Procedures can be found on the CWU webpage at www.cwu.edu/resources-reports/

- Academic Appeal Procedures CWUP 5-90-010(3)
- Alcohol and Drug Policy CWUP 2-40-030
- Discrimination Complaint and Resolution Policy CWUP 2-35-070
- Equal Opportunity Policies and Programs CWUP 2-35
- Family Educational Rights and Privacy Act (FERPA) CWUP 2-20-070
- Reasonable Accommodation of Persons with Disabilities - Students CWUP 2-35-040(2)
- Students Rights and Responsibilities Policy WAC 10-120
- Student Sexual Assault Response Policy CWUP 8-40-050

Disclaimer: all policies and procedures are reviewed biannually by the University Policy Advisory Committee (UPAC).

2015-2016 General Education Program

MISSION, RATIONALE, AND STUDENT OUTCOMES
The general education program offers undergraduate students a liberal arts education in order to cultivate thoughtful and responsible persons and citizens, to prepare them for the world of work and to teach them to pursue knowledge for its own sake. In order to accomplish those broad goals, the general education program seeks to promote effective reasoning, broad and deep learning, and the inclination to inquire.

Effective Reasoning
A comprehensive liberal education helps students to develop their abilities to recognize and to think clearly about important issues and questions. The ability to think clearly involves fluency in reading, writing and oral communication, as well as mastery of the basic principles of logical, mathematical and scientific reasoning.

Broad and Deep Learning
A liberally educated person should possess a rich and broad fund of meaningful knowledge as well as the ability to compare and integrate new or different areas of knowledge in fruitful ways. To that end, the general education curriculum imparts a broad understanding of the various liberal arts and sciences and the ways that those arts and sciences evolve. In much the same way, the curriculum aims to foster an appreciation of diversity as a rich source of new ideas and opportunities for learning. Through such studies, students may comprehend the interconnectedness of knowledge and the importance of integrating knowledge gained from disparate parts of the curriculum.

The Inclination to Inquire
An education in the liberal arts fosters a student's commitment to seek out and acquire important knowledge and skills, both for their intrinsic value and for the good they contribute to our common and individual lives. For this reason, a disposition to ask incisive and insightful questions is perhaps the surest sign of a liberally educated mind.

The general education requirement offers a basic knowledge of mathematics and the natural sciences, including laboratory experience, intermediate knowledge of at least one world language, the study of the humanities, the political, philosophical and cultural history of world civilizations, and the foundations and principles of American society.

This mission statement reflects the standards promulgated by the American Academy for Liberal Education and CWU's Mission Statement.

General Education Program Goals

1. Students will become thoughtful and responsible members of society and stewards of the Earth.
2. Students will respect diversity of background, experience and belief, and will value the different perspectives that this diversity brings.
3. Students will achieve fluency in reading, writing, oral communication and information technology.
4. Students will master the basic principles of logical, mathematical and scientific reasoning.
5. Students will develop an appreciation of the breadth and depth of scientific and humanistic knowledge.
6. Students will develop a sense of the interconnectedness of knowledge.
7. Students will integrate knowledge from diverse fields of study in order to solve real-world problems.
8. Students will become aware of the manifold ways that knowledge evolves.
9. Students will develop a disposition to ask incisive and insightful questions.

Assessment of the General Education Program

1. Students will be surveyed as to how well they think their courses addressed the mission of the general education program.
2. Instructors will be surveyed as to how well they think the courses addressed the mission of the general education program.
3. Student achievement in general education classes will be evaluated regularly by means of examinations.

All courses taken to satisfy general education requirements must be taken for a letter grade.

BASIC SKILLS REQUIREMENT

All students must satisfy the following requirements in basic academic and intellectual skills:

1. Academic Advising
Only required of students who enter Central with fewer than 45 credits.

- UNIV 101 - Academic Advising Seminar **Credits:** (1)

2. English Comp I
A grade of C- or higher is required in ENG 101 before ENG 102 may be taken.

- ENG 101 - Composition I: Critical Reading and Responding **Credits:** (4)

3. English Comp II

- ENG 102 - Composition II: Reasoning and Research **Credits:** (4)

4. Mathematics

Select one from the following:

- FIN 174 - Personal Finance **Credits:** (5)
- MATH 101 - Mathematics in the Modern World **Credits:** (5)
- MATH 153 - Pre-Calculus Mathematics I **Credits:** (5)
- MATH 154 - Pre-Calculus Mathematics II **Credits:** (5)
- MATH 164 - Foundations of Arithmetic **Credits:** (5)
- MATH 170 - Intuitive Calculus **Credits:** (5)
- MATH 172 - Calculus I **Credits:** (5)

5. Reasoning

Select one from the following:

- CS 105 - The Logical Basis of Computing **Credits:** (4)
- ECON 130 - Foundations for Business Analytics **Credits:** (5)
- MATH 102 - Mathematical Decision Making **Credits:** (5)
- MATH 130 - Finite Mathematics **Credits:** (5)
- PHIL 150 - Critical Thinking **Credits:** (5)
- PHIL 201 - Introduction to Logic **Credits:** (5)

6. Computer Fundamentals

Select one from the following:

- BUS 102 - Business Computer Skills **Credits:** (4)
- CS 101 - Computer Basics **Credits:** (4)
- IT 101 - Computer Applications **Credits:** (3)

7. Foreign Language

- 2-years high school or 1-year college (One year of college or university study of a single foreign language or two years of high school study of a single foreign language. Courses used to satisfy this foreign language basic skills requirement may not be used to satisfy the Philosophies and Cultures of the World breadth requirement).

All students

All students must have met these basic education requirements by the end of the quarter in which they complete 75 credits. (This does not include the foreign language basic skills requirement, which may require more time to complete.) Students who do not meet this standard will have a hold placed on further course registration. To remove the hold, the student must meet with an advisor and submit a program of study to plan successful completion of this requirement. The student's progress will then be monitored by an assigned academic advisor.

Williams O. Douglas Honors

Students in the William O. Douglas Honors program should check with their advisor regarding the General Education requirements.

WRITING REQUIREMENT

Four (4) of the courses taken to fulfill the breadth requirement must have the writing designation in the list below. These are courses which include at least 7 pages of assigned writing that is assessed for content and mechanics (grammar, spelling, punctuation, and organization).

BREADTH REQUIREMENT

I. ARTS AND HUMANITIES

Students must take at least one course from each of the three groups. No more than one class from a single department may be counted toward this requirement.

Literature and the Humanities

A grade of C- or better is required in ENG 101 before taking any of the courses in this category.

- ABS 110 - Expressive African American Culture **Credits:** (5)
- ENG 105 - The Literary Imagination: An Introduction to Literature **Credits:** (5) (Fulfills Writing Requirement)
- ENG 247 - Multicultural Literature **Credits:** (5) (Fulfills Writing Requirement)
- ENG 347 - Global Perspectives in Literature **Credits:** (5) (Fulfills Writing Requirement)
- HUM 101 - Exploring Cultures in the Ancient World **Credits:** (5) (Fulfills Writing Requirement)
- HUM 102 - Exploring Cultures From 16th through 19th Centuries **Credits:** (5) (Fulfills Writing Requirement)
- HUM 103 - Exploring Cultures in Modern and Contemporary Societies **Credits:** (5) (Fulfills Writing Requirement)

The Aesthetic Experience

- ART 101 - Introduction to Western Art **Credits:** (5)
- ART 102 - Introduction to Non-Western Art **Credits:** (5)
- ART 103 - Art Appreciation **Credits:** (4)
- FVS 250 - Introduction to Film and Video Studies **Credits:** (5) (Fulfills Writing Requirement)
- MUS 101 - History of Jazz **Credits:** (5)
- MUS 102 - Introduction to Music **Credits:** (5)
- MUS 103 - History of Rock and Roll **Credits:** (5)

- PED 161 - Cultural History of Dance **Credits:** (4)
- TH 101 - Appreciation of Theatre and Film **Credits:** (4)
- TH 107 - Introduction to Theatre **Credits:** (4) (Fulfills Writing Requirement)
- TH 375 - Asian Drama **Credits:** (4) (Fulfills Writing Requirement)
- TH 382 - Diverse Experiences in American Drama **Credits:** (4) (Fulfills Writing Requirement)

Philosophies and Cultures of the World

- World Languages 251, 252, or 253. Second-year World Language (same as studied in high school) **Credits:** (5)
  OR World Languages 151, 152 or 153 or CHIN 141, 142, or 143. First-year World Language (different than the one used to meet basic skills requirement) **Credits:**(5)
- PHIL 101 - Philosophical Inquiry **Credits:** (5) (Fulfills Writing Requirement)
- PHIL 202 - Global Ethics **Credits:** (5) (Fulfills Writing Requirement)
- PHIL 209 - Asian Philosophy **Credits:** (5) (Fulfills Writing Requirement)
- PHIL 210 - Current Ethical Issues **Credits:** (5) (Fulfills Writing Requirement)
- PHIL 306 - Environmental Ethics **Credits:** (5) (Fulfills Writing Requirement)
- PHIL 378 - Philosophy of Love **Credits:** (5) (Fulfills Writing Requirement)
- RELS 101 - World Religions **Credits:** (5) (Fulfills Writing Requirement)
- RELS 201 - Sacred Books of the World **Credits:** (5) (Fulfills Writing Requirement)

II. SOCIAL AND BEHAVORIAL SCIENCES

Students must take at least one course from each of the three groups. No more than one class from a single department may be counted toward this requirement.

Perspectives on the Cultures and Experiences of the United States

An introduction to the institutions, cultures, and traditions of the United States intended to encourage a critical and analytical understanding of how the past affects the present and the future. An introduction to the complexities of social, economic, and political processes, issues, and events in the United States intended to provide a context for informed decision-making and citizenship.

- AIS 101 - Pre-contact Period of American Indians, Pre-AD 1492 **Credits:** (5) (Fulfills Writing Requirement)
- AIS 102 - Contact Period of American Indians **Credits:** (5) (Fulfills Writing Requirement)
- AIS 103 - Emergence of Contemporary American Indians **Credits:** (5) (Fulfills Writing Requirement)
- COM 202 - Communication Ethics and the First Amendment **Credits:** (5)
- ECON 101 - Economic Issues **Credits:** (5)
- ECON 201 - Principles of Economics Micro **Credits:** (5)
- ETS 101 - Ethnic Awareness **Credits:** (5) (Fulfills Writing Requirement)
- HIST 143 - United States History to 1865 **Credits:** (5) (Fulfills Writing Requirement)
- HIST 144 - United States History Since 1865 **Credits:** (5) (Fulfills Writing Requirement)
- LAJ 102 - Introduction to Law and Justice **Credits:** (5)
- POSC 210 - American Politics **Credits:** (5)
- SOC 101 - Social Problems **Credits:** (5) (Fulfills Writing Requirement)
- SOC 305 - American Society **Credits:** (5) (Fulfills Writing Requirement)
- WGS 201 - Introduction to Women's and Gender Studies **Credits:** (5) (Fulfills Writing Requirement)
- WGS 250 - Introduction to Queer Studies **Credits:** (5) (Fulfills Writing Requirement)

Perspectives on World Cultures

An introduction to institutions, cultures, and traditions of nations, groups, and societies outside the United States intended to encourage an understanding and appreciation of the dimensions of human diversity as well as similarities. An introduction to contemporary international and transnational issues intended to provide a broader perspective of the individual's relationship to other cultures and to common human concerns.

- ANTH 130 - Introduction to Cultural Anthropology **Credits:** (5)
- AST 102 - Introduction to Asian Studies **Credits:** (3) (Fulfills Writing Requirement)
- COM 302 - Intercultural Communication **Credits:** (4) (Fulfills Writing Requirement)
- ECON 102 - World Economic Issues **Credits:** (5) (Fulfills Writing Requirement)
- GEOG 101 - World Regional Geography **Credits:** (5)
- HIST 101 - World Civilization to 1500 **Credits:** (5) (Fulfills Writing Requirement)
- HIST 102 - World Civilization: 1500-1815 **Credits:** (5) (Fulfills Writing Requirement)
- HIST 103 - World Civilization Since 1815 **Credits:** (5) (Fulfills Writing Requirement)

- LLAS 102 - An Introduction to Latino and Latin American Studies **Credits:** (5) (Fulfills Writing Requirement)
- POSC 270 - International Politics **Credits:** (5) (Fulfills Writing Requirement)

Foundations of Human Adaptions and Behavior
An introduction to and analysis of the fundamental principles underlying human interaction intended to foster a better understanding of the human condition. An introduction to the fundamental patterns and understandings of human interaction with natural and man-made environments intended to help students make informed judgments concerning broad environmental issues.

- ANTH 107 - General Anthropology **Credits:** (5)
- ANTH 120 - Introduction to Archaeology **Credits:** (5) (Fulfills Writing Requirement)
- FS 310 - Family Issues in the 21st Century **Credits:** (4) (Fulfills Writing Requirement)
- FS 337 - Human Sexuality **Credits:** (4)
- GEOG 108 - Introduction to Human Geography **Credits:** (5)
- HED 101 - Health Essentials **Credits:** (4)
- POSC 101 - Introduction to Politics **Credits:** (5) (Fulfills Writing Requirement)
- PSY 101 - General Psychology **Credits:** (5)
- PSY 205 - Psychology of Adjustment **Credits:** (5) (Fulfills Writing Requirement)
- SOC 107 - Principles of Sociology **Credits:** (5) (Fulfills Writing Requirement)

III. THE NATURAL SCIENCES

The natural sciences provide basic methods for rigorously describing and comprehending the natural world. Inquiry-driven laboratory and field observations are an essential mode of teaching, learning, and practicing natural science. Students must take at least one course from each of the three groups. No more than one class from a single department may be counted toward this requirement. It may be advantageous for students to take courses from groups in the order they appear below.

Fundamental Disciplines of Physical and Biological Sciences
An introduction to those sciences that study the fundamentals of physical and life systems.

- BIOL 101 - Fundamentals of Biology **Credits:** (5)
- CHEM 111 - Introduction to Chemistry **Credits:** (4)
- **AND** CHEM 111LAB - Introductory Chemistry Laboratory **Credits:** (1)
- CHEM 181 - General Chemistry I **Credits:** (4)
- **AND** CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)
- GEOL 101 - Physical Geology **Credits:** (4)
- **AND** GEOL 101LAB - Physical Geology Laboratory **Credits:** (1)
- PHYS 106 - Physics Inquiry **Credits:** (5) (Lab included)
- PHYS 111 - Introductory Physics **Credits:** (4)
- **AND** PHYS 111LAB - Introductory Physics Laboratory **Credits:** (1)
- PHYS 181 - General Physics **Credits:** (4)
- **AND** PHYS 181LAB - General Physics Laboratory **Credits:** (1)

Patterns and Connections in the Natural World
Those sciences that use a knowledge of basic scientific disciplines to examine large and complex physical and life systems.

- ANTH 110 - Introduction to Biological Anthropology **Credits:** (5) (Lab ANTH 110LAB is optional)
- BIOL 200 - Plants in the Modern World **Credits:** (5) (Fulfills Writing Requirement)
- BIOL 201 - Human Physiology **Credits:** (5)
- BIOL 300 - Introduction to Evolution **Credits:** (5)
- ENST 201 - Earth as an Ecosystem **Credits:** (5)
- GEOG 107 - Our Dynamic Earth **Credits:** (5)
- GEOL 103 - Geology of Washington **Credits:** (4)
- **AND** GEOL 101LAB - Physical Geology Laboratory **Credits:** (1)
- GEOL 107 - Volcanoes, Earthquakes, and Civilization **Credits:** (5)
- GEOL 302 - Oceans and Atmosphere **Credits:** (4)
- PHYS 101 - Introductory Astronomy I **Credits:** (5) (Lab included)
- PHYS 102 - Introductory Astronomy of the Solar System **Credits:** (4) (Lab included)

Applications of Natural Science
These courses explicitly treat social, economic, technological, ethical or other implications of natural phenomena, of human influence on natural systems, or of responsive scientific inquiry.

NOTE: *Only open to freshman students enrolled in STEP program, and all three courses must be completed with passing grade to receive credit for Application of Natural Science breadth.

- ANTH 314 - Human Variation and Adaptation in Living Populations **Credits:** (4)
- BIOL 302 - Sustainability and Environmental Change **Credits:** (5)

- CHEM 101 - Contemporary Chemistry **Credits:** (5) (and Lab)
- ENST 202 – Environment and Society **Credits:** (5)
- ENST 310 - Energy and Society **Credits:** (5) (Fulfills Writing Requirement)
- ETSC 101 - Modern Technology and Energy **Credits:** (5)
- GEOG 273 - Geography of Rivers **Credits:** (5)
- GEOL 108 - Introduction to Environmental Geology **Credits:** (5)
- NUTR 101 - Introduction to Human Nutrition **Credits:** (5)
- PHYS 103 - Physics of Musical Sound **Credits:** (5) (Fulfills Writing Requirement)
- PHYS 108 - Light and Color **Credits:** (4) (Lab included)
- STEP 101 - Scientific Perspectives and Experimentation I **Credits:** (2) *see note.
- STEP 102 - Scientific Perspectives and Experimentation II **Credits:** (2) *see note.
- STEP 103 - Scientific Perspectives and Experimentation III **Credits:** (1) *see note (Fulfills Writing Requirement)

General Education Course Descriptions

ABS 110. Expressive African American Culture (5). An interdisciplinary exploration of a variety of perspectives in African American folk culture, from oral expressions developed during slavery to contemporary rap and stand-up comedy. The course includes an overview of the worldwide contribution of black oral performative art. Prerequisite: ENG 101 with a grade of C- or higher. AH-Literature and Humanities.

AIS 101. Pre-contact Period of American Indians, Pre-AD 1492 (5). An interdisciplinary approach explores the lifeways and environments of American Indians prior to European contact and settlement. Sources of pre-contact information consist of the archaeological, oral history, and paleoenvironmental records. SB-Perspectives on Cultures, Experiences of U.S. (W).

AIS 102. Contact Period of American Indians (5). An interdisciplinary study of the lifeways and environments of American Indians during the period of European contact. Sources of contact period information come from the archaeological, American Indian and European written and oral history records. SB-Perspectives on Cultures, Experiences of U.S. (W).

AIS 103. Emergence of Contemporary American Indians (5). An interdisciplinary approach explores the emergence of contemporary American Indians after AD 1890 with an emphasis on social, political, and cultural aspects. Sources of information about this period come from written and oral history. SB-Perspectives on Cultures, Experiences of U.S. (W).

ANTH 107. General Anthropology (5). Human biological and cultural adaptations: survey of concepts, methods, and perspectives on past and present. SB-Foundations of Human Adaptation, Behavior.

ANTH 110. Introduction to Biological Anthropology (5). A survey of the history, philosophy, and theory of biological anthropology including biological relationships to other primate forms, the fossil record, and evolutionary adaptations. Corequisite: ANTH 110LAB. NS-Patterns, Connections, Natural World.

ANTH 120. Introduction to Archaeology (5). Introduction to the concepts, methods, and development of archaeology. SB-Foundations of Human Adaptation, Behavior (W).

ANTH 130. Introduction to Cultural Anthropology (5). Understanding human cultures: concepts, methods, and basic data involved in the comparative study of human cultural adaptations. SB-Perspectives on World Cultures.

ANTH 314. Human Variation and Adaptation in Living Populations (4). Survey of genetic, morphological, and physiological variability of living human populations and their biological source mechanisms. Current population dynamics are used to project future alternatives for change. Prerequisite: sophomore standing or above. NS-Applications Natural Science.

ART 101. Introduction to Western Art (5). The visual arts as an expression of the human experience. Does not apply to the art major. AH-Aesthetic Experience.

ART 102. Introduction to Non-Western Art (5). A survey of non-western painting, sculpture, and architecture. This course does not apply to the art major. AH-Aesthetic Experience.

ART 103. Art Appreciation (4). An introduction to artistic styles, periods, techniques, and ways of making art. The class will consider art from the prehistoric to the contemporary period and will introduce students to the visual components. AH-Aesthetic Experience.

AST 102. Introduction to Asian Studies (3). An interdisciplinary introduction to the study of Asia; emphasizing geography, history, culture, and economics. SB-Perspectives on World Cultures (W).

BIOL 101. Fundamentals of Biology (5). Biology in the modern world. Four hours lecture and one two-hour laboratory per week. May not be counted toward a major or minor in the department of biological sciences. NS-Fund Disc Phys, Biological Science (L).

BIOL 200. Plants in the Modern World (5). Plants and their significance in the world today. Three hours lecture and three hours laboratory per week. (Not open to majors in the biological sciences.) May not be counted toward a major or minor in the department of biological sciences. NS-Patterns, Connections, Natural World (W) (L).

BIOL 201. Human Physiology (5). Organ systems of humans. Not open to students with credit in BIOL 455; may not be counted toward a major or minor in the department of bio logical sciences. NS-Patterns, Connections, Natural World.

BIOL 300. Introduction to Evolution (5). The evidence, theories, and mechanisms of the evolution of life, including man. Prerequisite: sophomore standing or above. May not be counted toward a major in the department of biological sciences. NS-Patterns, Connections, Natural World.

BIOL 302. Sustainability and Environmental Change (5). Basic concepts of ecology with emphasis on ecosystems and populations and how human activities and attitudes relate to these basic concepts. May not be counted toward a major in the

department of biological sciences. NS-Applications Natural Science.

BUS 102. Business Computer Skills (4). This course will develop practical computer skills needed to evaluate and help solve business problems. Students will learn how to use software commonly used in businesses to access, organize and analyze information and present it professionally in presentations and reports. Basic Skills 6 - Computing.

CHEM 101. Contemporary Chemistry (5). Chemical principles and their application to contemporary problems of human beings and their environment. Four hours of lecture and two hours of laboratory weekly. NS-Applications Natural Science (L).

CHEM 111. Introduction to Chemistry (4). Chemical principles of the compositions, structure, properties, and changes of matter. Designed for students in certain health science programs. Four lectures weekly. NS-Fund Disc Phys Biological Sciences.

CHEM 111LAB. Introductory Chemistry Laboratory (1). Introduction to basic chemistry techniques. Two hours laboratory weekly. Co- or prerequisite: CHEM 111. NS-Fund Disc Phys Biological Sciences (L).

CHEM 181. General Chemistry I (4). This course introduces chemistry concepts such as atoms and molecules, stoichiometry, solution chemistry, thermochemistry, electronic structure of the atom and periodicity, and chemical bonding. Prerequisites: strongly recommend high school chemistry and qualification for MATH 153 or math placement exam. NS-Fund Disc Phys and Biological (L).

CHEM 181LAB. General Chemistry Laboratory I (1). This laboratory supports hands-on, inquiry-based approaches to exploring topics presented in CHEM 181. Three hours of laboratory weekly. Co- or prerequisite: CHEM 181. NS-Fund Disc Phys Biological Sciences (L).

COM 202. Communication Ethics and the First Amendment (5). This class explores the First Amendment freedoms as the foundation of a free, tolerant and democratic society. The communicative rights and responsibilities of citizens in a democracy governed by such an amendment are also examined. SB-Perspectives, Cultures, Experiences of U.S.

COM 302. Intercultural Communication (4). The objective of this course is to give the participants the skills and understanding necessary to improve communication with peoples of other nations and cultures. Prerequisite: sophomore standing or above. SB-Perspectives on World Cultures (W).

CS 101. Computer Basics (4). Integrated, project-based course using student-produced working materials in the form of a mini thesis. Microsoft Office tools are learned in a web-based practical application environment. Basic Skills 6 - Computer Fundamentals.

CS 105. The Logical Basis of Computing (4). Problem solving, algorithm development, complexity, computability. Representation of algorithms as computer programs, data, decisions and control inherent sources of error. Basic Skills 5 - Reasoning.

ECON 101. Economic Issues (5). For the student who desires a general knowledge of economics. Applications of economic principles to current social and political problems. ECON 101 cannot be substituted for either ECON 201 or 202. SB-Perspectives, Cultures, Experiences of U.S.

ECON 102. World Economic Issues (5). An introduction to current international issues related to international trade and finance, economic development, and comparative economic systems. SB-Perspectives on World Cultures (W).

ECON 130. Foundations for Business Analytics (5). Role of mathematics, statistics, and software to business and economic decision making; business and economics applications including indexing, percentage changes, compounding, financing, and accounting; probability theory and descriptive statistical analysis; modelling. Includes a lab component. Prerequisites: either at least 500 on the SAT, 19 on the ACT, a Compass test score of either 50-Pre-Algebra, 26-Algebra, 31-College Algebra, or 31-Trigonometry, or completed MATH 100B or a higher level math class. Basic Skills 5 - Reasoning.

ECON 201. Principles of Economics Micro (5). The function of the market system in the allocation of scarce resources, determination of prices and output in competitive and monopolistic markets, and distribution of income. The role of government in the market economy. SB-Perspectives, Cultures, Experiences of U.S.

ENG 101. Composition I: Critical Reading and Responding (4). Develops skills necessary for academic writing, including summarizing, reading sources critically and responding to them, synthesizing multiple perspectives, and using academic writing conventions. Required of all students except those who have passed an exemption examination. Students must earn a minimum grade of C- or above to enroll in ENG 102. Prerequisite: appropriate test scores or have satisfactorily completed Transitional English. Basic Skills 2 - English Comp I.

ENG 102. Composition II: Reasoning and Research (4). Develops skills in research-based academic argument through assignments involving evaluation, analysis, and synthesis of multiple sources. Prerequisite: ENG 101 with a grade of C- or higher. Basic Skills 3 - English Comp II.

ENG 105. The Literary Imagination: An Introduction to Literature (5). Human experience as it is imagined, interpreted, and made significant in the poetry, prose, fiction, and

drama of the major writers of the world. Prerequisite: ENG 101 with a grade of C- or higher. AH-Literature and Humanities (W).

ENG 247. Multicultural Literature (5). Literary themes examined through the comparison of works from various cultures. Prerequisite: ENG 101 with a grade of C- or higher. AH-Literature and Humanities (W).

ENG 347. Global Perspectives in Literature (5). An introduction to contemporary non-western and third world literature. Prerequisites: sophomore standing or above and ENG 101 with a grade of C- or higher. AH-Literature and Humanities (W).

ENST 201. Earth as an Ecosystem (5). Introduction to the concept of our planet as a finite environment with certain properties essential for life. The dynamic nature of the earth's physical, chemical, geological, and biological processes and their interrelated "systems" aspects furnishes the thrust of this treatment. NS-Patterns and Connection Natural.

ENST 202. Environment and Society (5). The physical and cultural dimensions of environmental problems with particular emphasis given to the interaction between ecosystems, basic resources, population dynamics, and culture. NS-Application Natural Science.

ENST 310. Energy and Society (5). Through classroom and field experience, students will examine society's use of, and dependence upon, energy. Students will become more discerning citizens, able to take part in local, national, and global energy discussions. Prerequisite: sophomore standing or above. NS-Application Natural Science (W).

ETS 101. Ethnic Awareness (5). Awareness and understanding of the problems facing the American people in the area of race and ethnic relations, primarily focusing on ethnic minorities. The nature and scope of relationships between minority groups and the majority in the United States. SB1 S&B-Perspectives on U.S. (W).

ETSC 101. Modern Technology and Energy (5). A study of how basic scientific principles are applied daily in industrial societies through a survey of transportation, energy and power, construction, and consumer product technologies. NS-Application Natural Science.

FIN 174. Personal Finance (5). Broad spectrum course covering financial issues encountered by individuals throughout their lives. Topics include but are not limited to: Preparing a personal budget, money management, investments, retirement planning, and insurance. Basic Skills 4 - Math.

FS 310. Family Issues in the 21st Century (4). An introduction to social issues that impact family life. Current issues pertaining to individual and family relationships are assessed from an interdisciplinary perspective. SB-Found Human Adaptations (W).

FS 337. Human Sexuality (4). The biophysical, psychosocial, and behavioral aspects of sexuality with emphasis on making responsible sexual decisions and promoting healthy relationships. Prerequisite: sophomore standing or above. SB3-Found Human Adaptations.

FVS 250. Introduction to Film and Video Studies (5). Learning and applying motion picture vocabulary and aesthetic concepts through screenings, discussions, and writing. Emphasis on the social context, cultural influences, and aesthetic qualities of film. Prerequisite: ENG 101 and ENG 102 with a grade of C- or higher. AH-Aesthetic Experience (W).

GEOG 101. World Regional Geography (5). Regions and nations of the world together with the changing elements of the physical and human environment that support them. SB-Perspective on World Culture.

GEOG 107. Our Dynamic Earth (5). The complex weather, climate, water, landforms, soils, and vegetation comprising Earth's physical environments over space and time. Incorporates map interpretation and scientific analysis in understanding various landscapes and human impacts upon those landscapes. NS-Patterns and Connection Natural.

GEOG 108. Introduction to Human Geography (5). Distribution and spatial variation of population, settlement patterns, cultural elements of language, religion, and lifeways, and the economic and political organization of the planet. SB-Found Human Adaptations.

GEOG 273. Geography of Rivers (5). Global, regional, and local physical and cultural patterns and processes within river basins. NS-Application Natural Science.

GEOL 101. Physical Geology (4). An introduction emphasizing the origin and nature of the common rocks and the continually changing features of the earth's crust. Four lectures per week. Co- or prerequisite: GEOL 101LAB. NS-Fund Disc Phys and Biological.

GEOL 101LAB. Physical Geology Laboratory (1). Application of map study to geological processes and land forms, identification of rocks and minerals, and local field trips. Two hours laboratory per week. Co-requisite: GEOL 101 or GEOL 102 or GEOL 103. NS-Fund Disc Phys and Biological (L).

GEOL 103. Geology of Washington (4). Fundamentals of geology applied to the state of Washington. Topics include Washington's volcanic, earthquake, tectonic, and glacial activity. Four lectures per week. Corequisite: GEOL 101LAB. NS-Patterns and Connection Natural.

GEOL 107. Volcanoes, Earthquakes, and Civilization (5). The role of natural geologic processes such as volcanoes, earthquakes, and climate change in shaping the earth, the environment and human civilization. Four hour lecture per week plus required field trips. NS-Patterns and Connection Natural.

GEOL 108. Introduction to Environmental Geology (5). Interaction between human activity and geological processes. Scientific discussion of global environmental issues such as ozone depletion, climate change, geologic hazards, natural resources, and water use. NS-Application Natural Science.

GEOL 302. Oceans and Atmosphere (4). Introduction to Earth's climate and the hydrologic cycle through study of the ocean-atmosphere system. Chemical and physical changes will be studied over time scales ranging from millions of years to days. Will include a field trip. Prerequisite: sophomore standing or above. NS-Patterns and Connection Natural.

HED 101. Health Essentials (4). Fundamental patterns and understanding of human interaction with natural and man-made environments intended to help students make informed judgments. SB-Found Human Adaptations.

HIST 101. World Civilization to 1500 (5). Origins and development of the major world civilizations to the 15th century. A comparative study of their political, social, and economic institutions, and their religious and intellectual backgrounds. SB-Perspective on World Culture (W).

HIST 102. World Civilization: 1500-1815 (5). A comparative survey of political, social, economic, and cultural developments. For general education (breadth) credit, it is preferred that a student be enrolled in or have completed ENG 101. SB-Perspective on World Culture (W).

HIST 103. World Civilization since 1815 (5). A comparative survey of political, social, economic, and cultural developments. For general education (breadth) credit, it is preferred that a student be enrolled in or have completed ENG 101. SB-Perspective on World Culture (W).

HIST 143. United States History to 1865 (5). The Colonial, Revolutionary, and National periods. SB-Perspectives on Cultures and experiences of U.S. (W).

HIST 144. United States History since 1865 (5). Reconstruction, Industrial America, and 20th-century urban America. Recommended ENG 101. SB-Perspectives on Cultures and experiences of U.S. (W).

HUM 101. Exploring Cultures in the Ancient World (5). An interdisciplinary exploration from literature, history, philosophy, and the arts of selected major ancient civilizations in Asia, Africa, Europe, and the Americas from their beginnings through the 15th century. Prerequisites: ENG 101 with a grade of C- or higher. AH-Literature and Humanities (W).

HUM 102. Exploring Cultures from 16th through 19th Centuries (5). An interdisciplinary exploration of selected literature, history, philosophy, and the arts in Asia, Africa, Europe, and the Americas from the 16th through the 19th centuries. Prerequisites: ENG 101 with a grade of C- or higher. AH-Literature and Humanities (W).

HUM 103. Exploring Cultures in Modern and Contemporary Societies (5). An interdisciplinary exploration of literature, history, philosophy, and the arts of selected world civilizations of the 20th century. Prerequisites: ENG 101 with a grade of C- or higher. AH-Literature and Humanities (W).

IT 101. Computer Applications (3). Basic skills in Windows, word processing, spreadsheets, databases, and presentations. Basic Skills 6 - Computing.

LAJ 102. Introduction to Law and Justice (5). This course will focus on the role of law in society and will examine both the criminal and civil law system, as well as, the function of law in social change and social control. SB - Perspectives on Cultures and experiences of U.S.

LLAS 102. An Introduction to Latino and Latin American Studies (5). A multi-disciplinary introduction of Latino and Latin American studies, presented in three main components: People and the Land, The Environment and the Human Condition, and Socio-Political Spectrum. SB-Perspective on World Culture (W).

MATH 101. Mathematics in the Modern World (5). Selected topics from the historical development and applications of mathematics together with their relationship to the development of our present society. Prerequisites: either at least 500 on the SAT, 19 on the ACT, a Compass test score of either 50-Pre-Algebra, 26-Algebra, 31-College Algebra, or 31-Trigonometry, or completed MATH 100B or a higher level math class. Basic Skills 4 - Math.

MATH 102. Mathematical Decision Making (5). Selected topics from probability, statistics, and mathematical decision making with real-world application. Prerequisites: either at least 500 on the SAT, 19 on the ACT, a Compass test score of either 50-Pre-Algebra, 26-Algebra, 31-College Algebra, or 31-Trigonometry, or completed MATH 100B or a higher level math class. Basic Skills 5 - Reasoning.

MATH 130. Finite Mathematics (5). The language of sets, counting procedures, introductory probability, decision making, and introductory descriptive statistics. Meets General Education "reasoning" requirement and prepares student for introductory statistics courses in various departments. Prerequisites: either at least 500 on the SAT, 19 on the ACT, a Compass test score of either 50-Pre-Algebra, 26-Algebra, 31-College Algebra, or 31-Trigonometry, or completed MATH 100B or a higher level math class. Basic Skills 5 - Reasoning.

MATH 153. Pre-Calculus Mathematics I (5). A foundation course which stresses those algebraic and elementary function concepts together with the

manipulative skills essential to the study of calculus. Prerequisites: either MATH 100C with a grade of C or higher; or a score of 18 or higher on the Intermediate Math Placement Test, or a score of 66 or higher on the Compass Algebra test. Basic Skills 4 - Math.

MATH 154. Pre-Calculus Mathematics II (5). A continuation of MATH 153 with emphasis on trigonometric functions, vectors, systems of equations, the complex numbers, and an introduction to analytic geometry. Prerequisites: MATH 153 with a grade of C or higher, a score of 17 or higher on the Advanced Math Placement Test, or a score of 46 or higher on the Compass College Algebra Test. Basic Skills 4 - Math.

MATH 164. Foundations of Arithmetic (5). Structure of the real number system. Properties of and operations on integers, rationals, decimal representation, percentages, proportion, graphing, and elementary problem solving. Recommended for the prospective elementary school teacher. Prerequisites: 45 earned credits, and either at least a 500 on the SAT, a 19 on the ACT, or a score of 50 on the Compass test. Basic Skills 4 - Math.

MATH 170. Intuitive Calculus (5). An intuitive approach to the differential and integral calculus specifically designed for students in the behavioral, managerial, and social sciences. Prerequisites: MATH 153 with a grade of C or higher or a score of 19 or higher on the Advanced Placement Test. Not open to students with credit for MATH 172 or higher. Basic Skills 4 - Math.

MATH 172. Calculus I (5). Theory, techniques, and applications of differentiation and integration of the elementary functions. Prerequisites: MATH 154 with a grade of C or higher, a score of 19 on the Advanced Math Placement Test, or a score of 46 or higher on the Compass Trigonometry test. Basic Skills 4 - Math.

MUS 101. History of Jazz (5). America's only indigenous art form; late 1800s to present. Emphasis on artists and cultural/societal forces shaping music's evolution. Extensive listening, reading; required attendance of performances. AH-Aesthetic Experience.

MUS 102. Introduction to Music (5). Fundamental musical concepts (melody, harmony, rhythm, form, etc.) through illustrations of the instrumental and vocal music of major composers from the earliest period through the present day. AH-Aesthetic Experience.

MUS 103. History of Rock and Roll (5). America's second indigenous musical art form, after jazz, 1950's to present. Emphasis on artists and cultural/societal forces shaping music's evolution. Extensive listening, reading; required online discussion. Minimum technology requirements for online course. AH-Aesthetic Experience.

NUTR 101. Introduction to Human Nutrition (5). Fundamental nutritional concepts as related to health. Four hours lecture and one hour discussion per week. NS-Application Natural Science.

PED 161. Cultural History of Dance (4). A survey course in the evolution of dance through the ages with emphasis on the major forces that have influenced dance in the 20th century. AH-Aesthetic Experience.

PHIL 101. Philosophical Inquiry (5). Introduction to the basic themes, thinkers, and topics of philosophy. The mind-body problem, good versus evil, knowledge, truth, goodness, and beauty. AH-Philosophies and Culture World (W).

PHIL 150. Critical Thinking (5). This course will focus on informal logic: understanding and evaluating arguments in ordinary language. Students will learn to read, write, and think critically. Basic Skills 5 - Reasoning.

PHIL 201. Introduction to Logic (5). Formal principles, methods and techniques for analyzing, constructing, and evaluating arguments. Topics include validity, soundness, truth tables, Venn diagrams, syllogisms, and logical symbolism. Basic Skills 5 - Reasoning.

PHIL 202. Global Ethics (5). Examine some main traditions of ethics, such as Christian ethics, Buddhist ethics, Confucian ethics, ethical absolutism and relativism, utilitarianism, deontology, and feminist ethics. AH-Philosophies and Culture World (W).

PHIL 209. Asian Philosophy (5). Examination of selected classical and/or contemporary issues and questions in Chinese, Japanese and Indian philosophy. AH-Philosophies and Culture World (W).

PHIL 210. Current Ethical Issues (5). Contemporary ethical theories from diverse traditions applied to current ethical problems. Recent ethical approaches to euthanasia, abortion, capital punishment, affirmative action, and environmental concerns. AH-Philosophies and Culture World (W).

PHIL 306. Environmental Ethics (5). An examination of various positions on the human relationship with the natural environment, from ancient and contemporary, western and non-western, as well as interdisciplinary perspectives. Prerequisite: sophomore standing or above. AH-Philosophies and Culture World (W).

PHIL 378. Philosophy of Love (5). A study of various concepts of love as they occur in philosophy, literature, and other cultural expressions. The nature of romantic love, eros, agape, friendship, and fellow feeling will be discussed. Prerequisite: sophomore standing or above. AH-Philosophies and Culture World (W).

PHYS 101. Introductory Astronomy I (5). An inquiry-based introduction to celestial motions, celestial objects, observational astronomy and the physics associated with each.

Emphasis on stars and planets. This is an activity-based lecture/lab course. NS-Patterns and Connection Natural (L).

PHYS 102. Introductory Astronomy of the Solar System (4). An introduction to the physics of the bodies in our solar system with an emphasis on planets and the Sun. This course will include an emphasis how we observe the planets and Sun, current and past planetary missions, and the comparative evolution of bodies in our solar system. NS-Patterns and Connection Natural (L).

PHYS 103. Physics of Musical Sound (5). Basic principles of acoustics applied to the production and perception of sound by musical instruments. Other topics covered include sound in rooms, musical scales, sound synthesis, and vocal acoustics. Techniques and tools for analyzing sound will be emphasized. Class format includes lecture, group problem solving, and laboratory activities. NS-Application Natural Science (L) (W).

PHYS 106. Physics Inquiry (5). An introduction to fundamental physics topics in matter, motion, electricity, and magnetism. NS1 NS-Fund Disc Phys and Biological (L).

PHYS 108. Light and Color (4). An introduction to topics in light and color with applications to technology in the arts. NS-Application Natural Science (L).

PHYS 111. Introductory Physics (4). Topics in physics including kinematics and dynamics. Analyzing physical systems using algebra and trigonometry. Not open to students with credit in PHYS 181. Prerequisites: must be eligibility for MATH 154 based on the Math Placement Test, or MATH 153 with a grade of C or higher. Co-requisite: PHYS 111LAB. NS1 NS-Fund Disc Phys and Biological.

PHYS 111LAB. Introductory Physics Laboratory (1). Investigation of topics in physics including kinematics and dynamics. Corequisite: PHYS 111. NS1 NS-Fund Disc Phys and Biological (L).

PHYS 181. General Physics (4). Topics in physics including kinematics and dynamics. Analyzing physical systems using algebra, trigonometry, and calculus. Co-requisite: PHYS 181LAB. Co- or prerequisite: MATH 172. NS-Fund Disc Phys and Biological.

PHYS 181LAB. General Physics Laboratory (1). Investigation of topics in physics including kinematics and dynamics. Co-requisite: PHYS 181. NS-Fund Disc Phys and Biological (L).

POSC 101. Introduction to Politics (5). The basic ideas around which political debate revolves and from which political institutions evolve. SB-Found Human Adaptations (W).

POSC 210. American Politics (5). Origin and development of the United States government; structure, political behavior, organizations, and processes; rights and duties of citizens. For general education (breadth) credit, a student must be enrolled in or have completed ENG 101. SB-Perspectives on Cultures and experiences of U.S.

POSC 270. International Politics (5). Conditions and principles governing the contemporary nation-state system. SB-Perspective on World Culture (W).

PSY 101. General Psychology (5). An introduction to the science of behavior. SB-Found Human Adaptations.

PSY 205. Psychology of Adjustment (5). The nature of the adaptive process and the means by which people adjust to their environment. SB-Found Human Adaptations (W).

RELS 101. World Religions (5). Survey of the major world religions (Judaism, Christianity, Islam, Hinduism, Buddhism, Confucianism, Daoism), including their tenets, practices, and evaluation of the human condition. AH-Philosophies and Culture World (W).

RELS 201. Sacred Books of the World (5). Comparative study of religious thought and literature from eastern and western classics: Upanishads, Bhagavad-Gita, Dhammapada, Tao Te Ching, Hebrew Bible, New Testament, Koran. AH-Philosophies and Culture World (W).

SOC 101. Social Problems (5). An introduction to the study of contemporary issues such as poverty, military policies, families, crime, aging, racial, ethnic conflict, and the environment. SB-Perspectives on Cultures and Experiences of U.S. (W).

SOC 107. Principles of Sociology (5). An introduction to the basic concepts and theories of sociology with an emphasis on the group aspects of human behavior. SB-Found Human Adaptations (W).

SOC 305. American Society (5). Introduction to the social structure and processes of American society; emphasis on institutions such as government, family, schools, and religion, and processes such as conflict, change, stratification, mobility, and communication. Prerequisite: sophomore standing or above. SB-Perspectives on Cultures and Experiences of U.S. (W).

STEP 101. Scientific Perspectives and Experimentation I (2). First course in three-quarter freshman science series. Students will take an interdisciplinary approach toward scientific research centered on a single theme. Students must take STEP 101, 102, and 103 to receive credit for Applications of Natural Science breadth area. Prerequisite: enrollment in the STEP Program. NS-Application Natural Science.

STEP 102. Scientific Perspectives and Experimentation II (2). Second course in three-quarter freshman science series. Students gain practical introduction to the scientific process through designing and conducting experimental, computer,

laboratory and/or field investigations. Students must take STEP 101, 102, and 103 to receive credit for Applications of Natural Science breadth area. Prerequisites: STEP 101 and enrollment in STEP Program. NS-Application Natural Science.

STEP 103. Scientific Perspectives and Experimentation III (1). Third course in three-quarter freshman science series. Topical survey of active research efforts by faculty and students in science, technology and mathematics fields at CWU. Students must take STEP 101, 102, and 103 to receive credit for Applications of Natural Science breadth area. Prerequisites: STEP 102 and enrollment in the STEP Program. NS-Application Natural Science (W).

TH 101. Appreciation of Theatre and Film (4). Viewing, discussing, and comparing film and live theatre performance. AH-Aesthetic Experience.

TH 107. Introduction to Theatre (4). Overview of the basic elements of the theatre arts and dramatic structure, and the environment for production of plays. Attendance at assigned outside events is required. AH-Aesthetic Experience (W).

TH 375. Asian Drama (4). Survey of the traditional theatre, puppetry, and dance-drama forms of Asia. Historical development. Cultural and aesthetic aspects of the text in performance. Influence on contemporary world theatre. Prerequisite: sophomore standing or above. By permission. AH-Aesthetic Experience (W).

TH 382. Diverse Experiences in American Drama (4). Study of contemporary American multi-cultural plays by people of color and other ethnic groups. Prerequisite: ENG 101. AH-Aesthetic Experience (W).

UNIV 101. Academic Advising Seminar (1). This course is designed for students to learn about the mission of the general education program and majors in order to make informed academic decisions and discover opportunities for personal growth. Basic Skills 1- GenEd Colloq.

WGS 201. Introduction to Women's and Gender Studies (5). A survey of women's and gender studies from an interdisciplinary perspective. Basic terms, concepts, theories, and research methodologies will be introduced. Gender related issues will be examined from the historical, cross-cultural and cross-national perspectives. SB-Perspectives on U.S. (W).

WGS 250. Introduction to Queer Studies (5). An interdisciplinary introduction to queer studies, investigating the historical and contemporary reality of those who identify as gay, lesbian, bisexual, transgender, and/or queer. SB-Perspectives, Cultures, Experiences of U.S.

College of Arts and Humanities

Administration and Organization

Dean
Stacey Robertson, PhD (Hebeler Hall, room 202)

Associate Dean
Rodney Bransdorfer, PhD (Hebeler Hall, room 202)

Associate Dean
Jeff Snedeker, PhD (Hebeler Hall, room 202)
Mail Stop 7518
509-963-1858
Fax: 509-963-1851
www.cwu.edu/arts/

Overview
The College of Arts and Humanities (CAH) is comprised of 12 departments and programs, which represent the disciplines of the arts and humanities. All of the departments and some of the programs of CAH offer undergraduate degrees as well as minors which supplement other degree programs. Five departments offer Master's degrees. In addition to its role in providing degree programs, CAH is responsible for many of the course offerings of the general education programs as well as extensive service coursework for the entire university. The college also plays a major role in Central's teacher education programs, offering bachelors and master's degrees for students preparing to be secondary teachers and providing coursework in educational foundations and discipline-specific methods for teacher education majors. Building on a legacy of teaching excellence, college faculty are engaged in research, creative activities and service, involving students in the scholarship and practical applications of their various academic specializations, while making important contributions to the intellectual tradition and to society at large. There are no special requirements for admission to the college, but some departments have requirements that are described under the respective department and program headings in the catalog.

Mission
The College of Arts and Humanities advances knowledge, promotes intellectual inquiry, and cultivates creative endeavor among students and faculty through teaching informed by scholarship, creative activity, and public and professional involvement. We are committed to helping students develop intellectual and practical skills for responsible citizenship and the challenges of contemporary life in a global society. The college offers disciplinary and interdisciplinary programs of the highest quality, acts as a steward of the foundational disciplines upon which all inquiry is based, and serves as a cultural center for arts and humanities for the university and the region.

Vision
The College of Arts and Humanities will be recognized as a distinguished learning community known regionally for scholarly and creative excellence, innovative, and rigorous foundational liberal arts education, and undergraduate and graduate programs that are outstanding and unique in the state.

Departments and Programs
Africana and Black Studies Program: Bobby Cummings, PhD (Michaelsen Hall, room 104)
Art: Gregg Schlanger, MFA (Randall Hall, room 100)
Asia/Pacific Studies Program: Jeffrey Dippman, PhD (Language and Literature Bldg., room 337C)
Communication: César García, PhD (Bouillon Hall, room 232A)
English: George Drake, PhD (Language and Literature Bldg., room 423)
Film and Video Studies Program: Michael Ogden, PhD (Bouillon Hall, room 225)
History: Roxanne Easley, PhD (Language and Literature Bldg., room 100)
Latino and Latin American Studies Program: Stella Moreno, PhD (Language and Literature Bldg., room 102J)
Music: Todd Shiver, DMA (Jerilyn S. McIntyre Music Building, room 144)
Philosophy and Religious Studies: Matthew Altman, PhD (Language and Literature Bldg., room 337)
Theatre Arts: Scott Robinson, MFA (McConnell Hall, room 106)
World Languages: Laila Abdalla, PhD (Language and Literature Bldg., room 102)

Affiliated Programs
American Indian Studies: Toni Culjak, PhD and Patrick McCutcheon, PhD (Farrell Hall, room 305)
Environmental Studies: Anne Johansen, PhD (Science, room 207D)
Ethnic Studies: Nelson Pichardo, PhD (Farrell, room 440)
Women's and Gender Studies: Judith Hennessey, PhD (Farrell, room 436)

College of Business

Administration and Organization

Dean
Kathryn Martell, PhD (Shaw-Smyser Hall, room 129)

Associate Dean
Laura Milner, PhD (Shaw-Smyser Hall,
room 126)
Mail Stop 7487
509-963-1955
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Vision
CWU's College of Business will be recognized as a premier learning community creating an environment in which students, faculty, and staff reach their full potential.

Mission
CWU's College of Business faculty and staff create value and opportunity for our students by focusing on quality in undergraduate education at the Ellensburg campus and university centers in the Puget Sound and central regions of Washington State. We accomplish this through emphasis on excellence in teaching, strengthened by faculty research and supported by professional service.

Our Shared Values
The faculty and staff of the CB share a set of core beliefs and commitments.

We believe in:
• Student success
• Lifelong learning
• Integrity and ethical behavior
• Excellence

We commit ourselves to:
• Prepare students for the future
• Impart knowledge on which students can build
• Treat everyone with respect and fairness
• Exemplify our values by serving as teachers and role models
• Maintain currency in our academic disciplines and professional fields
• Engage in scholarly activities that contribute to the body of knowledge in our disciplines

Statement of Conduct
The College of Business is a learning community committed to a set of core values based on integrity, respect, and responsibility that guide our interactions.

Integrity: The quality of possessing and steadfastly adhering to high moral principles or professional standards.

Respect: To show consideration or thoughtfulness in relation to others.

Responsibility: The state, fact, or position of being accountable and responsible.

Code of Honor
As College of Business students we pledge to uphold these standards of professionalism and conduct ourselves in accordance with them. We will not lie, cheat, or steal, and will not tolerate those who do. Our behavior defines who we are and what we will become.

Programs
The College of Business offers programs leading to the Bachelor of Science degree in the following areas:

• Bachelor of Science, Accounting

• Bachelor of Science, Business Administration with specializations in:

Finance
General Business
Human Resource Management
Leadership and Management
Marketing Management
Supply Chain Management

• Bachelor of Science, Economics with specializations in:

Economic and Business Forecasting
General Economics
Managerial Economics

The College of Business offers minors in:

Accounting
Business Administration
Finance
Human Resource Management
Sport Business

The College of Business offers certificate programs in:

Accounting
Sport Business
Supply Chain Management

The college also offers a Master of Professional Accountancy degree through the graduate school. Students may take their junior and senior years of the accounting and business administration programs at two Puget sound-area centers: Lynnwood and Des Moines.

Admission Requirements
Admission requirements to major programs within the College of Business are identical regardless of the location of the program. Students must first be accepted by the university and, if applicable, the university center which

they plan to attend. Then, students must formally apply to the College of Business and be admitted to a College of Business Program prior to enrolling in 300- and 400-level courses within the college.

Students must attend a College of Business major orientation to be fully admitted to our majors. Applications are only accepted at new student orientations. The application form must be completed and returned to the appropriate office along with copies of current transcripts.

If a student has met the requirements of admission but has struggled to do so, the College of Business reserves the right to offer conditional admission status for up to 2 quarters and/or 30 credits in order for the student to demonstrate she/he will be successful. Final admission to the College of Business under these circumstances is not guaranteed.

Students must have the below requirements to be admitted to a College of Business major. Students seeking entry to the College without these requirements will be granted pre-major standing.

- Completion of 30 credits (If a student is a transfer student, credits must be transferable)
- The applicant must be in good academic standing
- 2.25 Collegiate GPA
- Completion of ENG 101 and ENG 102 with a C- or higher, or equivalent
- Attend a College of Business Orientation

International students whose native language is not English must meet one of the following English proficiency requirements:

- A score of 71 or above on the Internet-based TOEFL or 525 or above on the paper-based TOEFL (195 for computer based, 71 for internet based), OR
- A score of 6.0 or above on the International English Language Testing System (IELTS) exam, OR
- A 3.0 (B grade) or above in each two college-level English composition courses from an accredited United States college or university. Contact the Office of Admissions to find out what courses are acceptable.

Students who have met all of the above requirements will be admitted unless the number of applicants exceeds available space. In that case, acceptance will be competitive, based on a selection index.

Previous or Transfer Coursework Policy

Business courses taken to fulfill the requirements for an undergraduate or graduate degree from the CWU College of Business must have been taken within the last 10 years at the time of graduation. Exceptions may be made, but must be approved prior to acceptance into the College of Business by the department chair and dean or designee.

Students wishing to have credits from non-United States institutions considered for transfer into the College of Business for any major or minor must have their transcripts evaluated through outside credential evaluators who are members of the National Association of Credential Evaluation Services (NACES), such as the Foundation for International Services (FIS), the World Education Service (WES), or Educational Perspectives. Students who intend to pursue the CPA may instead decide to use the NABSA (National Association of State Boards of Accountancy) international evaluation services since it is a requirement of the CPA. Credits for current students participating in a CWU study abroad program will be evaluated by the Office of the Registrar.

Equivalent lower-division (100-200 level) courses may be transferred toward meeting the foundation course requirements for any BS degree in the college. Upper-division (300-400 level) courses may be transferred toward meeting the major requirements only with the approval of the department chair and the college dean (or designee).

Academic Jeopardy Policy

The College of Business is committed to the success of its students. If a student that has been admitted to the College of Business is deemed to be in academic jeopardy, the College of Business may place restrictions on the student. A student is considered in academic jeopardy for the following reasons:

- On academic warning or probation
- Frequently withdraws from class
- Repeating coursework to be successful
- Has less that a 2.5 (2.499 and below) in any of the required GPAs for graduation.
    - CWU GPA
    - Collegiate GPA (CWU and all transfer coursework combined)
    - Major GPA
    - Upper-division coursework in the major GPA
    - Accounting majors: upper-division Accounting coursework GPA

The College of Business may do the following in response to an Academic Jeopardy situation:

- Limit College of Business coursework in future quarters
- Require academic advising with both faculty and/or professional advisors
- Require academic success plans
- Double majors or double specialization students may be limited to one major plan in the College of Business

If a student is unable to improve academically while receiving intensive advising and support or does not actively participate in required advising, the student may be subjected to the College of Business Separation Policy.

Separation Policy
If a student that has been admitted to the College of Business is placed on academic probation, suspension, received multiple academic warnings, has repeat academic course withdrawals, or whose academic performance is below the necessary grade point averages required to graduate, then the student's admission into the College of Business may be rescinded. Once rescinded, the student will be denied readmission to the College of Business for one year following which a written petition for readmission must be presented at least 30 days prior to the start of the quarter in which readmission is desired. The decision to readmit will be based on meeting current admission standards, analysis of the entire academic record, as well as any other sources of information deemed appropriate. Readmission is not guaranteed.

Service to Other Majors
Students majoring in programs outside CB who are required to take courses in this college for either their major or minor will be eligible to enroll on a space-available basis. These students will be given priority over other non-college majors wishing to enroll in courses. All students must have taken prerequisites for courses prior to enrollment.

Departments and Programs
Accounting: Marvin Bouillon (Shaw-Smyser Hall, room 340)
Economics: Carlo Smith (Des Moines Center, room 373)
Finance and SCM: Carlo Smith (Des Moines Center, room 373)
Management: Jeffrey Stinson (Shaw-Smyser Hall, room 317)

College of Education and Professional Studies

Administration and Organization

Dean
Paul Ballard, (Black Hall, room 228-8)

Associate Dean of Education
Virginia Erion, PhD (Black Hall, room 228-4)
509-963-1935

Associate Dean of Professional Studies
Ethan Bergman, PhD RDN (Black Hall, room 228-10)
509-963-1975
Fax: 509-963-1049
Mail Stop 7415
www.cwu.edu/education-professional-studies

The mission of the College of Education and Professional Studies is to prepare competent, enlightened citizens who will enhance their respective professions, commit themselves to socially responsible leadership, and help develop the global economy in a spirit of cooperation. Each academic unit of the college has developed specific goals to address this mission.

Graduates of the College of Education and Professional Studies programs are Professionally Prepared and Profession Ready, or P3R. Graduates enter the job force right after graduation and make an immediate positive impact on their profession.

Education

Students graduating from Education Programs are Professionally Prepared and Profession Ready, or P3R. The Education programs at CWU are all about preparing students to enter the greatest profession in the world....Teaching! Our Education programs approach learning in a supportive and positive environment where students and staff share responsibility for knowledge, and where students and staff value working and learning together. Graduates enter their teaching positions after graduation and make an immediate positive impact on the students they teach.

The Center for Teaching and Learning (CTL) is the WA State approved unit that provides oversight for all CWU school personnel preparation programs. The CTL facilitates communication between and among the respective disciplines that contribute to the preparation of educators, including teachers, school administrators, and school psychologists. Supporting the mission, purpose, and governance structure of the CTL is the constructivist philosophy-a belief that knowledge is actively created by learners and made meaningful when learners relate new information to prior knowledge.

The Teacher Preparation Program is administered through CEPS and the CTL. Admission to the university does not guarantee admission into the Teacher Preparation Program. Students must apply to the Teacher Preparation Program and meet specific application criteria before being admitted. For more information about the **Teacher Certification** process, link to www.cwu.edu/teacher-certification/.

For more information about the CEPS education departments and programs, go to the departments listed below.

The Department of Advanced Programs has master level degrees in School Administration, Instructional Leadership and Higher Education.

The Department of Educational Foundations and Curriculum houses the Professional Education Program (PEP), Field Experiences, Instructional Foundations undergraduate degree, and Master Teacher Graduate Program.

The Department of Language, Literacy, and Special Education offers teachers' education programs for those interested in bilingual education and teaching English as a second language, literacy, and special education.

The Department of Physical Education, School and Public Health. Graduates of this department are prepared to enter careers as physical education and school health teachers or in a wide variety of community/public health settings.

The Department of Teaching Elementary, Adolescent and Young Children (TEACH) is committed to ensuring graduates are prepared to be outstanding educational leaders and facilitators of learning who demonstrate the knowledge and skill necessary to educate and work within a diverse school population.

Professional Studies

The Professional Studies at Central Washington University strives to deliver innovative applied science and technology programs that develop competent globally responsible citizens who contribute to their respective professions. The vision of Professional Studies at CWU is to be recognized as a premier learning community dedicated to providing relevant and authentic learning experiences.

Students graduating from Professional Studies programs are Professionally Prepared and Profession Ready, or P3R their profession in a variety of fields.

Professional Studies within the College of Education and Professional Studies at Central Washington University programs value:

- Students
- Excellence in teaching
- A rigorous academic and learning environment
- The preparation of students for successful careers
- Accreditation and industry standards
- Applied research
- Creative, diverse and innovative ideas
- Open, collaborative environments
- Partnerships with external constituents
- The use of current technology
- Professionalism, integrity, and responsible citizenship
- Life balance

For more information about the Professional Studies Departments and Programs, go to the departments listed below.

The Department of Aerospace Students (AFROTC). The mission of CWU's Air Force ROTC attachment is to train cadets for active duty through professionalism, discipline, and challenging leadership experience.

The Department of Aviation is a regional leader in professional aviation education.

The Department of Engineering Technologies, Safety and Construction Management offers Bachelor of Science degree programs in selected industrial technologies, engineering technologies, safety, and construction management.

The Department of Family and Consumer Sciences offers programs in Apparel, Textiles, and Merchandising; Business and Marketing Education; Family Studies; Recreation and Tourism; and Global Wine Studies.

The Department of Information Technology and Administrative Management offers major and minor programs blending high-demand technical skills with soft skills such as leadership and supervision. A cutting-edge, relevant curriculum prepares students to act as leaders in their chosen fields.

The Department of Military Science (AROTC) houses the Army ROTC program at CWU. The mission of the Wildcat Battalion is to recruit, teach, coach, mentor and commission outstanding scholars, athletes and leaders who possess character and conviction to proudly serve our nation.

The Department of Nutrition, Exercise, and Health Sciences prepares students in a variety of professions that focus on the physical and functional abilities of humans including clinical physiology, exercise science, nutrition and dietetics, and paramedicine.

The Department of Physical Education, School and Public Health. Graduates of this department are prepared to enter careers as physical education and school health teachers or in a wide variety of community/public health settings.

Department Chairs
Advanced Programs: Henry Williams, EdD (Black Hall, room 241-25)
Aerospace Studies (AFROTC): Richard Warr, Lt. Colonel, USAF (Peterson Hall, room 203)
Aviation: Amy Hoover, PhD (Black Hall, room 225-1)
Educational Foundations and Curriculum: Ian Loverro, PhD (Black Hall, room 101)
Engineering Technologies, Safety and Construction: Lad Holden, Master of Technology (Hogue Hall, room 107)
Family and Consumer Sciences: Rob Perkins, EdD and Duane Dowd, PhD (Michaelsen Hall, room 100)
Information Technology and Administrative Management: Robert Lupton, PhD (Shaw-Smyser Hall, room 203)
Language, Literacy, and Special Education: Janet Finke, PhD (Black Hall, room 204-6)
Military Science (AROTC): Scott Carpenter, Lt. Colonel (Peterson Hall, room 202G)

Nutrition, Exercise and Health Sciences: Ethan Bergman, PhD (Physical Education Bldg., room 114)
Physical Education, School and Public Health: Kenneth Briggs, EdD (Physical Education Bldg., room 114)
Teaching Elementary, Adolescent and Young Children: Keith Salyer, PhD (Black Hall, room 101)

College of the Sciences

Administration and Organization

Dean
Kirk A. Johnson, PhD (Dean Hall, room 130)

Associate Dean
Timothy Englund, PhD (Dean Hall, room 130)

Associate Dean
Martha Kurtz, PhD (Dean Hall, room 130)

Staff
Kari Anderson, development officer
Velma Henry, administrative assistant
Cindy Klein, fiscal specialist
Janis Orthmann, administrative assistant

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www.cwu.edu/sciences
The College of the Sciences (COTS) is comprised of 13 departments and 12 interdisciplinary programs representing disciplines in the behavioral, natural, and social sciences, and mathematics. The departments and programs of the college offer undergraduate baccalaureate degrees, master's degrees, minors that supplement other degree programs, and a comprehensive range of service coursework. As an essential part of its mission, the college offers an extensive general education curriculum. The departments play a major role in Central's Teacher Certification Programs, offering bachelors and master's degrees for students preparing to be secondary teachers and providing coursework in educational foundations and discipline-specific content and methods.

Departments within the college are committed to teaching excellence, active engagement by faculty in research, scholarship and professional service activities, student involvement in research, community service, and employing practical applications of academic specializations.

Departments
All departments offer baccalaureate degree programs and, in some cases, minors educational specialist degrees and master's degrees. In addition to consulting department/program headings in this catalog, students are encouraged to contact individual departments and program offices directly.

Anthropology and Museum Studies: Kathleen Barlow, PhD, Dean Hall, room 356, 509-963-3201
Biological Sciences: Tom Cottrell, PhD, Science Building, room 338, 509-963-2731
Chemistry: Levente Fabry-Asztalos, PhD, Science Building, room 302, 509-963-2811
Computer Science: Razvan Andonie, PhD, Hebeler Hall, room 219, 509-963-1495
Geography: John Bowen, PhD, Dean Hall, room 301, 509-963-1188
Geological Sciences: Carey Gazis, PhD, Lind Hall, room 108B, 509-963-2701
Law and Justice: Rodrigo Murataya, PhD, Farrell Hall, room 300, 509-963-3208
Mathematics: Aaron Montgomery, PhD, Bouillon Hall, room 108, 509-963-2103
Physics: Andy Piacsek, PhD, Lind Hall, room 201A, 509-963-2727
Political Science: Todd Schaefer, PhD, Psychology Building, room 415, 509-963-2408
Psychology: Stephanie Stein, PhD, Psychology Building, room 421, 509-963-2381
Science Education: Bruce Palmquist, PhD, Science Building, room 107, 509-963-2929
Sociology: Delores Cleary, PhD, Farrell Hall, room 409, 509-963-1305

Interdisciplinary Programs
These programs offer specialized coursework, interdisciplinary baccalaureate majors or minors, master's degrees or research, and public service functions.

American Indian Studies: Toni Culjak, PhD, Language and Literature, room 408D, 509-963-1531
Center for Excellence in Science and Mathematics Education: Martha Kurtz, PhD, Science Building, room 107A, 509-963-2135
Environmental Studies: Anne Johansen, PhD, Science, room 207D, 509-963-2164
Ethnic Studies: Nelson Pichardo, PhD, Farrell Hall, room 440, 509-963-1348
Interdisciplinary Studies - Social Sciences: Steve Schepman, PhD, Psychology Building, room 429, 509-963-2389
Museum of Culture and Environment: Mark Auslander, PhD, Dean Hall, room 334, 509-963-3209
Primate Behavior and Ecology Program: Lori Sheeran, PhD, Dean Hall, room 335, 509-963-1434
Resource Management Program: Karl Lillquist, PhD, Dean Hall, room 319, 509-963-1184

or Steve Hackenberger, PhD, Dean Hall, room 349, 509-963-3224
Science Honors: Linda Raubeson, PhD, Science Building, room 338L, 509-963-2734
Science Talent Expansion Program (STEP): Wendy Bohrson, PhD, Lind Hall, room 101, 509-963-2835
Women's and Gender Studies: Judith Hennessey, PhD, Farrell Hall, room 436, 509-963-1574

Affiliated Centers and Institutes
Center for Spatial Information and Research: Anthony Gabriel, PhD, Dean Hall, room 320, 509-963-1166
Center for the Environment: Anne Johnasen, PhD, Science, room 207D, 509-963-2164
Central Washington Archaeological Survey, Anthropology: Patrick McCutcheon, PhD, Dean Hall, room 340, 509-963-2075
or Steve Hackenberger, PhD, Dean Hall, room 349, 509-963-3224
Community Counseling and Psychological Assessment Center: Heath Marrs, PhD, Psychology Building, room 346, 509-963-2349
or Elizabeth Haviland, PhD, Psychology Building, room 118, 509-963-2371
Geodesy Laboratory and Pacific Northwest Geodetic Array (PANGA) Data Analysis Facility: Tim Melbourne, PhD, Hebeler Hall, room 110A, 509-963-2799
Health Career Resources: Tracy Andrews, PhD, Dean Hall, room 351, 509-963-3220

Center for Teaching and Learning

College of Education and Professional Studies
Ellensburg
Black Hall, room 228

The Center for Teaching and Learning (CTL) is the Washington State Professional Educator Standards Board approved unit that provides oversight for all CWU school personnel preparation programs. The CTL is intended to facilitate communication between and among the respective disciplines that contribute to the preparation of educators. CTL programs include the preparation of teachers, school administrators, school counselors, and school psychologists.
The mission of the center is played out through its theme: Preparing Facilitators of Learning in a Diverse World. To accomplish this mission, private and public school teachers, administrators, counselors, and psychologists from around the state join university faculty who represent the three colleges mentioned above, to establish a professional community. This professional community reaches all corners of CWU and extends to the world of schooling.
Representatives of this professional education community merge under the aegis of the CTL to: (1) design, deliver, and renew candidate recruitment, admission, and retention policies, and procedures; (2) to assess, as an aggregate, candidate knowledge, skills, and dispositions; and (3) to evaluate the efficacy of the CTL for the purpose of maintaining a state approval and national accreditation status.

Conceptual Framework
Supporting the mission, purpose, and governance structure of the CTL is the constructivist philosophy. This philosophy asserts that:

- Knowledge is actively created by the learner
- Knowledge is constructed or made meaningful when learners relate new information to prior knowledge or existing structures of knowledge
- Knowledge constructs are shaped by experience and social interaction
- Members of a culture collaboratively establish knowledge.

For information about the School Administrator program, contact the Department of Permalink. For information about the school counselor and School Psychologist programs, contact the Permalink.

Teacher Certification Program General Information
The Teacher Certification Program is administered through CEPS and the CTL executive board. The provost/vice president for academic and student life in collaboration with the CEPS dean appoints faculty to serve on the advisory council, which advises the CTL executive board on program policies.

Admission Requirements
Admission to the university does not guarantee a student admission into the Teacher Certification Program. Students must be at least conditionally admitted to the Teacher Certification Program prior to enrolling in any courses required in an Education-related major and/or minor. Students must be fully admitted to the Teacher Certification Program prior to enrolling in any of the Professional Education Program courses housed within the Educational Foundations and Curriculum Department (Black Hall, room 101).

The processing of applications takes time. To insure the thorough review of an application, it is required that all application materials for admission to the Teacher Certification Program be submitted by the following dates: For Ellensburg campus programs-winter, October 1; spring, January 1; summer, April 1; fall, April 1. For university center programs-please contact the university center.

(All application forms are available online at www.cwu.edu/teacher-certification)

1. A 3.0 grade point average (GPA) for at least the last 45 graded quarter credits (the total may exceed 45 if an entire quarter is needed to achieve the minimum 45) or overall CWU/transfer cumulative is required for full admittance into the Teacher Certification Program. A 2.8 GPA for at least the last 45 graded quarter credits or overall CWU/transfer cumulative will be considered for conditional admittance into the Teacher Certification Program. A 3.0 GPA for at least the last 45 graded quarter credits or overall CWU/transfer cumulative is required prior to making application to student teaching.
2. Completed APPLICATION FOR ADMISSION TO TEACHER EDUCATION.
3. Completed Character and Fitness supplement. Answering "YES" to any question on the form will require that you meet with the Certification Officer prior to a decision regarding admission. All court documents should be submitted prior to that meeting. False answers to the questions on the form may result in denial of program admission and/or certification.
4. Official or unofficial transcripts for all college/university coursework must be submitted directly to the Teacher Certification office. These transcripts are in addition to transcripts submitted to Registrar Services.
5. Successful completion of ENG 101, ENG 102, and one of either MATH 101, 153, 154, 164,170, or 172.
6. Submission of the Dispositional Survey. Once you activate your LiveText account, you are automatically sent the Dispositional Survey. It is located in your Forms box in LiveText. Once you complete the survey, click the submit button. Please call 509-963-2660 if you have any questions.
7. Successful completion of the Basic Skills (Reading, Writing, and Math) requirement. Candidates may satisfy this requirement by passing the WEST-B or obtaining certain scores on the SAT and/or ACT. Please see below:

Subject (Basic Skill)	WEST-B	SAT Score	ACT Score
Math	PASS	515 or higher	22 or higher
Reading	PASS	500 or higher	22 or higher
Writing	PASS	490 or higher	8 or higher

WEST-B Test
The WEST-B exam is administered statewide several times each year. Registration information and test dates can be found online at www.west.nesinc.com.

Note: Failure to begin the program within one year from date of acceptance may result in cancellation of admission.

The completed application packet needs to be submitted to the following address by the appropriate deadline date: Teacher Certification Office, College of Education and Professional Studies, Central Washington University, 400 East University Way, Ellensburg, WA 98926-7414.

Please be aware that:
No grade lower than a C in major or minor, and foundation coursework, will be accepted for certification.

To remain in the program, students must maintain a 3.0 GPA for the last 45 graded quarter credits or overall CWU/transfer cumulative.

Each applicant for admission to the Teacher Certification Program will be notified in writing of the status of his or

her application.

Completion of the Teacher Certification Program does not guarantee certification by the state of Washington. In order to be certified, the candidate must demonstrate good moral character and personal fitness as defined by WAC 180-79A-155. Fingerprint clearance from the Washington State Patrol and FBI will be required prior to application for any practicums, all courses that require any type of field experience or working with P-12th grade children, EFC 330 - Field Experience, and/or EFC 480 - Student Teaching. If you have anything from your past that you think may compromise your certification, please seek advisement from the Certification Officer at 509-963-2660 prior to submitting your application.

Teacher Certification Program admission regulations are administered by the CTL. Personal folders are maintained in the Teacher Certification office for each student enrolled in a teaching program at Central.

Transfer Students
Students entering the university with a transferable associate of arts (AA) degree from an accredited Washington community college will need to meet the admission requirements for the Teacher Certification Program prior to enrolling in any education courses. These students are frequently surprised to find that, after finishing two years of community college, they have more than two years left to complete an education degree. This is because the AA degree required 90 credits and, when transferred to CWU, satisfies only the Basic and Breadth requirements, which can generally be completed in 60 credits at CWU. Community college students can make good use of the additional 30 credits required by the AA by selecting courses at the community college which may meet major, minor, or, in some cases, courses in the Professional Education Program. Check your community college's equivalency sheet to make certain your courses are equivalent to CWU's courses for these particular requirements.

National Evaluation Series (NES) Exam
As of July 1, 2014, all teachers wishing to obtain certification must take the NES exam in each content area for which they seek endorsement prior to student teaching. Documentation (i.e., registration confirmation, test scores) that the student has registered for a test date that occurs prior to student teaching must be submitted to the Teacher Certification Office prior to applying for student teaching. Final certification will not be awarded until successful completion of the NES exam is earned. Test information and registration is online at www.nestest.com.

Alternative Admissions Procedures to Teacher Certification
Students who do not have the required grade point average, or who do not pass portions of the WEST-B test may apply for provisional admission to the Teacher Certification Program by alternative means.

PROCEDURE

1. Applications will be made in writing to the Candidate Admissions, Recruitment, and Retention Committee (CARR) in care of the Certification Officer. The deadline for application will be the first Friday of the quarter preceding the quarter admission is desired (fall quarter applicants deadline will be the first Friday of spring quarter.) The written application will include the following:

a. A letter from the applicant's major advisor that supports the following:

- Applicant's academic ability, service experience, growth, commitment, and motivation
- Potential for graduate study (following graduation from the undergraduate program)
- Potential for success in working with diverse groups
- Other criteria appropriate to the applicant's potential as a teacher
- Other extenuating circumstances that may have affected the applicant's grades and test scores

b. One supporting letter from a former employer, supervisor, or other individual knowledgeable of the applicant's experiences in working with young people

c. A personal essay by the applicant that describes his or her educational goals and objectives

2. An interview with the Candidate Admissions, Recruitment, and Retention committee (CARR) may be required.

3. Those admitted will be monitored on a quarterly basis by the CARR committee, and will meet all admission requirements prior to student teaching.

4. Students who have been admitted to the Teacher Certification Program via the CARR committee will receive personal guidance to facilitate completion of their undergraduate degrees and receipt of their certificates.

5. For further information, contact the Certification Officer at 509-963-2660.

Graduation/Certification Requirements for the Teacher Certification Program

- No grade lower than a C in major, minor, and professional education foundation courses
- Minimum GPA of 2.5 in major, minor, and professional education foundation courses
- Minimum GPA of 3.0 for last 45 graded quarter credits (the total may exceed 45 if an entire quarter is needed to achieve the minimum 45) or overall CWU/transfer cumulative.
- Passing scores on the NES exam.
- Passing scores on the edTPA.

Major and Minor Concentrations

The following majors are endorsements offered at CWU. Students should contact the departments to request information about major requirements.

Endorsable Majors
Biology: Teaching Major
Chemistry: Teaching Major
Early Childhood Education Major
Earth Science Teaching Major
Elementary Education Major
English/Language Arts: Teaching Major
Family and Consumer Sciences Career and Technical Education Teaching Major
World Languages: Teaching Foreign Languages: Teaching Broad Area:, German, Japanese Majors
General Science Teaching Major
History: Social Studies Teaching Major
Mathematics: Teaching Secondary Major
Middle Level Humanities Major
Middle Level Math and Science Teaching Major
Music: Broad Area Specialization
Music: Choral Music Specialization
Music: Instrumental Music Specialization
Physical Education and School Health
Physics Major (BA)
Spanish Teaching Major
Special Education P-12 Major
Special Education P-12 Broad Area Major
Technology Education Broad Area Major
Technology Education Major

The following minors are endorsements offered at CWU. Students should contact the departments to request information about requirements.

Endorsable Minors
Bilingual Education/Teaching English as a Second Language Minor
Biology Teaching Secondary Minor
Chemistry Teaching Minor
Dance Teaching Minor
Early Childhood Education Minor
Literacy Minor
Middle Level Mathematics Minor
Middle Level Science Teaching Minor
Physics Minor
Science Education: Broad Area Science Teaching Minor
Teaching English as a Second Language Minor
Traffic Safety Education Minor

Certification
Central is in compliance with the No Child Left Behind federal legislation. It is a public institution that is regionally accredited.

CWU is accredited by the Northwest Commission on Colleges and Universities (NWCCU). NWCCU is recognized by the U.S. Department of Education and the Council for Higher Education Accreditation (CHEA) as the regional authority on educational quality and institutional effectiveness of higher education institutions in the seven-state Northwest region of Alaska, Idaho, Montana, Nevada, Oregon, Utah, and Washington.

Additionally, CTL, the unit that oversees all CWU Teacher Certification Programs, is fully approved by the state of Washington's Professional Educator's Standards Board.

CWU's Teacher Certification Program is approved by the Washington State Board of Education to offer programs, which lead to teacher certification. To be awarded Washington certificates, candidates must be at least 18 years of age.

Graduates of the Teacher Certification Program are legally qualified for certification in states, which are party to the interstate certification compact.

Residency Certificate
The residency-teaching certificate is normally awarded simultaneously with the bachelor's degree. Individuals who hold, or have held a residency-teaching certificate and are enrolled in a professional certificate program, may have the certificate renewed for an additional two years upon verification the individual is enrolled in a professional certificate program.

Professional Certificate (Pro Teach Program)
The Pro Teach Portfolio is an evidence-based assessment designed for teachers seeking the Washington professional certificate. Teachers who hold a residency certificate must meet the passing score set on the Pro Teach Portfolio (determined by the Professional Educators Standards Board) in order to earn their professional certificate. The

Pro Teach Portfolio evaluates teachers on their ability to impact student learning as stated in the 3 standards-- effective teaching, professional development and professional contributions-- and 12 criteria for the professional certificate approved by the Professional Educator Standards Board (PESB). Visit www.waproteach.org/index.html for more information.

To maintain the continuing (professional) certificate, each person must complete 150 clock hours of approved in-service education and/or 15 college or university credits every five years.

Endorsement-only Program
CWU's endorsement-only program is available to certified teachers who hold the Washington State initial, residency, or continuing teaching certificate and who wish to add a teaching endorsement to their certificate. Teachers interested in obtaining an endorsement from CWU should obtain an application online at www.cwu.edu/teacher-certification/endorsement-programs. Once an application and transcripts are submitted, a credit evaluation will be completed.

To qualify for an endorsement to teach in more than one specialization, students must meet the requirements for each specialization.

Certification Only
Candidates with a bachelor's degree who desire certification must follow the guidelines for admission to Teacher Certification. Certification-only students may earn the residency-teaching certificate by satisfactorily completing the professional foundation courses and at least one college endorsement program. Final approval of the college endorsement program lies with the individual's content area.

Alternative Pathway to Teaching Program

General Information
Washington has a shortage of teachers in the areas of special education, mathematics, and the sciences. While the need for these teachers is widespread across the state, rural districts have the most difficulty recruiting and retaining high-quality teachers. Merely preparing more teachers is not the answer to meet current demands. The solution is to address teacher placement and retention in rural schools.

Central Washington University's Center for Teaching and Learning (CTL) offers a hybrid online alternative certification program in partnership with school districts in central and southeast Washington (Educational Service Districts (ESD's) 171, 105, and 123).

Ten intensive days of coursework during the summer will be completed on the main CWU campus in Ellensburg prior to placement in a school classroom. You will begin the session with group of students and then proceed at your own pace.

The online APT program is inquiry-based. Throughout the year, you will complete and implement pieces of evidence for an online portfolio using case studies, chat rooms, and discussion boards. A co-teaching model is used for your internship. You will begin your internship supporting the classroom teacher, and as your skills build, the roles gradually reserve. You will complete a series of transitions that conclude with the submission of a portfolio and passing the teacher performance assessment.

Transition I:

- Learn from case studies matching them to state standards and the teacher performance assessment.

Transition II:

- Contribute to cases using actual classroom problems and issues.

Transition III:

- Write case studies.

Transition IV:

- Complete and pass the teacher performance assessment.

Admission Requirements

- Applicants must complete a bachelor's degree from a regionally accredited institution prior to enrollment in the CWU-Alternative Pathways to Teaching-Online Program. Degrees attained from foreign institutions must be translated and evaluated for U.S. equivalency by an accredited agency.
- Attained a cumulative GPA of 2.50 or higher from all college coursework.
- Complete the application to the Alternative Pathways to Teaching-Online Program.
- Complete a post-baccalaureate application to Central Washington University.
- Submit official transcript(s) from ALL previous colleges or universities attended. All transcripts must be sent directly from the school to CWU Admissions Office.
- Submit a resume.
- Submit two letters of recommendation.
- Submit passing scores from the Washington Educator Skills Test - Basic (WEST-B). Candidates may also satisfy this requirement if they have

scored high enough on the SAT or ACT. Please see the chart below:

Subject (Basic Skill)	WEST-B	SAT Score	ACT Score
Math	PASS	515 or higher	22 or higher
Reading	PASS	500 or higher	22 or higher
Writing	PASS	490 or higher	8 or higher

- Complete an interview. You will be contacted by the Alternative Pathways to Teaching-Online Program Manager to schedule an interview time.
- Submit a passing score on the WEST-E exam in our content area. (Information on the exam can be found online at www.nestest.com).
- Submit a completed Character and Fitness Form. If you have any yes answers on the form, you must contact the CWU Certification Office at 509-963-2660 to schedule an appointment to discuss the yes answer(s).
- Have current WSP and FBI fingerprint clearance (verified through the OSPI Fingerprint Database by the CWU Teacher Certification Office).

Please contact the APT Program Manager at 509-963-2433 or hollarje@cwu.edu if you have any questions.

Recency of Coursework

Education courses may not be older than 10 years at the time of graduation/ certification.

Office of Continuing Education

The Office of Continuing Education provides lifelong learning opportunities in support of the university mission. The unit offers a variety of credit, non-credit, training, and enrichment courses and programs.

Please NOTE:

- All Continuing Education courses, certificates, degrees, and services are offered on a self-support basis, and may be canceled if adequate enrollment is not reached.

- Waivers for veterans, university staff, senior citizens, and others do not apply. However, student financial aid can be applied to credit courses.

- Full fee-paying students must make additional payments at the rate established for each continuing education course in which they enroll.

- Tuition for some Continuing Education courses is higher than regular CWU tuition. Additional course fees may also apply.

Please visit us on the Web at www.cwu.edu/ce or call 509-963-1504 for complete information on the following programs:

ACADEMIC PROGRAMS

Master of Higher Education

The Master of Education, Higher Education program is designed for candidates with an interest in working in administrative positions in institutions of higher education, civic organizations, non-profit organizations, national government organizations, or the social sector. Program coursework provides students with a strong grounding in leadership/management/organizational development with particular attention to the higher education context.

For more information, please visit Academic Programs at www.cwu.edu/ce.

Flex IT Competency-Based (BS): Retail Management and Technology

Is it time to move forward in your career? Are you a professional who wants to keep working while gaining your Bachelor's degree? Do you want a degree that reflects your applied knowledge and skills? Flex IT Bachelor of Science from ITAM will help you. This competency-based

program is designed to complement who you are: your knowledge, your schedule and your pace.

In partnership with the Information Technology and Administrative Management (ITAM) department, CWU is proud to launch its first Flex IT specialization in Retail Management and Technology. It offers global opportunities for professionals and the competencies gained in this program are applicable in a broad range of professions.

For more information, please visit Academic Programs at www.cwu.edu/ce.

GIVE International Excursions

Through cultural immersion and experiential learning in an international setting, students will engage in activities designed to broaden their perspectives on sustainable development while providing opportunities for personal growth. Students will apply critical thinking skills, field observations, and reflective processing to explore and reveal the contextual impacts and opportunities associated with international sustainable development projects.

Content is delivered via a hybrid course that has an online component and an international immersion component through partnership with GIVE Excursions. A pin number for accessing the online course will be provided once the student is registered. The course begins prior to departure and concludes after your return.

For more information, please visit Academic Programs at www.cwu.edu/ce.

CAREER TRAINING AND DEVELOPMENT

Online Certificates - Non-credit
Are you looking to start a new career or gain skills to advance in your current one? The Office of Continuing Education, in partnership with ed2go (Formerly, Gatlin Education Services), offers online, open enrollment courses and programs designed to provide the skills necessary to acquire professional level positions for many in-demand occupations.

You can start these career training programs anytime and work at a pace that suits your individual style. You will have access to all the lessons and assignments from day one, and many of these programs can be completed in less than six months. Instructors are actively involved in your online learning experience. They respond to questions and concerns, as well as encourage and motivate you to succeed. Upon completing your program with a passing score, you will get a certificate of completion.

Please NOTE: Many of these programs are approved by the Workforce Training Board and are eligible to receive funding from the Workforce Investment Act (WIA). For a list of approved courses, visit the Washington Career Bridge website at www.careerbridge.wa.gov and search the Eligible Training Provider List for online programs at Central Washington University, Ellensburg.

For a full list of our current offerings, please visit Career Training and Development at www.cwu.edu/ce.

Online Courses - Non-credit
Looking to get ahead in your career? These six-week, online, professional development courses are the perfect way to learn a new skill or enhance your existing ones. You will spend roughly two to four hours each week completing two engaging lessons in an enjoyable, interactive learning environment. Expert instructors develop and lead every course, and you will be able to interact with them and with fellow students in lively online discussion areas. New sessions start every month, so you can sign up anytime. Upon completing a course with a passing score, you will receive a certificate of completion.

For a full list of our current offerings, please visit Career Training and Development at www.cwu.edu/ce.

Seminars and Workshops - Non-credit
These face to face courses are available each quarter and are designed to enhance and strengthen your business operations or your personal career development. Upon completion of each seminar or workshop, continuing education units (CEU's) will be issued. Course topics are timely, taught by experienced instructors, and offer professionals and businesses convenient, affordable options for training. Course topics include Microsoft Excel, Leading across generational differences, Social media strategy, and more.

For a full list of our current offerings, please visit Career Training and Development at www.cwu.edu/ce.

PROGRAMS FOR EDUCATORS

Alternate Pathways to Endorsement
Are you passionate about educating our nation's young people as a means to creating a more just and equitable society? Central Washington University's Center for Teaching and Learning (CTL) offers a hybrid online alternative certification program for individuals with a bachelor's degree to teach high need subjects in rural districts across the state.

You begin the program with a ten-day intensive "boot camp" held on the main CWU campus in Ellensburg. This "boot camp" occurs the first two full weeks after the Fourth of July every year and is taught by university

faculty from across the CWU Education Departments. Featured seminars include orientation to teaching, classroom management, exceptional learners, lesson planning, assessment, culturally relevant teaching practices, and English Language learners, to name a few.

After the boot camp, you complete a mentored internship in a school close to where you live. This mentored internship progresses so that you assume more and more responsibility for lead instruction and culminates in six weeks of student teaching. You proceed through the mentored internship at your own pace, completing a minimum of 720 field experience hours (combined observation and teaching), in your endorsement area(s). Most teacher candidates spend a full year in their internship, dedicating the first quarter to observation, the second quarter to guided instruction or teaching a short lesson segment, the third quarter to teaching one class or prep, and spending the fourth quarter student teaching full time. This progression is flexible and is developed in concert with a university field supervisor and your mentor teacher.

For more information, please visit Programs for Educators at www.cwu.edu/ce.

Online Courses - Non-credit
Numerous professional development classes are available year round through online learning in partnership with VESi (Virtual Education Software). Course topics are timely, taught by experienced instructors, and offer PK-12 teachers convenient, affordable options for professional development (500) credit or clock hours. Course topics include classroom management, special education, bilingual education, health and safety management, teaching strategies, technology in schools, and more.

For a full list of our current offerings, please visit Programs for Educators at www.cwu.edu/ce.

Seminars and Workshops - Non-credit
Professional development classes are available each quarter through in-service and distance learning. Course topics are timely, taught by experienced instructors, and offer PK-12 teachers convenient, affordable options for professional development (500) credit or clock hours. Course topics include classroom management, special education, bilingual education, health and safety management, teaching strategies, technology in schools, and more.

For a full list of our current offerings, please visit Programs for Educators at www.cwu.edu/ce.

LIFE AND LEISURE

Courses - Non-credit
These fun, open to the public offerings range from recreational activities like fly fishing and hiking to beer tastings and bus trips to local wineries and breweries. Categories of classes include Outdoor Recreation and Fitness; Bus Tours and Day Trips; Food, Wine, and Beer; and Art, Culture, and History.

For a full list of our current offerings, please visit Life and Leisure at www.cwu.edu/ce.

RUNNING START

The Running Start program is designed to offer highly capable students the opportunity to take rigorous college courses while still in high school. Courses are available at partner high schools throughout Washington, on-campus at CWU, and online. Credits earned, if applied at CWU or transferred to another institution, can strengthen students' chances of being accepted to their colleges of choice, help them get a head start on their degree, and reduce the cost of college. Course offerings vary by location.

For more information, visit us at www.cwu.edu/runningstart or call 509-963-1351.

Online Learning

The Office of Multimodal Learning seeks to assure that Central Washington University maintains the highest standards of excellence in online learning and is recognized regionally and nationally for offering outstanding online programs that provide increased access of educational opportunities to diverse, place-bound, traditional, and non-traditional students.

Online offerings at CWU are meant to:

- provide more flexible access to content and instruction for learners who are unable to attend traditional face-to-face offerings
- provide greater educational course and program selection for students
- improve time-to-degree completion by offering students greater course scheduling flexibility

More information about online learning at CWU is available on the web at: www.cwu.edu/online-learning.

ONLINE LEARNING POLICIES

Admission
Students interested in entering an online program may submit an application at www.cwu.edu/admissions. Once admitted to the university, students must also apply for their major.

Registration
Continuing students follow the same procedures as noted in the registration part of this handbook. Be sure to study the procedures for MyCWU. Non-matriculated students may register for classes on a space-available basis.

Advising
Online students are encouraged to visit the Online Student Resource Center webpage at www.cwu.edu/student-achievement/online-student-resource-center to explore all the advising resources and services available. General transfer advising is available by emailing onlineadvisor@cwu.edu and specific program advising is available by contacting your faculty advisor. A list of advisors for the online programs is available on the web at: www.cwu.edu/online-learning. Final official transcripts must be received for articulation of all transfer courses.

Tuition
See current tuition rates and fees or refer to the Registrar Services home page at www.cwu.edu/registrar. Continuing Education courses are offered on a self-support basis. The self-support tuition schedule is separate from full-time tuition and fees. Visit the Continuing Education web site at www.cwu.edu/ce. Tuition and fees are subject to change.

Student Services
Questions regarding services that accommodate physical- and learning-disabled students can be directed towards Disability Services at DS@cwu.edu. CWU also offers career counseling through our Career Services office. They can be contacted by emailing career@cwu.edu. Tutoring is available for some subjects, including math and writing. Students can email onlinetutoring@cwu.edu for additional information.

Financial Aid
Students enrolled in an online program are eligible to apply for financial aid. You can apply online at www.fafsa.ed.gov.

For more information about financial aid, visit www.cwu.edu/financial-aid. All students must submit the Free Application for Federal Student Aid (FAFSA) to begin the process.

Veterans
Information on veteran's benefits is available through the Veterans Center on the Ellensburg campus by calling 509-963-3028 or by emailing va@cwu.edu.

Library
Access to library services is available to students enrolled in the online programs through the CWU Brooks Library, which is available by logging on to www.lib.cwu.edu. Assistance in acquiring reference materials may also be obtained by calling 800-290-3327. On-site library resource centers are also located at CWU- Ellensburg, CWU-Des Moines, and CWU-Lynnwood.

Textbooks
Textbooks may be purchased through the Wildcat Shop at cwubookstore.collegestoreonline.com.

Final Exam Schedule
Online Learning final exam dates can be different from the Ellensburg or Center campus schedule. Please review your syllabus and confirm with your instructor for the appropriate date and, if applicable, time.

ONLINE LEARNING PROGRAMS

Online Graduate Degree Programs

MEd Higher Education
MEd Literacy
MEd School Administration
MEd Special Education
MS Health and Physical Education
• Athletic Administration Specialization
MS Health and Physical Education
MS Information Technology and Administrative Management

Online Undergraduate Degree Programs

BA English: Professional and Creative Writing
BS Information Technology and Administrative Management
• Administrative Management Specialization
• Retail Management and Technology Specialization
• Retail Management and Technology Specialization Flex IT Competency Based
BAS Information Technology and Administrative Management
• Administrative Management Specialization
• Information Technology Specialization
• Cybersecurity Specialization
BS Interdisciplinary Studies: Social Sciences
BA Law and Justice
BS Paramedicine (Hybrid)
BA Psychology
BA Sociology

Online Minors

Administrative Management Minor
Family Studies Minor
Latino and Latin American Studies Minor
Law and Justice Minor
Library and Information Science Minor
Non-Profit Organization Management Minor
Psychology Minor
Retail Management and Technology Minor
Sociology Minor
Sports Business Minor

Online Certificates/Endorsements

Global Literacy Development Certificate
Library Media Endorsement
Non-Profit Organization Management Certificate
Reading Endorsement

Degrees Offered (Majors, Minors, Certificates)

Accounting Major, BS
Accounting Minor
Actuarial Science Major, BS
Administrative Management Minor or Certificate
Advertising Minor
Aerospace Studies Minor
Africana and Black Studies Minor
American Indian Studies Minor
American Sign Language Minor
Anthropology Major, BA (45 Credits)
Anthropology Major, BA (63 Credits)
Anthropology Major, BS
Anthropology Minor
Apparel Design Minor
Apparel, Textiles and Merchandising Major, BS
Apparel, Textiles and Merchandising Minor
Applied Computer Science Minor
Art BFA, Graphic Design Specialization
Art BFA, Studio Art Specialization
Art History Minor
Art Major, BA
Art Studio Minor
Asia University America Program (AUAP)
Asia/Pacific Studies Major, BA
Asia/Pacific Studies Minor
Asian Business Certificate
Astronomy Minor
Athletic Training Minor
Aviation Management BS, Aviation Management Specialization
Aviation Management BS, Maintenance Management Specialization
Aviation Management Minor
Aviation Professional Pilot Minor
Aviation: Professional Pilot BS, Commercial Pilot Specialization
Aviation: Professional Pilot BS, Flight Officer Specialization
Bilingual Education/Teaching English as a Second Language Minor
Biology BS, Biology Teaching Specialization
Biology BS, Biomedical Science Specialization
Biology BS, Ecology and Evolutionary Biology Specialization
Biology BS, General Biology Specialization
Biology BS, Molecular and Cell Biology Specialization
Biology Major, BA
Biology Minor
Biology: Teaching Secondary Minor
BSBA, Finance Specialization

BSBA, General Business Specialization
BSBA, Human Resource Management Specialization
BSBA, Leadership and Management Specialization
BSBA, Marketing Management Specialization
BSBA, Supply Chain Management Specialization
Business Minor (FSCM)
Business Administration
Business and Marketing Education Major, BS
Business Minor (MGT)
Chemistry Major BS, Biochemistry Specialization
Chemistry Major, BS
Chemistry Minor
Chemistry: Teaching Major, BA
Chemistry: Teaching Minor
Chinese Minor
Cinema Studies Minor
Clinical Physiology Major, BS
Communication Minor
Communication Studies Major, BA
Community Health Education Minor
Computer Applications Minor or Certificate
Computer Science Major, BS
Computer Science Minor
Construction Management Major, BS
Construction Safety Minor
Craft Beer Trade Certificate
Craft Brewing, BS
Creative Writing Minor
Cybersecurity Minor or Certificate
Dance Performance Minor (PESPH)
Dance Performance Minor (TH)
Digital Journalism Major BA, Broadcast Journalism Specialization
Digital Journalism Major BA, Journalistic Writing and Reporting Specialization
Douglas Honors College
Dual-degree Physics/Engineering Program
Early Childhood Education Major
Early Childhood Education Minor
Economics BS, Economic and Business Forecasting Specialization
Economics BS, General Economics Specialization
Economics BS, Managerial Economics Specialization
Economics Minor I
Economics Minor II
Electronic Engineering Technology Major, BS
Elementary Education Major
EMS Paramedicine Major, BS
Energy Studies Minor
English Language and Literature Major, BA
English Language and Literature Minor
English Language Arts Teaching Major, BA
English Professional and Creative Writing, BA
Environmental Geological Sciences Major, BS
Environmental Studies BS, Environmental Biology Specialization
Environmental Studies BS, Environmental Chemistry Specialization
Environmental Studies BS, Environmental Geography Specialization
Environmental Studies BS, Environmental Geology Specialization
Environmental Studies BS, Environmental Policy Specialization
Environmental Studies Minor
Ethics Minor
Ethnic Studies Minor
Event Planning Minor
Exercise Science Major, BS
Exercise Science Minor
Family and Consumer Sciences Career and Technical Education Teaching Major, BS
Family and Consumer Sciences Education Minor
Family and Consumer Sciences Major, BA
Family and Consumer Sciences Minor
Family Studies Major BS, Child Life Specialization
Family Studies Major BS, Family Science Specialization
Family Studies Minor
Film and Video Studies BA, Cinema Studies Specialization
Film and Video Studies BA, Production Specialization
Film and Video Studies BA, Screenwriting Specialization
Finance Minor
Food Science and Nutrition BS, Dietetics Specialization
Food Science and Nutrition BS, Foods and Nutrition Specialization
Food Service Management Minor
French Major, BA
French Minor
French Teaching Major, BA
Geographic Information Systems (GIS) Certificate
Geography BS, Environmental and Resource Geography Specialization
Geography BS, GIScience Specialization
Geography Major, BA
Geography Minor
Geology Major, BA
Geology Major, BS
Geology Minor
German Minor
Global Literacy Development Certificate
Global Studies and Initiative (GSI)
Global Wine Studies, BS
History Major (Large Plan), BA
History Major (Small Plan), BA
History Minor

History Social Studies Teaching, BA
Human Resource Management Minor
Individual Studies
Industrial Engineering Technology Major, BS
Industrial Technology Minor
Information Technology Minor or Certificate
Instructional Foundations, BA
Integrated Energy Management BS, Integrated Energy Business Specialization
Integrated Energy Management BS, Integrated Energy Policy Specialization
Integrated Energy Management BS, Integrated Power Systems Specialization
Interdisciplinary Honors Minor
Interdisciplinary Studies-Social Sciences, BS
International Studies Minor
ITAM BAS, Administrative Management Specialization
ITAM BAS, Cybersecurity Specialization
ITAM BAS, Information Technology Specialization
ITAM BS, Administrative Management Specialization
ITAM BS, Cybersecurity Specialization
ITAM BS, Network Administration and Management Specialization
ITAM BS, Retail Management and Technology Specialization
ITAM BS, Web and Database Administration and Management Specialization
Japanese Major, BA - Large Plan
Japanese Major, BA - Small Plan
Japanese Minor
Japanese Teaching Major, BA - Large Plan
Japanese Teaching Major, BA - Small Plan
Jazz Studies Certificate
Latin American Business Certificate
Latino and Latin American Studies Minor
Law and Justice Major, BA
Law and Justice Minor
Library and Information Science Certificate
Library and Information Science Minor
Library Media Endorsement
Linguistics Minor
Literacy Minor
Mathematics Major, BS (Large Plan)
Mathematics Major, BS (Small Plan)
Mathematics Minor
Mathematics: Teaching Secondary Major, BA
McNair Scholars Program
Mechanical Engineering Technology Major, BS
Middle-level English Minor (Non-Endorsement)
Middle-level Humanities Teaching Major, BA
Middle-level Mathematics Teaching Major, BA
Middle-level Science Teaching Major, BS
Middle-level Social Studies Minor (Non-Endorsement)
Military Science Minor
Museum Studies Minor
Music Composition Major, BM
Music Education Major BM, Broad Area Specialization
Music Education Major BM, Choral Music Specialization
Music Education Major BM, Instrumental Music Specialization
Music Major, BA
Music Minor
Music Performance Major BM, Keyboard Specialization
Music Performance Major BM, Percussion/Wind/String Specialization
Music Performance Major BM, Vocal Specialization
Non-profit Organization Management Certificate (COM)
Non-profit Organization Management Minor (COM)
Nutrition Minor
Occupational Education
Organizational Communication Minor
Philosophy Major, BA (50 or 62 credits)
Philosophy Major, BA (50 or 62 credits), Religious Studies Specialization
Philosophy Minor
Physical Activity and Recreation Programming Minor (FCS)
Physical Activity and Recreation Programming Minor (PESPH)
Physical Education - Coaching Minor
Physical Education - Dance Minor
Physical Education - Dance: Teaching Minor
Physical Education and School Health Major, BS
Physics Major, BA
Physics Major, BS
Physics Minor
Political Science Major, BA (47 credits) (62 credits)
Political Science Minor
Pre-Chiropractic
Pre-Dentistry
Pre-Dietetics
Pre-Engineering
Pre-Law
Pre-Medical Technology
Pre-Medicine
Pre-Nursing in Public Health
Pre-Occupational Therapy
Pre-Optometry
Pre-Pharmacy
Pre-Physical Therapy
Pre-Veterinary
Primate Behavior and Ecology Major, BS
Professional Education Program
Professional Sommelier Certificate

Professional Writing Certificate (COM)
Professional Writing Certificate (ENG)
Program Development Minor
Project Management Minor
Psychology Major, BA (45 credits) (60 credits)
Psychology Minor
Public Health BS, Population Health Specialization
Public Health BS, Pre-Nursing Specialization
Public Policy BS
Public Relations Major, BA
Recreation and Tourism BS, Event Planning Specialization
Recreation and Tourism BS, Recreation Management Specialization
Recreation and Tourism BS, Tourism Management Specialization
Recreation and Tourism Management Minor
Religious Studies Minor
Retail Management and Technology Minor or Certificate
Russian Major, BA
Russian Minor
Russian Teaching Major, BA
Safety and Health Management Major, BS
Safety and Health Management Minor
School Library Media Studies
Science Education - Broad Area Science Teaching Minor
Science Education K-8 Minor
Science Honors Research
Science Talent Expansion Program (STEP)
Screenwriting Minor
Social Services Major, BS
Social Services Minor
Sociology Major, BA (45 credits)
Sociology Major, BA (60 credits)
Sociology Minor
Spanish Major, BA
Spanish Minor
Spanish Teaching Major, BA
Special Education (P-12) Broad Area Major, BAEd
Special Education (P-12) Major, BAEd
Special Education Minor
Sport Business Certificate
Sport Business Minor
Study Abroad and Exchange Program (SAEP)
Supply Chain Management Certificate
Supply Chain Management Minor
Sustainable Tourism Minor
Teaching English as a Second Language (TESL) Minor
Technology Education Broad Area Major, BS
Technology Education Major, BS
Theatre Art BFA, Design and Production Specialization
Theatre Arts BFA, Musical Theatre Specialization
Theatre Arts BFA, Performance Specialization
Theatre Arts Minor
Theatre Arts-General Studies, BA
Traffic Safety Education Minor
University and Enrichment Program
University English as a Second Language Program (UESL)
Web Design and Management Minor or Certificate
Wine Trade and Tourism Minor
Wine Trade Professional Certificate
Women's and Gender Studies Minor

Accounting Department

College of Business
Ellensburg (E)
Shaw-Smyser Hall, room 327
CWU-Des Moines (D)
CWU-Lynnwood (L)
Mail Stop 7484
509-963-3340
Fax: 509-963-2875
www.cwu.edu/accounting

See the website for how these programs may be used for educational and career purposes.

Faculty and Staff
Chair
Marvin L. Bouillon, PhD, (E)
Shaw-Smyser Hall, room 340

Director, MPA Program
Marvin L. Bouillon, PhD, (E)

Professors
Marvin L. Bouillon, PhD, (E)
Robert E. Holtfreter, PhD (E)
Karen D. Martinis, MBA, CPA (E)
Ronald R. Tidd, PhD, CPA (E)

Associate Professors
MaryAnne Atkinson, PhD (L)
Michael Ruble, PhD, CPA (L)
Kenneth A. Smith, PhD, CPA (D)
James H. Thompson, PhD, (D)
Ke Zhong, PhD (D)

Assistant Professor
Clemense E. Ehoff, Jr., PhD, CPA (E)

Senior Lecturers
Melissa Becker MBA (E)
Asher Wilson, MBA, JD, CPA (D)
Margaret A. Smith, MBA, CPA (E)

Staff
Lisa Woods, secretary

Department Information
We help our students learn foundation knowledge and skills in accounting and business that will aid them in private, government, or non-profit careers or prepare them for additional education for public accounting careers.

Bachelor of Science in Accounting Major
Admission Requirements
Admission requirements to major programs within the College of Business are identical regardless of the location of the program. Students must first be accepted by the university and, if applicable, the university center which they plan to attend. Then, students must formally apply to the College of Business and be admitted to a College of Business Program prior to enrolling in 300- and 400-level courses within the college.

Students must attend a College of Business major orientation to be fully admitted to our majors. Applications are only accepted at new student orientations. The application form must be completed and returned to the appropriate office along with copies of current transcripts.

If a student has met the requirements of admission but has struggled to do so, the College of Business reserves the right to offer conditional admission status for up to 2 quarters and/or 30 credits in order for the student to demonstrate she/he will be successful. Final admission to the College of Business under these circumstances is not guaranteed.

Students must have the below requirements to be admitted to a College of Business major. Students seeking entry to the College without these requirements will be granted pre-major standing.

- Completion of 30 credits (If a student is a transfer student, credits must be transferable)
- The applicant must be in good academic standing
- 2.25 Collegiate GPA
- Completion of ENG 101 and ENG 102 with a C- or higher, or equivalent
- Attend a College of Business Orientation

International students whose native language is not English must meet one of the following English proficiency requirements:

- A score of 71 or above on the Internet-based TOEFL or 525 or above on the paper-based TOEFL (195 for computer based, 71 for internet based), OR
- A score of 6.0 or above on the International English Language Testing System (IELTS) exam, OR
- A 3.0 (B grade) or above in each two college-level English composition courses from an accredited United States college or university. Contact the Office of Admissions to find out what courses are acceptable.

Students who have met all of the above requirements will be admitted unless the number of applicants exceeds

available space. In that case, acceptance will be competitive, based on a selection index.

Previous or Transfer Coursework Policy
Business courses taken to fulfill the requirements for an undergraduate or graduate degree from the CWU College of Business must have been taken within the last 10 years at the time of graduation. Exceptions may be made, but must be approved prior to acceptance into the College of Business by the department chair and dean or designee.

Students wishing to have credits from non-United States institutions considered for transfer into the College of Business for any major or minor must have their transcripts evaluated through outside credential evaluators who are members of the National Association of Credential Evaluation Services (NACES), such as the Foundation for International Services (FIS), the World Education Service (WES), or Educational Perspectives. Students who intend to pursue the CPA may instead decide to use the NABSA (National Association of State Boards of Accountancy) international evaluation services since it is a requirement of the CPA. Credits for current students participating in a CWU study abroad program will be evaluated by the Office of the Registrar.

Equivalent lower-division (100-200 level) courses may be transferred toward meeting the foundation course requirements for any BS degree in the college. Upper-division (300-400 level) courses may be transferred toward meeting the major requirements only with the approval of the department chair and the college dean (or designee).

Academic Jeopardy Policy
The College of Business is committed to the success of its students. If a student that has been admitted to the College of Business is deemed to be in academic jeopardy, the College of Business may place restrictions on the student. A student is considered in academic jeopardy for the following reasons:

- On academic warning or probation
- Frequently withdraws from class
- Repeating coursework to be successful
- Has less that a 2.5 (2.499 and below) in any of the required GPAs for graduation.
    - CWU GPA
    - Collegiate GPA (CWU and all transfer coursework combined)
    - Major GPA
    - Upper-division coursework in the major GPA
    - Accounting majors: upper-division Accounting coursework GPA

The College of Business may do the following in response to an Academic Jeopardy situation:

- Limit College of Business coursework in future quarters
- Require academic advising with both faculty and/or professional advisors
- Require academic success plans
- Double majors or double specialization students may be limited to one major plan in the College of Business

If a student is unable to improve academically while receiving intensive advising and support or does not actively participate in required advising, the student may be subjected to the College of Business Separation Policy.

Separation Policy
If a student that has been admitted to the College of Business is placed on academic probation, suspension, received multiple academic warnings, has repeat academic course withdrawals, or whose academic performance is below the necessary grade point averages required to graduate, then the student's admission into the College of Business may be rescinded. Once rescinded, the student will be denied readmission to the College of Business for one year following which a written petition for readmission must be presented at least 30 days prior to the start of the quarter in which readmission is desired. The decision to readmit will be based on meeting current admission standards, analysis of the entire academic record, as well as any other sources of information deemed appropriate. Readmission is not guaranteed.

Service to Other Majors
Students majoring in programs outside CB who are required to take courses in this college for either their major or minor will be eligible to enroll on a space-available basis. These students will be given priority over other non-college majors wishing to enroll in courses. All students must have taken prerequisites for courses prior to enrollment.

Graduation Requirements
To graduate with an accounting degree, the department requires a cumulative grade-point average of at least 2.0 in in-the-major upper-division accounting courses completed at CWU, in addition to the university grade-point average requirements that apply to all CWU major programs. Accounting majors cannot earn a business minor.

Upper-division (300-400 level) courses may be transferred toward meeting the major requirements only with the approval of the department chair and the college dean (or designee). Transfer students must earn at least 45 credits at CWU. Transfer students and post-baccalaureate students must complete at least 20 CWU in-the-major

upper-division accounting credits to be eligible for the accounting degree. In addition to the 20 CWU in-the-major upper-division credits, transfer students and post-baccalaureate students must complete an additional 17 CWU in-the-major accounting major required course or elective credits to be eligible for the accounting degree. Lower-division (100-200 level) accounting or business courses cannot be transferred to meet upper-division (300-400 level) course requirements. No accounting courses are offered for challenge by examination. CWU students who desire to study abroad must have the department chair and dean pre-approve credits transferred back to the College of Business using the Credit Transfer Agreement.

Central accounting students who are up to 180 days prior to obtaining a degree and at least 225 quarter credits, or who are completing the Master of Professional Accountancy Program, are qualified to sit for the Uniform Certified Public Accountant (CPA) examination. Washington law requires individuals wishing to sit for the CPA examination to have completed a minimum of 36 quarter credits of study in accounting and a minimum of 36 quarter credits in related business courses. See WAC4-25-710 for educational requirements). Registration for the examination is made through the State Board of Accountancy, Olympia, Washington www.cpaboard.wa.gov/. Graduates are also prepared to sit for the Certified Management Accounting examination and the Certified Internal Auditor examination. Students should consult with their major advisor for details.

Accounting Major, BS

College of Business Admission Requirements

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Students majoring in programs outside CB who are required to take courses in this college for either their major or minor will be eligible to enroll on a space-available basis. These students will be given priority over other non-college majors wishing to enroll in courses. All students must have taken prerequisites for courses prior to enrollment.

Repeat Policy
Business administration courses may be repeated only once.

Additional BSBA Graduation Requirements
The following special rules apply to students seeking the BSBA major:

- Students must earn a minimum cumulative GPA of 2.25 in the 99-to 100- credit in-the-major coursework to be eligible for a degree. In addition, the Department requires a minimum GPA of 2.25 in the 59- to 60-credit upper-division component of the in-the-major total.
- Transfer students must complete at least 40 College of Business credits at CWU to be eligible for the BSBA degree including MGT 489. Additionally, students seeking a human resource management specialization must complete HRM 486 at CWU and students seeking a marketing specialization must complete MKT 470 at CWU.
- The BSBA program requires a single specialization of at least 25 credits. Occasionally a student requests a second specialization. To be eligible for a second specialization, a minimum of 20 unique credits must be completed. Unique in this sense means the credits have not been used as part of any other BSBA specialization.

College of Business Curriculum
The College of Business Curriculum is divided into 4 tiers: foundation courses, core courses, major/specialization courses, and capstone. Students completing foundation courses may enroll in core courses so long as course pre-requisites are met. All foundation courses must be complete with a minimum grade of C- and a collegiate GPA of 2.25 or higher prior to a student enrolling in major courses. Students completing foundations courses may

enroll in major courses so long as course pre-requisites are met. In order to enroll in the capstone course, students must complete all core courses with a minimum grade of C- and have a collegiate GPA of 2.25 or higher. Core, major/specialization, and capstone courses all require admission to a College of Business major.

Accounting Requirements

The Department of Accounting will allow non-matriculated students in their classes under the following conditions:

1. Post-baccalaureate students who have a business degree from an AACSB-accredited program in the United States, or
2. Current students who are enrolled at another AACSB-accredited program in the United States.

These requests will be addressed on a space-available basis and will need the permission of the Accounting Chair. If you meet either of the above criteria, please email the Accounting classes you desire (including the course location): Ellensburg, Lynnwood, or Des Moines) and an unofficial transcript to the Chair of the Department of Accounting. The Chair will then prepare the necessary paperwork for admission into the course.

Graduation Requirements
To graduate with an accounting degree, the department requires a cumulative grade-point average of at least 2.0 in in-the-major upper-division accounting courses completed at CWU, in addition to the university grade-point average requirements that apply to all CWU major programs. Accounting majors cannot earn a business minor.

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Business Foundation Courses

- ACCT 251 - Financial Accounting **Credits:** (5)
- ACCT 252 - Managerial Accounting **Credits:** (5)
- BUS 221 - Introductory Business Statistics **Credits:** (5)
- BUS 241 - Legal Environment of Business **Credits:** (5)
- ECON 201 - Principles of Economics Micro **Credits:** (5)
- ECON 130 - Foundations for Business Analytics **Credits:** (5)
- **OR** MATH 130 - Finite Mathematics **Credits:** (5)

Select one of the following: 5 credits

- MATH 153 - Pre-Calculus Mathematics I **Credits:** (5)
- MATH 154 - Pre-Calculus Mathematics II **Credits:** (5)
- MATH 170 - Intuitive Calculus **Credits:** (5)
- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)

Foundation Total Credits: 35

Business Core Courses

- BUS 301 - Contemporary Issues in Management **Credits:** (3)
- **OR** MGT 200 - Essential Skills for Business Professionals **Credits:** (5)
- ECON 202 - Principles of Economics Macro **Credits:** (5)
- FIN 370 - Introductory Financial Management **Credits:** (5)
- MGT 382 - Principles of Management **Credits:** (5)
- MIS 386 - Management Information Systems **Credits:** (5)
- MKT 362 - Essential Marketing Concepts **Credits:** (5)

- SCM 310 - Supply Chain Management **Credits:** (5)

Select one of the following: 4-5 credits

- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- COM 345 - Business and Professional Speaking **Credits:** (4)
- ENG 310 - Technical Writing **Credits:** (4)

Business Core Total Credits: 37-40

Accounting Core Courses

- ACCT 305 - Cost Accounting **Credits:** (5)
- ACCT 346 - Income Tax Accounting I **Credits:** (5)
- ACCT 350 - Intermediate Accounting I **Credits:** (5)
- ACCT 351 - Intermediate Accounting II **Credits:** (5)
- ACCT 352 - Intermediate Accounting III **Credits:** (5)

Accounting Core Total Credits: 25

Accounting Major Courses

Required Course

- ACCT 460 - Auditing **Credits:** (5)

Select from the following electives: 10 Credits

- ACCT 405 - Advanced Cost Accounting **Credits:** (5)
- ACCT 430 - Governmental and Non-profit Accounting **Credits:** (5)
- ACCT 446 - Income Tax Accounting II **Credits:** (5)
- ACCT 450 - Advanced Accounting **Credits:** (5)
- ACCT 455 - Accounting Information Systems **Credits:** (5)
- ACCT 461 - Fraud Examination **Credits:** (5)
- ACCT 484 - Professional Writing and Speaking for the Accountant **Credits:** (5) (ACCT 484, if taken, should be completed no later than fall of senior year.)
- BUS 441 - Advanced Business Law **Credits:** (5)

Accounting Major Total Credits: 15

College of Business Capstone

- MGT 489 - Strategic Management **Credits:** (5)

Capstone Total Credits: 5
Total Credits: 114-115

Accounting Minor

The accounting minor provides students with an introduction to several key areas of accounting. Declaration forms with instructions are available online, in department and center offices. The accounting minor requires that the student take five accounting courses, and earn a cumulative grade point average of 2.00 in them.

Required Courses Credits: 15

- ACCT 251 - Financial Accounting **Credits:** (5)
- ACCT 252 - Managerial Accounting **Credits:** (5)
- ACCT 350 - Intermediate Accounting I **Credits:** (5)

Elective Courses Credits: 10

Choose any two courses from the following:

- ACCT 305 - Cost Accounting **Credits:** (5)
- ACCT 346 - Income Tax Accounting I **Credits:** (5)
- ACCT 351 - Intermediate Accounting II **Credits:** (5)
- ACCT 352 - Intermediate Accounting III **Credits:** (5)

Total Credits: 25

Advanced Programs

College of Education and Professional Studies
Ellensburg
Black Hall, room 214-25
Mail Stop 7404
509-963-1751
Fax: 509-963-1424
www.cwu.edu/advanced-programs
See the website for how these programs may be used for educational and career purposes.

Faculty and Staff
Chair
Henry Williams, EdD

Professors
Henry Williams, EdD

Assistant Professor
Donald Wattam, EdD

Adjunct Professor
Roger Close

For more information on the Library Media Endorsement Program please see Advanced Programs in the graduate studies section of the catalog.

Library Media Endorsement

Coming soon to undergraduate. Please see Advanced Programs in the graduate catalog for more information.

Aerospace Studies Program

College of Education and Professional Studies
Ellensburg
Peterson Hall, room 203
Mail Stop 7568
509-963-2314
800-CWU-ROTC
Fax: 509-963-2235
www.cwu.edu/airforce
See website for how this program may be used for educational and career purposes.

Faculty and Staff
Chair
Richard L. Warr, Lt. Colonel, PhD

Professor
Richard L. Warr, Lt. Colonel, PhD, mathematics, statistics

Assistant Professors
Amber M. Johnson, Captain, MS, aerospace engineering
W. Michael Phipps, Major, MS, aeronautical science

Staff
Jason G. Dumaliang, technical sergeant
Jasmine C. McCoy, staff sergeant
Kendra L. Sterkel, program coordinator

Department Information
The United States Air Force Reserve Officer Training Corps (AFROTC), represented at CWU by Detachment 895, develops leaders in preparation to be commissioned as second lieutenants in the U.S. Air Force. Upon completing a baccalaureate/master's degree and all officer qualifications, graduates are commissioned and enter active duty. The program is designed to work with your other academic courses and is taught by active duty officer/professors. The Air Force is seeking qualified candidates from under-represented groups including women, African Americans, Hispanics, Asian/Pacific Islanders, and Native American/Alaskan Natives.

The program is designed to educate students about aerospace studies, with a leadership lab to provide a unique opportunity to practice leadership skills. The Aerospace Studies courses cover an introduction to the Air Force, history, leadership, and regional studies/preparation for active duty. Between sophomore and junior year, students attend a four-week field-training encampment, where they are introduced to an intensive training environment designed to teach critical teamwork, leadership, and fellowship skills. Each year there is also an

opportunity to visit an Air Force base to see the environment and meet members of the Air Force. All textbooks, materials, and uniforms are provided.

Admission Requirements
Students from any academic major degree program with a minimum 2.0 cumulative GPA are eligible. Enrollment in the freshman and sophomore classes creates no obligation to the Air Force. A contractual agreement is required after the sophomore year to continue in the ROTC program. Students are eligible to compete for an enrollment allocation into the POC only after successfully passing a medical examination, physical fitness test and having an excellent SAT, ACT or AFOQT (Air Force Officer Qualifying Test) score.

Transfer Students
Students transferring from other institutions who are interested in pursuing a commission in the Air Force should contact the Unit Admissions Officer prior to their fall quarter, if possible.

Scholarships
AFROTC competitive merit scholarships are available and awarded to both non-technical and technical majors. A scholarship will normally cover tuition, fees, and books. Those who have never been a full-time college student may apply for a four-year AFROTC scholarship at www.afrotc.com by December 1 (the year prior to attending college). College freshmen and sophomores may compete for three-year and two-year scholarships. All contracted cadets in good standing receive a monthly stipend, separate from any scholarships.

Special Training Opportunities
There are a variety of summer programs available to enhance a student's knowledge of the Air Force. Opportunities such as base visits, flying, parachuting, Air Force Office of Special Investigations, engineering, space orientation, as well as trips to other countries to enhance cultural awareness or language immersion. All travel and meals are provided.

Aerospace Studies Minor

AFROTC courses are accredited and may be taken as an academic minor or as free electives. The aerospace studies minor is awarded upon successful completion of the required courses.

Required Courses

- AFRO 301 - Air Force Leadership Studies **Credits:** (3)
- AFRO 302 - Air Force Leadership Studies **Credits:** (3)
- AFRO 303 - Air Force Leadership Studies **Credits:** (3)
- AFRO 401 - National Security Affairs and Preparation for Active Duty **Credits:** (3)
- AFRO 402 - National Security Affairs and Preparation for Active Duty **Credits:** (3)
- AFRO 403 - National Security Affairs and Preparation for Active Duty **Credits:** (3)

Total Credits: 18

Africana and Black Studies Program

College of Arts and Humanities
Ellensburg
Language and Literature Bldg., room 423

509-963-1546
www.cwu.edu/africana
See website for how this program may be used for educational and career purposes.

Program Director
Bobby Cummings, PhD, English, Michaelsen Hall, room 133

Program Advisor
Bobby Cummings, PhD

Professors
Delores Cleary, PhD, sociology, ethnic studies, American Indian studies
Bobby Cummings, PhD, curriculum, rhetoric and composition, African American literature
Paulus Pimomo, PhD, English
Charles Reasons, LLB, criminology, criminal justice, law
Todd Schaefer, PhD, political science

Associate Professors
Mark Auslander, PhD, anthropology
Teresa Francis, JD, LLM, criminal law, correctional law
Nelson Pichardo, PhD, sociology, ethnic studies

Assistant Professors
Jay Ball, PhD, theatre studies
Lacy Ferrell, PhD, Africa
Raymond Hall, PhD, folklore
James Hollar, PhD, mutlicultural education

Africana and Black Studies Minor

The Africana and black studies minor program offers interdisciplinary study of the history, culture, economics, and political institutions that have shaped the experiences of people of African ancestry throughout the world. The program serves as an interdisciplinary intellectual center for study and research in the many dimensions of African and black diasporic experiences, and for application of knowledge and scholarship to advance the common good. It provides access for students and scholars to a broad range of information and research by drawing upon the insights of English, geography, history, political science, music, and other disciplines at Central. The minor is designed for all highly motivated and adventurous students in all majors who have a serious interest in learning about the black diaspora and its impact on the individual countries and on the interdependent world in which we live.

Students in the minor are encouraged to take advantage of study-abroad programs to Africa and to countries of the black diaspora. Africana and Black Studies minors are expected to participate actively in co-curricular multicultural learning experiences offered by the following: student organizations, Students for the Dream Living Learning Community, Diversity Education Center, Campus Life activities, Center for the Dream, University Housing and New Student Programs, Center for Student Empowerment, Latino and Latin American Studies Program, and the David Waine Coon Center for Excellence in Leadership.

Required Courses Credits: 15

- ABS 110 - Expressive African American Culture **Credits:** (5)
- ABS 210 - Introduction to Africana and Black Studies **Credits:** (5)
- HIST 332 - History of the Black Diaspora **Credits:** (5)

Africana Electives Credits: 11-15

Select from the following:

- ABS 300 - Black Diaspora Studies: Afro-Latin America and Afro-Caribbean Cultures **Credits:** (5)
- ABS 302 - Hip Hop as Global Culture **Credits:** (5)
- ABS 305 - 20th Century Black Women's Literature **Credits:** (4)
- ABS 308 - African American Folklore **Credits:** (5)
- ABS 309 - Race and Sports: Freedom, Power, and Difference **Credits:** (4)
- ABS 399 - ABS Seminar **Credits:** (3-5)
- ABS 400 - Race and Literature **Credits:** (4)
- ENG 330 - African American Literature **Credits:** (5)
- HIST 331 - Colonial Africa **Credits:** (5)

Social Sciences Electives Credits: 4-5

Select one from the following:

- ETS 354 - Minority Experiences **Credits:** (5)
- LAJ 402 - African Americans and the Constitution **Credits:** (4)
- POSC 365 - African Politics **Credits:** (5)
- SOC 354 - Minority Experience **Credits:** (5)
- SOC 386 - Seminar on Racism **Credits:** (5)

Total Credits: 30-35

American Indian Studies Program

College of the Sciences
Ellensburg
Language and Literature, room 422

509-963-1546
www.cwu.edu/native-american
See website for how this program may be used for educational and career purposes.

Faculty and Staff
Program Director
Toni Culjak, PhD, English, Language and Literature Building, room 408D

Professors
Tracy Andrews, PhD, anthropology
Kathleen Barlow, PhD, anthropology
Delores Cleary, PhD, sociology
Toni Culjak, PhD, English
Steven Hackenberger, PhD, anthropology
Daniel Herman, PhD, history
Patrick Lubinski, PhD, anthropology
Patrick McCutcheon, PhD, anthropology
Micheal Ogden, PhD, communication

Associate Professor
Christopher Schedler, PhD, English

Assistant Professor
Brian Carroll, PhD, history

Lecturers
Sharron Connor, MA, philosophy and religious studies
Neal Endacott, PhD, anthropology
Marla Carroll, PhD, anthropology

American Indian Studies Minor

The American Indian studies minor program goals are to provide an interdisciplinary opportunity to learn about American Indian peoples, to facilitate research and creative activities that concern American Indian peoples, and to recognize the diversity represented in the rich heritage of American Indians. Students with a minor in American Indian studies will use academic and experiential knowledge to appreciate the natural and cultural diversity of American Indian people.

Required Courses Credits: 15

- AIS 101 - Pre-contact Period of American Indians, Pre-AD 1492 **Credits:** (5)
- AIS 102 - Contact Period of American Indians **Credits:** (5)
- AIS 103 - Emergence of Contemporary American Indians **Credits:** (5)

Humanities Electives Credits: 10

Select two of the following courses:

- AIS 320 - American Indian Philosophy **Credits:** (5)
- AIS 321 - American Indian Spirituality **Credits:** (5)
- ENG 332 - American Indian Literature **Credits:** (5)
- ENG 334 - American Indian Oral and Nonfiction Literature **Credits:** (5)
- ENG 461 - Studies in Film and Culture **Credits:** (5)
- HIST 434 - American Indian History to 1795 **Credits:** (5)
- HIST 438 - American Indian History since 1795 **Credits:** (5)

Science Electives Credits: 8-9

Select two of the following courses:

- ANTH 324 - North American Archaeology **Credits:** (4)
- ANTH 325 - Prehistory of the Pacific Northwest **Credits:** (4)
- ANTH 341 - Native American Cultures of the Pacific Northwest **Credits:** (4)
- ANTH 347 - Native American Cultures of North America **Credits:** (4)
- POSC 411 - American Indian Politics and Sovereignty **Credits:** (4)
- SOC 366 - Sociology of American Indians **Credits:** (5)

Additional course opportunities in:

The below courses are offered throughout the academic year under different titles.

- AIS 296 - Individual Study **Credits:** (1-6)
- AIS 490 - Cooperative Education **Credits:** (1-12)
- AIS 491 - Workshop **Credits:** (1-6)
- AIS 496 - Individual Study **Credits:** (1-6)
- AIS 498 - Special Topics **Credits:** (1-5)

Total Credits: 33-34

Anthropology and Museum Studies Department

College of the Sciences
Ellensburg
Dean Hall, room 357
Mail Stop 7544
509-963-3201
Fax: 509-963-3215
http://www.cwu.edu/anthropology
See website for how this program may be used for educational and career purposes.

Faculty and Staff
Chair
Kathleen Barlow, PhD

Professors
John A. Alsoszatai-Petheo, PhD, (emeritus), biological anthropology
Tracy J. Andrews, PhD, (emeritus),sociocultural anthropology, ethnicity, medical and ecological anthropology, gender, Native North America
Kathleen Barlow, PhD, psychological anthropology, learning and culture, museum anthropology, art and aesthetics, resource management
Anne S. Denman, PhD, (emeritus),American culture, intercultural issues

Steven Hackenberger, PhD, archaeology, cultural resource management, North America and Caribbean
Patrick Lubinski, PhD, archaeology, zooarchaeology, cultural resource management, North America
Patrick McCutcheon, PhD, archaeology, evolutionary and environmental archaeology, cultural resource management (on sabbatical 2015-2016)
Lene Pedersen, PhD, sociocultural anthropology, visual and environmental anthropology, postcolonialism, SE Asia (Indonesia), E. Africa, circumpolar North
Lori K. Sheeran, PhD, biological anthropology, primate ecology, gibbons, China
William C. Smith, PhD, (emeritus),archaeology, museum studies, comparative world prehistory
Penglin Wang, PhD, linguistic and cultural anthropology, East and Central/Inner Asia, China

Associate Professors
Mark Auslander, PhD, director, museum of culture and environment, art, aesthetics, museums, religion, historical anthropology, race, development, slavery; Africa, US
Loran E. Cutsinger, PhD, (emeritus), cultural anthropology, informal economy, gender, globalization, transnationalism, British Caribbean
Mary Lee Jensvold, PhD, primate behavior and ecology, communication
Joseph Lorenz, PhD, biological anthropology, anthropologist genetics, DNA, ancient DNA, genetics of American Indians, North America (on sabbatical 2015-2016)

Assistant Professors
J. Hope Amason, PhD, political economy and globalization, politics of representation, race, class, and gender, museums, memorials and heritage sites, tourism studies, Appalachia, US South
Raymond Hall, PhD, African folk lore, Africana and Black Studies Program

Staff
Penelope Anderson, secretary senior

Department Information
Anthropology presents an integrated perspective on the cultural and biological nature of humans. Anthropologists study present and past human diversity through classroom, laboratory, and field studies in cultural and biological anthropology, including archaeology, linguistics, ethnology, and applied anthropology.
Students interested in major and minor programs should contact the department office as soon as possible for further information, application forms, and assignment of an advisor. Anthropology majors are expected to meet with their advisors at least once a quarter.
Students need a GPA of 2.5 or higher to be admitted to the department.

Special Programs
Reflecting the broad nature of anthropological study, the department directly sponsors or is affiliated with a wide range of on- and off-campus options to broaden classroom experiences. Further information about the following programs is available through the anthropology department office:

- **Museum Studies Program**, offering coursework, field experiences, and projects with local and regional museums
- **Central Washington Archaeological Survey (CWAS)**, a service, research, and public information facility with special emphasis in the Northwest
- **Bachelor of science in primate behavior and ecology**, an interdisciplinary program providing undergraduate training in method and theory of primatology as basis for research, laboratory, and field experience
- **Master of science in resource management**, offering an integrated program in natural and cultural resource management including anthropology classes in cultural resource management, and historic preservation
- **Master of science in primate behavior**, an interdisciplinary program in primatology, including courses in the history, field and lab methods, and current topics and issues in the discipline
- **Center for Spatial Information**, providing a range of Geographic Information System (GIS) tools for analysis of social and natural science data
- **Summer workshops and field schools**, including survey archaeology in eastern Washington, primate and biodiversity studies in China, and workshops in forensic anthropology
- **Study abroad opportunities** coordinated through the CWU Office of International Study and programs
- **Departmental honors program** encourages individualized research and study in a sub-area of anthropology. It is open to junior and senior students with an anthropology major GPA of 3.0 or better
- **Anthropology Student Association**, an active student group which sponsors academic and social events related to the discipline.

Anthropology Core Requirements
ANTH 110 - Introduction to Biological Anthropology.....5
ANTH 110LAB - Biological Anthropology Laboratory.....1

OR
ANTH 309LAB - Skeletal Analysis and Comparison
ANTH 120 - Introduction to Archaeology.....5
ANTH 130 - Introduction to Cultural Anthropology.....5
ANTH 180 - Introduction to Linguistics.....5
ANTH 301 - Anthropology: Principles and Assessment...2

Total Core Credits: 23

Bachelor of Arts
(NOTE: Students seeking a BA degree must complete one year college/university study or two years high school study of a single world language.)

Subfield identification key:
A=Archaeology
B=Biological Anthropology
C=Cultural Anthropology
L=Linguistics
S=Seminars

Anthropology Major, BA (45 Credits)

This 45-credit major must be accompanied by a major in a discipline related to anthropology. The program will consist of coursework focused on areas related to the dual major and must be designed in close consultation with an anthropology advisor. A program proposal must be approved prior to admission to this BA program.

Required Courses

- Introductory (100-level) **Credits:** (15)
- Intermediate (300-level) must include three subfields- **Credits:** (12-16)
- Advanced Courses (400-level) must include two subfields- **Credits:** (8-12)
- ANTH 301 - Anthropology: Principles and Assessment **Credits:** (2)
- ANTH 458 - Senior Comprehensive Survey **Credits:** (4)

Total Credits: 45

Anthropology Major, BA (63 Credits)

This liberal arts and sciences major provides background to prepare students for any vocation, in that a measure of achievement in all careers is success in human relationships. The major is also consistent with employment in a variety of business, government and social service areas.

(NOTE: Students seeking a BA degree must complete one year college/university study or two years high school study of a single world language.)

Required Courses

Anthropology Core Requirements

- ANTH 110 - Introduction to Biological Anthropology **Credits:** (5)
- ANTH 110LAB - Biological Anthropology Laboratory **Credits:** (1)
- **OR** ANTH 309LAB - Skeletal Analysis and Comparison **Credits:** (2)
- ANTH 120 - Introduction to Archaeology **Credits:** (5)
- ANTH 130 - Introduction to Cultural Anthropology **Credits:** (5)
- ANTH 180 - Introduction to Linguistics **Credits:** (5)
- ANTH 301 - Anthropology: Principles and Assessment **Credits:** (2)

Anthropology Core Total Credits: 23

Additional Required Courses

- ANTH 458 - Senior Comprehensive Survey **Credits:** (4)
- Select 300-level courses from at least three subfields: Archaeology, Biological Anthropology, Cultural Anthropology, Linguistics-**Credits:** (16)
- Advanced (400-level) courses (must include a department-approved, 400-level seminar course) **Credits:** (16)
- Department-approved electives **Credits:** (4)

Total Credits: 63

Anthropology Major, BS

This major prepares students for graduate work in anthropology or for careers in anthropology and closely related fields. Electives are chosen in consultation with an advisor to lead into specialization in areas such as: ethnology, linguistics, archaeology, environmental studies, or biological anthropology. Students in this major must have course schedules approved quarterly by their departmental advisors.

Anthropology Core Requirements

- ANTH 110 - Introduction to Biological Anthropology **Credits:** (5)
- ANTH 110LAB - Biological Anthropology Laboratory **Credits:** (1)
- **OR** ANTH 309LAB - Skeletal Analysis and Comparison **Credits:** (2)
- ANTH 120 - Introduction to Archaeology **Credits:** (5)
- ANTH 130 - Introduction to Cultural Anthropology **Credits:** (5)
- ANTH 180 - Introduction to Linguistics **Credits:** (5)
- ANTH 301 - Anthropology: Principles and Assessment **Credits:** (2)

Anthropology Core Total Credits: 23

Required Courses

Intermediate: (300-level courses) Credits: 24

- Select one 300-level course from each subfield: Archaeology, Biological Anthropology, Cultural, Linguistics- **Credits:** (16)
- Select additional 8 credits from 300-level courses. **Credits:** (8)

Advanced (400-level courses) Credits: 20

- ANTH 458 - Senior Comprehensive Survey **Credits:** (4)
- Theory Course: ANTH 410 or ANTH 421 or ANTH 451 **Credits:** (4)
- Department-approved 400-level seminar **Credits:** (4)
- Select additional 8 credits of advanced (400-level) courses **Credits:** (8)

Electives in Anthropology and related fields (must include a course in statistics) Credits: 8

Total Credits: 75

(NOTE: Students planning on graduate school in linguistics are strongly advised to select ANTH 382.)

Anthropology Minor

Required Courses Credits: 15-16

Select three from the following:

- ANTH 110 - Introduction to Biological Anthropology **Credits:** (5)
- ANTH 110LAB - Biological Anthropology Laboratory **Credits:** (1)
- **OR** ANTH 309LAB - Skeletal Analysis and Comparison **Credits:** (2) *If ANTH 309LAB is taken then one credit will be applied to program electives.
- ANTH 120 - Introduction to Archaeology **Credits:** (5)
- ANTH 130 - Introduction to Cultural Anthropology **Credits:** (5)
- ANTH 180 - Introduction to Linguistics **Credits:** (5)

Department-approved electives Credits: 10

(NOTE: Students in teacher education must include ANTH 324 or 347, and ANTH 355 or 381 within the 10 credits of electives. ANTH 381 suggested for those enrolled in Teaching English as a Second Language.)

Total Credits: 25-26

Museum Studies Minor

The museum studies minor prepares students for entry-level, museum-related employment and/or for graduate work in museum studies. To be eligible for admission to this program, students should be enrolled in a related major (e.g., anthropology, art, biology, geology, geography, history, recreation and tourism, science education, etc.).

Approval by the anthropology department chair is also required.

Required Courses Credits: 18

- ANTH 360 - Introduction to Museum Studies **Credits:** (4)
- ANTH 361 - Museum Exhibit Design **Credits:** (4)
- ANTH 362 - Museum Curation and Management **Credits:** (4)
- ANTH 490 - Cooperative Education **Credits:** (1-12) (must be taken for 6 credits)

Select one of the following: Credits: 5

- ANTH 107 - General Anthropology **Credits:** (5)
- ANTH 110 - Introduction to Biological Anthropology **Credits:** (5)
- ANTH 120 - Introduction to Archaeology **Credits:** (5)
- ANTH 130 - Introduction to Cultural Anthropology **Credits:** (5)

Department-approved electives Credits: 7

Total Credits: 30

Art Department

College of Arts and Humanities
Ellensburg
Randall Hall, room 100
Mail Stop 7564
509-963-2665
Fax: 509-963-1918
www.cwu.edu/art
See website for how this program may be used for educational and career purposes.

Faculty and Staff
Chair
Gregg Schlanger, MFA

Professors
Glen Bach, MFA, graphic design
Keith Lewis, MFA, jewelry and metalsmithing
Gregg Schlanger, MFA, sculpture

Associate Professors
Maya Chachava, MFA, painting
Stephen Robison, MFA, ceramics

Assistant Professors
Ellen Avitts, PhD, art history
David Bieloh, MFA, graphic design
Allyson Klutenkamper, MFA, photography
Rachel Kirk, MFA, foundations and drawing

Staff
Jeff Cleveland, department maintenance
Heather Horn Johnson, gallery manager
Lynn Thompson, secretary senior

Departmental Information
The Department of Art is the primary agent for the study and practice of visual culture. Our faculty facilitates liberal learning and academic excellence to enable our students to assume their respective roles as practitioners, educators, and informed patrons of the visual arts. Degrees are offered in studio art, graphic design, and art education with allied course offerings in art history and criticism. We also offer minors in art studio and art history.

Bachelor of Fine Arts Core Requirements
ART 150 - Drawing I.....5
ART 170 - Basic Design I.....5
ART 171 - Basic Design II.....5
ART 235 - Ancient and Medieval Art.....4
ART 236 - Renaissance Through Mid-19th Century Art..4
ART 237 - Impressionism Through Postmodernism.....4
ART 495 - Studio Project.....1
Select one course from the following.....4
ART 374 - History of Graphic Design (4)
ART 389 - Contemporary Concepts in Art (4)
ART 414 - Recent Art (4)
ART 456 - History of Eastern Art (4)
Total Core Credits: 32

Art Major, BA

An art degree for students desiring to pursue studio art or graphic design-related careers and/or seeking artistic enrichment. The degree can be directed toward a discipline-specific studio art practice, graphic design or a cross-disciplinary and/or cross-media studio art practice.

(NOTE: Students seeking a BA degree must complete one year college/University study or two years high school study of a single world language.)

Required Courses Credits: 30

- ART 150 - Introduction to Drawing **Credits:** (3)
- ART 170 - Two-Dimensional Design **Credits:** (3)
- ART 171 - Three-Dimensional Design **Credits:** (3)
- ART 172 - Computer Fundamentals in Art and Design **Credits:** (3)
- ART 235 - Ancient and Medieval Art **Credits:** (3)
- ART 236 - Renaissance through Mid-19th-century Art **Credits:** (3)
- ART 237 - Impressionism through Postmodernism **Credits:** (3)
- ART 250 - Figure Drawing **Credits:** (3)
- ART 414 - Recent Art **Credits:** (4)
- ART 495 - Studio Project **Credits:** (2)

Art History Credits: 4

Select one course from the following:

- ART 324 - History of Photography **Credits:** (4)

- ART 333 - Art, Design, and Popular Culture **Credits:** (4)
- ART 374 - History of Graphic Design **Credits:** (4)
- ART 389 - Contemporary Concepts in Art **Credits:** (4)
- ART 420 - American Art and Architecture **Credits:** (4)

Lower Division Studio Arts Required Courses Credits: 16

Select four lower-division studio courses from the following eight courses:

- ART 225 - Beginning Photography **Credits:** (4)
- ART 241 - Beginning Wood Design **Credits:** (4)
- ART 246 - Beginning Jewelry/ Metals **Credits:** (4)
- ART 260 - Beginning Painting **Credits:** (4)
- ART 265 - Beginning Ceramics **Credits:** (4)
- ART 274 - Beginning Typography **Credits:** (4)
- ART 280 - Beginning Sculpture **Credits:** (4)
- ART 283 - Beginning Graphic Interface Design **Credits:** (4)

Department-approved Upper-division Courses Credits: 23-25

Total Credits: 73-75

Art BFA, Graphic Design Specialization

A comprehensive studio art degree for students desiring careers in graphic design/visual communications. Critical thinking through the exploration of digital and print media is emphasized. After completion of the art core and pre-graphic design prerequisites, students are required to complete the graphic design concentration requirements, including a contracted field experience. Transfer students are encouraged to complete as many of the transferable art requirements prior to enrolling at CWU.

An Apple laptop is required.

Bachelor of Fine Arts Requirements

- ART 150 - Introduction to Drawing **Credits:** (3)
- ART 170 - Two-Dimensional Design **Credits:** (3)
- ART 171 - Three-Dimensional Design **Credits:** (3)
- ART 172 - Computer Fundamentals in Art and Design **Credits:** (3)
- ART 235 - Ancient and Medieval Art **Credits:** (3)
- ART 236 - Renaissance through Mid-19th-century Art **Credits:** (3)
- ART 237 - Impressionism through Postmodernism **Credits:** (3)
- ART 250 - Figure Drawing **Credits:** (3)
- ART 414 - Recent Art **Credits:** (4)
- ART 495 - Studio Project **Credits:** (2)

BFA Requirements Total Credits: 30

Graphic Design Specialization

Prerequisite Lower-division Required Courses Credits: 12

- ART 225 - Beginning Photography **Credits:** (4)
- ART 274 - Beginning Typography **Credits:** (4)
- ART 283 - Beginning Graphic Interface Design **Credits:** (4)

Art History Credits: 4

- ART 374 - History of Graphic Design **Credits:** (4)

Lower-division Required Courses Credits: 12

- ART 251 - Beginning Illustration **Credits:** (4)

  Select an additional two department-approved lower-division studio courses from the following:

  ART 241 - Beginning Wood Design **Credits:** (4)
- ART 246 - Beginning Jewelry/ Metals **Credits:** (4)
- ART 260 - Beginning Painting **Credits:** (4)
- ART 265 - Beginning Ceramics **Credits:** (4)
- ART 280 - Beginning Sculpture **Credits:** (4)

Upper-division Required Courses Credits: 50-52

- ART 351 - Intermediate Illustration **Credits:** (4)
- ART 370 - Beginning Layout and Design **Credits:** (4)
- ART 371 - Intermediate Layout and Design **Credits:** (4)
- ART 372 - Beginning Design and Production **Credits:** (4)
- ART 383 - Intermediate Graphic Interface Design **Credits:** (4)
- ART 470 - Advertising Graphic Design **Credits:** (4)
- ART 471 - Corporate Graphic Design **Credits:** (4)
- ART 472 - Intermediate Design and Production **Credits:** (4)
- ART 474 - Intermediate Typography **Credits:** (4)

- ART 483 - Advanced Graphic Interface Design **Credits:** (4)
- ART 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 10-12 credits)

Total Credits: 108-110

Art BFA, Studio Art Specialization

A comprehensive studio art degree for students desiring to pursue studio art-related careers or seeking artistic enrichment. The degree can be directed toward either a discipline-specific studio art practice or a cross-disciplinary and/or cross-media studio art practice.

Bachelor of Fine Arts Requirements

- ART 150 - Introduction to Drawing **Credits:** (3)
- ART 170 - Two-Dimensional Design **Credits:** (3)
- ART 171 - Three-Dimensional Design **Credits:** (3)
- ART 172 - Computer Fundamentals in Art and Design **Credits:** (3)
- ART 235 - Ancient and Medieval Art **Credits:** (3)
- ART 236 - Renaissance through Mid-19th-century Art **Credits:** (3)
- ART 237 - Impressionism through Postmodernism **Credits:** (3)
- ART 250 - Figure Drawing **Credits:** (3)
- ART 414 - Recent Art **Credits:** (4)
- ART 495 - Studio Project **Credits:** (2)

BFA Requirements Total Credits: 30

Studio Art Specialization

Art History Credits: 4

Select one course from the following:

- ART 324 - History of Photography **Credits:** (4)
- ART 333 - Art, Design, and Popular Culture **Credits:** (4)
- ART 374 - History of Graphic Design **Credits:** (4)
- ART 389 - Contemporary Concepts in Art **Credits:** (4)
- ART 420 - American Art and Architecture **Credits:** (4)

Lower-division Studio Required Courses Credits: 24

Select six department-approved lower-division studio courses from the following courses:

- ART 225 - Beginning Photography **Credits:** (4)
- ART 241 - Beginning Wood Design **Credits:** (4)
- ART 246 - Beginning Jewelry/ Metals **Credits:** (4)
- ART 260 - Beginning Painting **Credits:** (4)
- ART 265 - Beginning Ceramics **Credits:** (4)
- ART 274 - Beginning Typography **Credits:** (4)
- ART 280 - Beginning Sculpture **Credits:** (4)

Upper-division Department-approved Studio Art Courses Credits: 50-52 Credits: 50-52

Total Credits: 108-110

Art History Minor

Required Courses Credits: 9

- ART 235 - Ancient and Medieval Art **Credits:** (3)
- ART 236 - Renaissance through Mid-19th-century Art **Credits:** (3)
- ART 237 - Impressionism through Postmodernism **Credits:** (3)

Select four courses from the following: Credits: 16

- ART 324 - History of Photography **Credits:** (4)
- ART 333 - Art, Design, and Popular Culture **Credits:** (4)
- ART 374 - History of Graphic Design **Credits:** (4)
- ART 389 - Contemporary Concepts in Art **Credits:** (4)
- ART 414 - Recent Art **Credits:** (4)
- ART 420 - American Art and Architecture **Credits:** (4)

Total Credits: 25

Art Studio Minor

Required Courses Credits: 6

Select two of the following courses:

- ART 150 - Introduction to Drawing **Credits:** (3)
- ART 170 - Two-Dimensional Design **Credits:** (3)
- ART 171 - Three-Dimensional Design **Credits:** (3)
- ART 172 - Computer Fundamentals in Art and Design **Credits:** (3)

Art History Credits: 3

- ART 235 - Ancient and Medieval Art **Credits:** (3)

Department-approved Studio Courses Credits: 16

Total Credits: 24

Asia/Pacific Studies Program

College of Arts and Humanities
Ellensburg
Language and Literature Bldg., room 100-0

509-963-1190
Fax 509-963-1822
www.cwu.edu/asia-pacific
See website for how this program may be used for educational and career purposes.

Faculty and Staff
Director
Jeffrey Dippmann, PhD

Professors
Liahna Armstrong, PhD, English
George Bellah, PhD, theatre
John Bowen, PhD, geography
Toni Culjak, PhD, English
Jeffrey Dippmann, PhD, philosophy and religious studies
Michael Launius, PhD, political science
Chenyang Li, PhD, philosophy and religious studies
Joshua Nelson, PhD, Japanese language
Penglin Wang, PhD, anthropology
Hong Xiao, PhD, sociology
Bang-Soon Yoon, PhD, political science and women and gender studies

Associate Professors
Yukari Amos, PhD, education
Koushik Ghosh, PhD, economics
Xiadong Kuang, PhD, communications
Alejandro Lee, PhD, Spanish language
Yong Joo Lee, PhD, finance and OSCM
Kun Liao, PhD, finance and OSCM
Cameron Otopalik, visiting professor, political science
Hideki Takei, DBA, ITAM
Fen Wang, PhD, ITAM

Lecturers
Yuanxia Liu, MA, Chinese language
Keneth Munsell, MA, history
Mariko Okada-Collins, MA, Japanese language

Program Information
The Asia/Pacific Studies Program is an interdisciplinary program focusing on a region currently undergoing a dramatic economic, political, and social transformation. The program provides students with a grasp of the region's diversity while emphasizing the interactive nature of an overarching community of nations. Careers in international business, government service, and education can be augmented by preparation in Asia/Pacific Studies. The program also serves as an excellent preparation for graduate study in various academic and professional fields.

Bachelor of Arts
(NOTE: Students seeking a BA degree must complete one year college/university study or two years high school study of a single world language)

Asia/Pacific Studies Major, BA

Asia/Pacific Studies Core

- AST 102 - Introduction to Asian Studies **Credits:** (3)
- AST 401 - Asia/Pacific Studies Capstone **Credits:** (3)

First- and Second-year Chinese - Credits: 30

- CHIN 151 - First-year Chinese **Credits:** (5)
- CHIN 152 - First-year Chinese **Credits:** (5)
- CHIN 153 - First-year Chinese **Credits:** (5)
- CHIN 251 - Second-year Chinese **Credits:** (5)
- CHIN 252 - Second-year Chinese **Credits:** (5)
- CHIN 253 - Second-year Chinese **Credits:** (5)
  OR

First- and Second-year Japanese

- JAPN 151 - First-year Japanese **Credits:** (5)
- JAPN 152 - First-year Japanese **Credits:** (5)
- JAPN 153 - First-year Japanese **Credits:** (5)
- JAPN 251 - Second-year Japanese **Credits:** (5)
- JAPN 252 - Second-year Japanese **Credits:** (5)
- JAPN 253 - Second-year Japanese **Credits:** (5)

Total Core Credits: 36

Choose six classes from the following list: Credits (25-29)

You are required to choose a minimum of one class from each of the three groups. Elective courses may not be chosen from the student's major area.

(Note: Other courses may be included with advisor's approval)

Group 1 (Social Sciences)

- ANTH 344 - Cultures of Asia **Credits:** (4)
- ANTH 345 - Cultures of Southeast Asia and Oceania **Credits:** (4)
- AST 310 - Japan Today **Credits:** (3)
- GEOG 375 - Geography of Asia **Credits:** (4)
- POSC 366 - Government and Politics of East Asia **Credits:** (5)
- POSC 367 - Politics of Japan **Credits:** (5)
- POSC 369 - Korean Politics **Credits:** (5)
- POSC 373 - International Politics of the Pacific Rim **Credits:** (5)

Group 2 (Aesthetic Experience)

- AST 301 - Chinese Literature in Translation **Credits:** (4)
- AST 465 - Indian Cinema **Credits:** (4)
- CHIN 461 - Chinese Cinema **Credits:** (4)
- JAPN 462 - Japanese Cinema **Credits:** (4)
- TH 375 - Asian Drama **Credits:** (4)

Group 3 (Humanities)

- HIST 380 - Modern East Asia **Credits:** (5)
- HIST 381 - History of Modern Southeast Asia: Colonial Era to the Present **Credits:** (5)
- HIST 383 - East Asian Civilization **Credits:** (5)
- HIST 465 - History of the People's Republic of China **Credits:** (5)
- HIST 483 - Modern China **Credits:** (5)
- PHIL 345 - Chinese Philosophy **Credits:** (5)
- RELS 351 - Religions of China and Japan **Credits:** (5)
- RELS 352 - Religions of India **Credits:** (5)
- RELS 401 - The Daoist Tradition **Credits:** (5)

Total Credits: 61-65

Asia/Pacific Studies Minor

Required Courses

- AST 102 - Introduction to Asian Studies **Credits:** (3)

First-year Chinese or First-year Japanese: Credits (15)

- CHIN 151 - First-year Chinese **Credits:** (5)
- CHIN 152 - First-year Chinese **Credits:** (5)
- CHIN 153 - First-year Chinese **Credits:** (5)

OR

- JAPN 151 - First-year Japanese **Credits:** (5)
- JAPN 152 - First-year Japanese **Credits:** (5)
- JAPN 153 - First-year Japanese **Credits:** (5)

Choose three classes from the following list: Credits 13-14

You are required to choose a minimum of one class from each of the three groups. Elective courses may not be chosen from the student's major area.

(Note: Other courses may be included with advisor's approval. At least two departments must be represented among selected courses.)

Group 1 (Social Sciences)

- ANTH 344 - Cultures of Asia **Credits:** (4)
- ANTH 345 - Cultures of Southeast Asia and Oceania **Credits:** (4)
- AST 310 - Japan Today **Credits:** (3)
- GEOG 375 - Geography of Asia **Credits:** (4)
- POSC 366 - Government and Politics of East Asia **Credits:** (5)
- POSC 367 - Politics of Japan **Credits:** (5)
- POSC 369 - Korean Politics **Credits:** (5)
- POSC 373 - International Politics of the Pacific Rim **Credits:** (5)

Group 2 (Aesthetic Experience)

- AST 301 - Chinese Literature in Translation **Credits:** (4)
- AST 465 - Indian Cinema **Credits:** (4)
- CHIN 461 - Chinese Cinema **Credits:** (4)
- JAPN 462 - Japanese Cinema **Credits:** (4)
- TH 375 - Asian Drama **Credits:** (4)

Group 3 (Humanities)

- HIST 380 - Modern East Asia **Credits:** (5)
- HIST 381 - History of Modern Southeast Asia: Colonial Era to the Present **Credits:** (5)
- HIST 383 - East Asian Civilization **Credits:** (5)
- HIST 465 - History of the People's Republic of China **Credits:** (5)
- HIST 483 - Modern China **Credits:** (5)
- PHIL 345 - Chinese Philosophy **Credits:** (5)
- RELS 351 - Religions of China and Japan **Credits:** (5)
- RELS 352 - Religions of India **Credits:** (5)

- RELS 401 - The Daoist Tradition **Credits:** (5)

Total Credits: 31-32

Asian Business Certificate

The certificate in Asian Business is designed to prepare students for working within the state's emerging Asia-oriented economy. It combines an overview of the nuances of the regional economy with an introduction to Asia's cultural and historical development. Topics will include an introduction to Asian culture and philosophy, corporate-government relations, twentieth-century history, regional development, and export strategies. It can be supplemented with study abroad opportunities and language study. There are two tracks: one for College of Business majors and one for non-business majors.

Required Courses Credits: 12

- AST 102 - Introduction to Asian Studies **Credits:** (3)
- COM 302 - Intercultural Communication **Credits:** (4)
- ECON 101 - Economic Issues **Credits:** (5)
- **OR** ECON 102 - World Economic Issues **Credits:** (5)
- **OR** ECON 201 - Principles of Economics Micro **Credits:** (5)

Track for Business Majors Credits: 9-10

- HIST 380 - Modern East Asia **Credits:** (5)
- **OR** ANTH 344 - Cultures of Asia **Credits:** (4)
- POSC 366 - Government and Politics of East Asia **Credits:** (5)
- **OR** POSC 373 - International Politics of the Pacific Rim **Credits:** (5)

Track for Non-business Majors Credits: 10

Choose two of the following courses:

- MGT 380 - Organizational Management **Credits:** (5)
- MKT 360 - Principles of Marketing **Credits:** (5)
- HRM 381 - Management of Human Resources **Credits:** (5)

Total Credits: 21-22

Aviation Department

College of Education and Professional Studies
Ellensburg
Black Hall Suite 225-1
400 East University Way 98926-7515
509-963-2364
Fax: 509-963-2377
Mail Stop 7515
aviation@cwu.edu

CWU-Moses Lake
7662 Chanute Street NE
Moses Lake, WA 98837
509-793-2355 or 509-793-2914
Fax: 509-762-1918

www.cwu.edu/aviation
See website for how this program may be used for educational and career purposes.

Faculty and Staff
Chair
TBA

Professors
Amy L. Hoover, PhD, CFII, mountain flying, meteorology, human factors
Teresa Sloan, MIT, ATP, FAA ground schools, air transportation
Jason Underhill, MBA, ATP, CFII, aircraft systems and simulation, airline operations
Dale Wilson, MS, ATP, aviation safety, human factors, aviation weather

Lecturers
Cathy Busha, JD
Patrick Devney, BS, ATP, CFI, CFII, MEI, AGI, IGI
Bryan McKune, BS ATP, Moses Lake center coordinator

Staff
Barbara Hodges, office manager
Juliana Scifo, dispatcher

Department Information
The Department of Aviation offers two Bachelor of Science degrees.

Professional Pilot degree: Specializations in flight officer and commercial pilot
Aviation Management degree: Specializations in aviation management and aviation maintenance management.

Accrediting Information
The aviation department holds an FAA Air Agency

certificate. Ground schools and flight labs are conducted under 14CFR Part 141 of the Federal Aviation Administration regulations. CWU aviation department is a member of the University Aviation Association.

Department Standards
Admissions
Students must apply for acceptance into a degree or specialization. Application will be reviewed upon acceptance to CWU. Admission decisions are based on a number of factors, including grade point average, SAT/ACT scores, letters of recommendation, financial capability, and a written statement of purpose, as outlined in the aviation department application form. Transportation Security Administration (TSA) regulations require proof of citizenship for pilots.

Financial Obligations
Flight training fees are paid by the student and will be in addition to normal university tuition and fees (see aviation department website for current fees). Additional fees are required for AVP 444, AVP 445, and AVP 489 (see online student registration handbook). Additional costs for students enrolled in flight labs include current FAA charts, pilot supplies, and optional personal aviation headphones.

Aviation Management BS, Aviation Management Specialization

This specialization prepares graduates for a variety of administrative and management positions in aviation.

Aviation Management Core Requirements

- ADMG 271 - Business Math Applications **Credits:** (4)
- AVM 330 - Aviation Law **Credits:** (3)
- AVM 332 - Aviation Legislation **Credits:** (4)
- AVM 333 - Air Transportation **Credits:** (4)
- AVM 335 - Aviation Management **Credits:** (3)
- AVM 350 - Aviation Career Planning and Professionalism **Credits:** (3)
- AVM 417 - Aviation Safety Management **Credits:** (4)
- AVM 418 - Threat and Error Management in Aviation **Credits:** (3)
- AVM 420 - Aviation Labor Relations **Credits:** (4)
- AVM 422 - Legal Ethics Aviation **Credits:** (4)
- AVM 424 - Aviation Security **Credits:** (4)
- AVM 434 - Airport Operations **Credits:** (3)

AVM Total Core Credits: 43

Aviation Management Specialization Courses

Select 5 of the following courses Credits: (15-28)

- ADMG 371 - Administrative Management **Credits:** (4)
- ADMG 372 - Leadership and Supervision **Credits:** (4)
- AVM 334 - Airport Management **Credits:** (3)
- AVM 338 - Airport Administration and Finance **Credits:** (4)
- AVM 426 - International Aviation Management **Credits:** (4)
- AVM 430 - Airport/Airline Marketing **Credits:** (4)
- AVM 438 - Airport Planning and Design **Credits:** (4)
- AVM 490 - Cooperative Education **Credits:** (1-12)

Select 4 of the following courses Credits: (19-20)

- ACCT 251 - Financial Accounting **Credits:** (5)
- ACCT 301 - Financial Accounting Analysis **Credits:** (5)
- ADMG 371 - Administrative Management **Credits:** (4)
- COM 345 - Business and Professional Speaking **Credits:** (4)
- ECON 201 - Principles of Economics Micro **Credits:** (5)
- ECON 202 - Principles of Economics Macro **Credits:** (5)
- HRM 381 - Management of Human Resources **Credits:** (5)
- MGT 380 - Organizational Management **Credits:** (5)
- MATH 130 - Finite Mathematics **Credits:** (5)
- MATH 311 - Statistical Concepts and Methods **Credits:** (5)
- MKT 360 - Principles of Marketing **Credits:** (5)

Total Specialization Credits: 34-48

Total Credits: 77-91

Aviation Management BS, Maintenance Management Specialization

This degree prepares graduates for a variety of administrative and management positions in aviation, including airports, airlines, corporate, government, and military.

Aviation Management Core Requirements

- ADMG 271 - Business Math Applications **Credits:** (4)
- AVM 330 - Aviation Law **Credits:** (3)
- AVM 332 - Aviation Legislation **Credits:** (4)
- AVM 333 - Air Transportation **Credits:** (4)
- AVM 335 - Aviation Management **Credits:** (3)
- AVM 350 - Aviation Career Planning and Professionalism **Credits:** (3)
- AVM 417 - Aviation Safety Management **Credits:** (4)
- AVM 418 - Threat and Error Management in Aviation **Credits:** (3)
- AVM 420 - Aviation Labor Relations **Credits:** (4)
- AVM 422 - Legal Ethics Aviation **Credits:** (4)
- AVM 424 - Aviation Security **Credits:** (4)
- AVM 434 - Airport Operations **Credits:** (3)

AVM Total Core Credits: 43

Maintenance Management Specialization

This specialization prepares graduates for entry into aviation maintenance and management in the aviation industry or FAA.

Students enrolling in this specialization must already possess an FAA Airframe and Powerplant certificate and/or graduation certificate from a Federal Aviation Administration-approved 14CFR Part 147 school. (Certificate not offered at Central Washington University.) Forty-five credits of the Airframe and Powerplant certificates will be accepted upon completion of all other degree requirements.

Maintenance Management Specialization Courses

- **Airframe and Powerplant Certificates Credits: (45)**
  (Certificate not offered at Central Washington University. Forty-five credits of the Airframe and Powerplant Certificate will be accepted upon completion of all other degree requirements. See program advisor.)

Total Specialization Credits: 45

Total Credits: 89

Aviation: Professional Pilot BS, Commercial Pilot Specialization

This specialization prepares graduates for commercial aviation employment opportunities. Students must earn a minimum grade of B- in CWU's FAA approved ground school courses to receive an FAA course graduation certificate as required by FAR141.

To be eligible for the FAA Restricted ATP certificate, students must complete the instrument/commercial pilot course with the approved flight training operator, lasco Flight Training, and in the manner approved by the FAA under FAR Part 141 and the R-ATP LOA.

Professional Pilot Core Requirements

- AVM 330 - Aviation Law **Credits:** (3)
- AVM 350 - Aviation Career Planning and Professionalism **Credits:** (3)
- AVM 417 - Aviation Safety Management **Credits:** (4)
- AVM 418 - Threat and Error Management in Aviation **Credits:** (3)
- AVP 101 - Private Pilot Flight Laboratory I **Credits:** (1)
- AVP 102 - Private Pilot Flight Laboratory II **Credits:** (1)
- AVP 103 - Private Pilot Flight Laboratory III **Credits:** (1)
- AVP 104 - Intermediate Pilot Flight Laboratory **Credits:** (1)
- AVP 141 - Principles of Flight I **Credits:** (4)
- AVP 142 - Principles of Flight II **Credits:** (4)
- AVP 201 - Instrument Pilot Flight Laboratory I **Credits:** (1)
- AVP 202 - Instrument Pilot Flight Laboratory II **Credits:** (1)
- AVP 203 - Instrument Pilot Flight Laboratory III **Credits:** (1)
- AVP 211 - Meteorology for Pilots **Credits:** (4)
- AVP 221 - Aircraft Systems I **Credits:** (3)
- AVP 241 - Instrument Flight I **Credits:** (4)
- AVP 242 - Instrument Flight II **Credits:** (3)
- AVP 304 - Commercial Pilot Flight Laboratory I **Credits:** (1)

- AVP 305 - Commercial Pilot Flight Laboratory II **Credits:** (1)
- AVP 306 - Commercial Pilot Flight Laboratory III **Credits:** (1)
- AVP 308 - Instrument/Commercial Pilot Flight Laboratory **Credits:** (1)
- AVP 312 - Aviation Weather Services **Credits:** (3)
- AVP 319 - Applied Aerodynamics **Credits:** (3)
- AVP 322 - Aircraft Systems II **Credits:** (3)
- AVP 323 - Advanced Navigation **Credits:** (3)
- AVP 337 - Aviation Physiology and Survival **Credits:** (4)
- AVP 340 - Human Factors in Flight **Credits:** (4)
- AVP 352 - Multiengine Principles **Credits:** (2)
- AVP 354 - Commercial Pilot **Credits:** (4)

Total Core Credits: 72

Required Courses

- AVP 332 - Aviation History **Credits:** (3)
- AVP 375 - Mountain and Canyon Flying **Credits:** (3)
- Department-approved AVM or AVP electives **Credits:** (10)
- Department-approved electives **Credits:** (2)

Total Credits: 90

Aviation: Professional Pilot BS, Flight Officer Specialization

This specialization prepares graduates for professional pilot positions within the airline industry. Students must earn a minimum grade of B- in CWU's FAA approved ground school courses to receive an FAA course graduation certificate as required by FAR141.

To be eligible for the FAA Restricted ATP certificate, students must complete the instrument/commercial pilot course with the approved flight training operator, lasco Flight Training, and in the manner approved by the FAA under FAR Part 141 and the R-ATP LOA.

Professional Pilot Core Requirements

- AVM 330 - Aviation Law **Credits:** (3)
- AVM 350 - Aviation Career Planning and Professionalism **Credits:** (3)
- AVM 417 - Aviation Safety Management **Credits:** (4)
- AVM 418 - Threat and Error Management in Aviation **Credits:** (3)
- AVP 101 - Private Pilot Flight Laboratory I **Credits:** (1)
- AVP 102 - Private Pilot Flight Laboratory II **Credits:** (1)
- AVP 103 - Private Pilot Flight Laboratory III **Credits:** (1)
- AVP 104 - Intermediate Pilot Flight Laboratory **Credits:** (1)
- AVP 141 - Principles of Flight I **Credits:** (4)
- AVP 142 - Principles of Flight II **Credits:** (4)
- AVP 201 - Instrument Pilot Flight Laboratory I **Credits:** (1)
- AVP 202 - Instrument Pilot Flight Laboratory II **Credits:** (1)
- AVP 203 - Instrument Pilot Flight Laboratory III **Credits:** (1)
- AVP 211 - Meteorology for Pilots **Credits:** (4)
- AVP 221 - Aircraft Systems I **Credits:** (3)
- AVP 241 - Instrument Flight I **Credits:** (4)
- AVP 242 - Instrument Flight II **Credits:** (3)
- AVP 304 - Commercial Pilot Flight Laboratory I **Credits:** (1)
- AVP 305 - Commercial Pilot Flight Laboratory II **Credits:** (1)
- AVP 306 - Commercial Pilot Flight Laboratory III **Credits:** (1)
- AVP 308 - Instrument/Commercial Pilot Flight Laboratory **Credits:** (1)
- AVP 312 - Aviation Weather Services **Credits:** (3)
- AVP 319 - Applied Aerodynamics **Credits:** (3)
- AVP 322 - Aircraft Systems II **Credits:** (3)
- AVP 323 - Advanced Navigation **Credits:** (3)
- AVP 337 - Aviation Physiology and Survival **Credits:** (4)
- AVP 340 - Human Factors in Flight **Credits:** (4)
- AVP 352 - Multiengine Principles **Credits:** (2)
- AVP 354 - Commercial Pilot **Credits:** (4)

Total Core Credits: 72

Required Courses

- AVM 333 - Air Transportation **Credits:** (4)
- AVP 301 - Certified Flight Instructor Laboratory **Credits:** (1)
- AVP 348 - Air Carrier Operations **Credits:** (4)
- AVP 401 - Multiengine Flight Laboratory **Credits:** (1)
- AVP 410 - Crew Resource Management **Credits:** (3)

- AVP 422 - Aircraft Systems III-Turboprop Systems **Credits:** (3)
- AVP 423 - Aircraft Systems IV-Turbojet Systems **Credits:** (4)
- AVP 444 - Multiengine FTD, Baron G58 **Credits:** (2)
- AVP 445 - Turboprop FTD, King Air 200 **Credits:** (2)
- AVP 448 - Fundamentals of Flight Instruction **Credits:** (5)
- AVP 469 - Turbojet Operations **Credits:** (4)
- AVP 489 - Turbo FTD, CRJ-200 **Credits:** (3)
- Department-approved electives: any AVM or AVP course not used in required course: Credits (2)

Total Credits: 110

Aviation Management Minor

An aviation management minor provides students with an introduction to several key areas of aviation management.

Required Courses

- AVM 330 - Aviation Law **Credits:** (3)
- AVM 334 - Airport Management **Credits:** (3)
- AVM 335 - Aviation Management **Credits:** (3)
- AVM 417 - Aviation Safety Management **Credits:** (4)
- MGT 380 - Organizational Management **Credits:** (5)

Choose two courses from the following:

- AVM 333 - Air Transportation **Credits:** (4)
- AVM 434 - Airport Operations **Credits:** (3)
- AVM 438 - Airport Planning and Design **Credits:** (4)

Total Credits: 25-26

Aviation Professional Pilot Minor

A program designed for students who wish to earn a pilot's license (private pilot certificate). Flight training is taken through CWU's approved flight training operator at Bowers Field in Ellensburg, Washington, and may be taken under FAR Part 61 or Part 141.

Required Courses

- AVP 101 - Private Pilot Flight Laboratory I **Credits:** (1)
- AVP 102 - Private Pilot Flight Laboratory II **Credits:** (1)
- AVP 103 - Private Pilot Flight Laboratory III **Credits:** (1)
- AVP 141 - Principles of Flight I **Credits:** (4)
- AVP 142 - Principles of Flight II **Credits:** (4)
- AVP 211 - Meteorology for Pilots **Credits:** (4)
- AVP 221 - Aircraft Systems I **Credits:** (3)
- Department-approved AVM or AVP electives **Credits:** (6)

Total Credits: 24

Biological Sciences Department

College of the Sciences
Ellensburg
Science Bldg., room 338
Mail Stop 7537
509-963-2731
Fax: 509-963-2730
www.cwu.edu/biology
See website for how this program may be used for educational and career purposes.

Faculty and Staff
Chair
Tom R. Cottrell, PhD

Professors
Daniel D. Beck, PhD, physiological ecology and herpetology
Tom R. Cottrell, PhD, plant ecology
David M. Darda, PhD, evolutionary vertebrate morphology, herpetology
Kristina A. Ernest, PhD, terrestrial and community ecology
Paul W. James, PhD, ecology and fisheries biology
James E. Johnson, PhD, mycology, systematics
Sheldon R. Johnson, PhD, zoophysiology, mammalogy (emeritus)
Robert E. Pacha, PhD, microbiology (emeritus)
Holly C. Pinkart, PhD, microbiology, microbial ecology
Mary E. Poulson, PhD, plant physiology
Wayne S. Quirk, PhD, sensation and perception, neuroscience
Ian J. Quitadamo, PhD, science education, cell and molecular biology
Linda A. Raubeson, PhD, evolutionary biology and genetics

Stamford D. Smith, PhD, entomology (emeritus,)
Gabrielle Stryker, PhD, microbiology, immunology and parasitology
Lixing Sun, PhD, behavioral ecology and evolution

Associate Professors
Lucinda Carnell, PhD, molecular behavioral genetics
Jason T. Irwin, PhD, animal physiology
R. Steven Wagner, PhD, conservation genetics and herpetological science

Assistant Professors
Clay Arango, PhD, stream ecology and nitrogen biogeochemistry
April Binder, PhD, molecular developmental biology
Jennifer Dechaine, PhD, plant biology
Blaise Dondji, PhD, human physiology, microbiology, parasitology, immunology
Alison Scoville, PhD, ecological and evolutionary genomics

Lecturers
Lucy Bottcher, PhD, ecologist, herpetologist
Raymon Donahue, PhD, plant physiological ecology

Staff
Emil Babik, engineering technician
Jonathan Betz, instructional classroom support technician
Mary Bottcher, instructional classroom support technician supervisor
Eric Foss, instructional classroom support technician
Mary Knirck, secretary senior
Kariann Linnell, secretary supervisor
Jeff Wilcox, engineering technician
Mark Young, research technologist I

Department Information
The Department of Biological Sciences provides the biological component of the liberal arts education at the university. We promote student understanding of biological concepts relevant to the individual and society, and foster an appreciation of scientific inquiry. Evolution is the unifying theme of our curriculum. Our students obtain a broad education, covering a wide variety of biological disciplines. We focus on the student. Classes are small, facilitating hands-on experience, interactions with faculty, and opportunities for both undergraduate and graduate research. We offer a full complement of competitive pre-professional programs, strong programs in regional field biology, and a quality program for secondary biology educators.

Admission Requirements
to be admitted to a biology major or minor, all students must:
1. Meet with an advisor

Advisors are normally assigned by the biology department upon admission to the major. However, it is highly recommended that a student talk with an advisor well before being admitted to the major. Any biology department faculty member may serve as an advisor but different faculty members advise in different areas. Please meet with your advisor as early in your academic career as possible to begin planning your program.

2. Complete and file an application to the major by the beginning of the junior year.

A formal application to the biology major must be submitted with your advisor's approval. The entry-to-major qualifications must be met and application should be made by the beginning of the junior year. Application forms can be obtained from the advisor, the department office, or online at www.cwu.edu/biology/forms-and-information.

3. Complete and file a program of study by the end of the junior year.

To graduate, each student must have on file in the biology department and in the registrar's office, an official Course of Study. The Course of Study documents a student's individual degree program and lists the required and elective courses necessary for successful program completion. It is prepared by the student in conjunction with his or her advisor and should be approved by the student, advisor, and department chair at least one year prior to graduation. Students should meet with their advisor regularly to discuss their progress. Course of Study forms can be obtained from the advisor, the department office, or online at: www.cwu.edu/biology/forms-and-information.

Student Scholarly Activities
The department is student oriented and provides a diversity of laboratory and field experiences. Students are encouraged to participate in a variety of activities.

- Research activities: Students are encouraged to seek out a faculty member who is engaged in active research that complements the student's career goals. Students who begin research early and continue it through their career in the department gain a better understanding of their profession and are more competitive in the job market or in graduate school admissions.
- Field program: The department believes in the importance of exposing students to biological field experiences. In addition to those provided by regular courses, the department offers

summer field courses and trips to biologically interesting areas during breaks between quarters.

Student Organizations

Biology Club: All biology students are encouraged to join the Biology Club. This student-run organization meets regularly to discuss academic planning and career opportunities in biology. The club performs service activities and plans recreational outings. See its website at www.cwu.edu/biology.

Beta Beta Beta: BBB is the undergraduate National Biological Sciences Honorary Society. Students maintaining a high grade point average (3.0 or higher) are encouraged to apply.

Various organizations for students interested in health professions (medicine, dentistry, etc.) are available to provide information, support, and opportunities for service.

Fees

Laboratory or field fees are assessed for many of the department's lab courses. These fees are used as partial support for purchasing lab materials or providing transportation costs.

General Consideration for Biology Majors and Minors

- The biological sciences department must approve each student's program at least one academic year preceding graduation
- CHEM 181 has a prerequisite of high school chemistry and qualification for MATH 153. PHYS 111 has a prerequisite of high school algebra and trigonometry. PHYS 181 has a prerequisite or corequisite of MATH 172, 173, and 272. BIOL 360 has a prerequisite of MATH 153.
- Credits earned in CHEM 181, 181LAB, and PHYS 111 will be allowed in partial fulfillment of the natural science breadth requirements as well as the requirements of the biology major or minor.
- A maximum of 15 credits in BIOL 295, BIOL 490, BIOL 295 and BIOL 496 may be included in the major (as electives in the BS degrees).
- A major in biological sciences incorporates classes from mathematics and other sciences. A full year of introductory biology and introductory chemistry is required for enrollment in upper-division biology classes. The introductory chemistry sequence (CHEM 181, 182, 183) is pre- or co-requisite to the introductory biology series (BIOL 181, 182, 183). Students are urged to complete these two introductory series in their first year or as early in their academic career as possible.

Graduation Requirements

- You must have a cumulative GPA of at least 2.25 in your major.
- End-of-major assessment must be completed, usually in conjunction with BIOL 499S. This requirement helps to assess whether the department has fulfilled its instructional objectives and provides us with information that will enable us to continuously improve our programs and courses.
- Application for the bachelor's degree must be filed by the second Friday of the quarter preceding the quarter in which the degree is to be received. Complete instructions and deadlines are available in Registrar Services.

Biology Major, BA

The BA degree is designed to develop a general breadth in the sciences. Students completing the BA major will find that their strong general background will allow them flexibility in career choices. The BA degree meets the requirements for admission to most graduate schools and medical schools.

(NOTE: Students seeking a BA degree must complete one year college/university study or two years high school study of a single world language.)

Required Courses

- BIOL 181 - General Biology I **Credits:** (5)
- BIOL 182 - General Biology II **Credits:** (5)
- BIOL 183 - General Biology III **Credits:** (5)
- BIOL 213 - Introductory Biostatistics **Credits:** (4)
- BIOL 321 - Genetics **Credits:** (5)
- BIOL 470 - Mechanisms of Evolution **Credits:** (5)
- BIOL 497 - Honors Thesis **Credits:** (1-5)
- **OR** BIOL 499S - Senior Seminar **Credits:** (1)
- CHEM 181 - General Chemistry I **Credits:** (4)
- CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)
- CHEM 182 - General Chemistry II **Credits:** (4)
- CHEM 182LAB - General Chemistry Laboratory II **Credits:** (1)
- CHEM 183 - General Chemistry III **Credits:** (4)
- CHEM 183LAB - General Chemistry Laboratory III **Credits:** (1)
- CHEM 361 - Organic Chemistry I **Credits:** (3)
- CHEM 361LAB - Organic Chemistry Laboratory I **Credits:** (2)

Select from the following sequences: Credits 10

- PHYS 111 - Introductory Physics **Credits:** (4)
- PHYS 111LAB - Introductory Physics Laboratory **Credits:** (1)
- PHYS 112 - Introductory Physics II **Credits:** (4)
- PHYS 112LAB - Introductory Physics Laboratory II **Credits:** (1)
  OR
- PHYS 181 - General Physics **Credits:** (4)
- PHYS 181LAB - General Physics Laboratory **Credits:** (1)
- PHYS 182 - General Physics II **Credits:** (4)
- PHYS 182LAB - General Physics Laboratory II **Credits:** (1)

Select from the following: Credits 5-10

Take both:

- BIOL 355 - Human Anatomy and Physiology I **Credits:** (5)
- BIOL 356 - Human Anatomy and Physiology II **Credits:** (5)
- **OR** BIOL 441 - Plant Physiology **Credits:** (5)
- **OR** BIOL 455 - Integrative Animal Physiology **Credits:** (5)

Select from the following: Credits 5

- BIOL 360 - General Ecology **Credits:** (5)
- BIOL 420 - Environmental Microbiology **Credits:** (5)

Total Credits: 70-75

Biology BS, Biology Teaching Specialization

This major satisfies the criteria for an endorsement in biology and qualifies students to teach biology at the high school, middle school, or junior high levels. Students should consider working toward endorsement in a second area such as chemistry, Earth science, general science, physics, middle-level science, or middle-level mathematics. Students taking this major are required to apply to the Teacher Certification Program and complete the Professional Education Program requirements offered through the Department of Educational Foundations and Curriculum, with the exception of EFC 416 and EFC 350 (44 total credits required). Students completing this program are required to demonstrate knowledge, skill, and disposition proficiency through a program portfolio prior to student teaching. Students must pass the WEST-E exam for biology to receive a biology endorsement.

Students consult with the appropriate biology advisor for approval of their BS program and electives, which must be submitted for approval to the biological sciences department at least one academic year preceding graduation. All students in the BS biology major must complete all BS core requirements, plus additional specific requirements. Additionally, students will need to choose a specified number of courses from different groupings of upper-division courses. A maximum of 15 credits in BIOL 295, BIOL 490, BIOL 495, and BIOL 496 may be included in the major. CHEM 181 has a prerequisite of high school chemistry and qualification for MATH 153. BIOL 181 has a pre or co-requisite of CHEM 181.

Biology Teaching Core Requirements Credits: (44)

BIOL 181 - General Biology I **Credits:** (5)
BIOL 182 - General Biology II **Credits:** (5)
BIOL 183 - General Biology III **Credits:** (5)
BIOL 213 - Introductory Biostatistics **Credits:** (4)
BIOL 321 - Genetics **Credits:** (5)
BIOL 427 - Biotechnology for Teachers **Credits:** (5)
BIOL 492 - Laboratory Experience in Teaching Biological Sciences **Credits:** (2)
SCED 301 - Interdisciplinary Science and Engineering Inquiry **Credits:** (5)
SCED 324 - Science Education in Middle and Secondary Schools I **Credits:** (3)
SCED 325 - Science Education in Middle and Secondary Schools II **Credits:** (3)
SCED 487 - Teaching Middle and Secondary Science Seminar **Credits:** (2)

General Chemistry and Laboratory Credits: (23)

CHEM 181 - General Chemistry I **Credits:** (4)
CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)
CHEM 182 - General Chemistry II **Credits:** (4)
CHEM 182LAB - General Chemistry Laboratory II **Credits:** (1)
CHEM 183 - General Chemistry III **Credits:** (4)
CHEM 183LAB - General Chemistry Laboratory III **Credits:** (1)
CHEM 361 - Organic Chemistry I **Credits:** (3)
CHEM 361LAB - Organic Chemistry Laboratory I **Credits:** (2)
CHEM 362 - Organic Chemistry II **Credits:** (3)

Additional Required Courses

1 course from the Biological Diversity Group **Credits:** (4-5) BIOL 323, Microbiology recommended.
1 course from the Ecology Group **Credits:** (4-5) BIOL 360, General Ecology recommended.
1 course from the Evolution Group **Credits:** (4-5) BIOL 470, Mechanisms of Evolution recommended.
1 course from the Structure/Function Group **Credits:** (3-10) BIOL 353, BIOL 355, and/or BIOL 356 recommended.

Total Credits: 82-92

Biological Diversity Group

BIOL 322 - Introductory Microbiology **Credits:** (5)
BIOL 323 - Microbiology **Credits:** (5)
BIOL 341 - Plant Taxonomy **Credits:** (5)
BIOL 344 - Dendrology **Credits:** (4)
BIOL 351 - General Entomology **Credits:** (5)
BIOL 352 - Parasitology **Credits:** (5)
BIOL 421 - General Virology **Credits:** (5)
BIOL 443 - Mycology **Credits:** (5)
BIOL 444 - Algae and Bryophytes **Credits:** (5)
BIOL 445 - Field Mycology **Credits:** (5)
BIOL 450 - Ichthyology **Credits:** (4)
BIOL 451 - Herpetology **Credits:** (4)
BIOL 452 - Ornithology **Credits:** (4)
BIOL 453 - Mammalogy **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Ecology Group

BIOL 360 - General Ecology **Credits:** (5)
BIOL 362 - Biomes of the Pacific Northwest **Credits:** (4)
BIOL 377 - Regional Natural History **Credits:** (2)
AND BIOL 377LAB - Regional Natural History **Credits:** (3)
BIOL 420 - Environmental Microbiology **Credits:** (5)
BIOL 461 - Community Ecology **Credits:** (3)
BIOL 462 - Wildlife and Fisheries Ecology **Credits:** (5)
BIOL 463 - Limnology **Credits:** (5)
BIOL 464 - Terrestrial Plant Ecology **Credits:** (5)
BIOL 466 - Conservation Biology **Credits:** (5)
BIOL 467 - Biological Field Techniques **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Evolution Group

BIOL 421 - General Virology **Credits:** (5)
BIOL 465 - Biology of Animal Behavior **Credits:** (4)
BIOL 470 - Mechanisms of Evolution **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Molecular and Cell Group

BIOL 354 - Developmental Biology **Credits:** (5)
BIOL 421 - General Virology **Credits:** (5)
BIOL 422 - Immunology **Credits:** (5)
BIOL 423 - Techniques in Immunology and Virology **Credits:** (5)
BIOL 425 - Molecular Biotechnology **Credits:** (5)
BIOL 430 - Cell Biology **Credits:** (5)
BIOL 441 - Plant Physiology **Credits:** (5)
BIOL 457 - Fundamentals of Neuroscience **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Structure/Function Group

BIOL 343 - Plant Anatomy **Credits:** (5)
BIOL 353 - Integrative Anatomy **Credits:** (6)
BIOL 354 - Developmental Biology **Credits:** (5)
BIOL 355 - Human Anatomy and Physiology I **Credits:** (5)
AND BIOL 356 - Human Anatomy and Physiology II **Credits:** (5)
BIOL 422 - Immunology **Credits:** (5)
BIOL 423 - Techniques in Immunology and Virology **Credits:** (5)
BIOL 426 - Medical Microbiology **Credits:** (3)
BIOL 426LAB - Medical Microbiology Laboratory **Credits:** (2)
BIOL 441 - Plant Physiology **Credits:** (5)
BIOL 454 - Histology **Credits:** (3)
BIOL 455 - Integrative Animal Physiology **Credits:** (5)
BIOL 457 - Fundamentals of Neuroscience **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Biology BS, Biomedical Science Specialization

The biomedical science specialization will serve students that are interested in pursuing careers in human health (medicine, dentistry, optometry, physical therapy, pharmacy) and veterinary medicine. This specialization allows for the study of human biology, together with a core of fundamental physical science principles (chemistry and physics). This specialization will allow students to apply these physical principals to the study of biological systems, which is an essential requirement of professional health programs in medicine, dentistry, optometry,

physical therapy, pre-pharmacy and physician assistant programs. The biomedical science specialization offers individualized academic plans to help each student achieve his or her goals in the biomedical field.

Students consult with the appropriate biology advisor for approval of their BS program and electives, which must be submitted for approval to the biological sciences department at least one academic year preceding graduation. All students in the BS biology major must complete all BS core requirements, plus additional specific requirements. Additionally, students will need to choose a specified number of courses from different groupings of upper-division courses. A maximum of 15 credits in BIOL 295, BIOL 490, BIOL 495, and BIOL 496 may be included in the major. CHEM 181 has a prerequisite of high school chemistry and qualification for MATH 153. BIOL 181 has pre or co-requisite of CHEM 181.

Biology Core Requirements

BIOL 181 - General Biology I **Credits:** (5)
BIOL 182 - General Biology II **Credits:** (5)
BIOL 183 - General Biology III **Credits:** (5)
BIOL 213 - Introductory Biostatistics **Credits:** (4)
BIOL 321 - Genetics **Credits:** (5)
BIOL 499S - Senior Seminar **Credits:** (1)

General Chemistry and Laboratory Credits: (15)

CHEM 181 - General Chemistry I **Credits:** (4)
CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)
CHEM 182 - General Chemistry II **Credits:** (4)
CHEM 182LAB - General Chemistry Laboratory II **Credits:** (1)
CHEM 183 - General Chemistry III **Credits:** (4)
CHEM 183LAB - General Chemistry Laboratory III **Credits:** (1)

Total Core Credits: 40

Select from the following sequences Credits: 15

PHYS 111 - Introductory Physics **Credits:** (4)
PHYS 111LAB - Introductory Physics Laboratory **Credits:** (1)
PHYS 112 - Introductory Physics II **Credits:** (4)
PHYS 112LAB - Introductory Physics Laboratory II **Credits:** (1)
PHYS 113 - Introductory Physics III **Credits:** (4)
PHYS 113LAB - Introductory Physics Laboratory III **Credits:** (1)
OR
PHYS 181 - General Physics **Credits:** (4)
PHYS 181LAB - General Physics Laboratory **Credits:** (1)
PHYS 182 - General Physics II **Credits:** (4)
PHYS 182LAB - General Physics Laboratory II **Credits:** (1)
PHYS 183 - General Physics III **Credits:** (4)
PHYS 183LAB - General Physics Laboratory III **Credits:** (1)

Additional Required Courses

CHEM 361 - Organic Chemistry I **Credits:** (3)
CHEM 361LAB - Organic Chemistry Laboratory I **Credits:** (2)
CHEM 362 - Organic Chemistry II **Credits:** (3)
3 courses* from the Ecology, Evolution, Molecular/Cell and/or Structure/Function Groups **Credits:** (11-20)
(*NOTE: Courses must come from three different groups.)

Department-approved electives Credits: 17-26

Total Credits: 100

Ecology Group

BIOL 360 - General Ecology **Credits:** (5)
BIOL 362 - Biomes of the Pacific Northwest **Credits:** (4)
BIOL 377 - Regional Natural History **Credits:** (2)
AND BIOL 377LAB - Regional Natural History **Credits:** (3)
BIOL 420 - Environmental Microbiology **Credits:** (5)
BIOL 461 - Community Ecology **Credits:** (3)
BIOL 462 - Wildlife and Fisheries Ecology **Credits:** (5)
BIOL 463 - Limnology **Credits:** (5)
BIOL 464 - Terrestrial Plant Ecology **Credits:** (5)
BIOL 466 - Conservation Biology **Credits:** (5)
BIOL 467 - Biological Field Techniques **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Evolution Group

BIOL 421 - General Virology **Credits:** (5)
BIOL 465 - Biology of Animal Behavior **Credits:** (4)
BIOL 470 - Mechanisms of Evolution **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Molecular and Cell Group

BIOL 354 - Developmental Biology **Credits:** (5)
BIOL 421 - General Virology **Credits:** (5)
BIOL 422 - Immunology **Credits:** (5)
BIOL 423 - Techniques in Immunology and Virology **Credits:** (5)
BIOL 425 - Molecular Biotechnology **Credits:** (5)
BIOL 430 - Cell Biology **Credits:** (5)
BIOL 441 - Plant Physiology **Credits:** (5)
BIOL 457 - Fundamentals of Neuroscience **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Structure/Function Group

BIOL 343 - Plant Anatomy **Credits:** (5)
BIOL 353 - Integrative Anatomy **Credits:** (6)
BIOL 354 - Developmental Biology **Credits:** (5)
BIOL 355 - Human Anatomy and Physiology I **Credits:** (5)
AND BIOL 356 - Human Anatomy and Physiology II **Credits:** (5)
BIOL 422 - Immunology **Credits:** (5)
BIOL 423 - Techniques in Immunology and Virology **Credits:** (5)
BIOL 426 - Medical Microbiology **Credits:** (3)
BIOL 426LAB - Medical Microbiology Laboratory **Credits:** (2)
BIOL 441 - Plant Physiology **Credits:** (5)
BIOL 454 - Histology **Credits:** (3)
BIOL 455 - Integrative Animal Physiology **Credits:** (5)
BIOL 457 - Fundamentals of Neuroscience **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Electives

Courses from the following group may also be used as electives:

Biological Diversity Group

BIOL 322 - Introductory Microbiology **Credits:** (5)
BIOL 323 - Microbiology **Credits:** (5)
BIOL 341 - Plant Taxonomy **Credits:** (5)
BIOL 344 - Dendrology **Credits:** (4)
BIOL 351 - General Entomology **Credits:** (5)
BIOL 352 - Parasitology **Credits:** (5)
BIOL 421 - General Virology **Credits:** (5)
BIOL 443 - Mycology **Credits:** (5)
BIOL 444 - Algae and Bryophytes **Credits:** (5)
BIOL 445 - Field Mycology **Credits:** (5)
BIOL 450 - Ichthyology **Credits:** (4)
BIOL 451 - Herpetology **Credits:** (4)
BIOL 452 - Ornithology **Credits:** (4)
BIOL 453 - Mammalogy **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Biology BS, Ecology and Evolutionary Biology Specialization

Ecology is the study of how organisms interact with their physical and biological environment. Evolution considers how populations change over time to generate the rich diversity of life on earth, and is the unifying theory of biology. The ecology and evolutionary specialization is designed for students broadly interested in basic and applied biology, natural resource management, agriculture, ecological restoration, conservation biology, disease dynamics, animal behavior, and biological research. Students following this specialization will gain experience in natural history, field research, and experimental design. Potential careers may be found in federal, state, and tribal agencies, or private environmental consulting firms, research laboratories, and natural history museums. Students interested in graduate study should work closely with their advisor to tailor this specialization to their particular field of interest.

Students consult with the appropriate biology advisor for approval of their BS program and electives, which must be submitted for approval to the Biological Sciences Department at least one academic year preceding graduation. All students in the BS Biology major must complete all BS core requirements, plus additional specific requirements. Additionally, students will need to choose a specified number of courses from different groupings of upper division courses. A maximum of 15 credits in BIOL 295, BIOL 490, BIOL 495, and BIOL 496 may be included in the major. CHEM 181 has a prerequisite of high school chemistry and qualification for MATH 153. BIOL 181 has a pre or co-requisite of CHEM 181.

Biology Core Requirements

BIOL 181 - General Biology I **Credits:** (5)
BIOL 182 - General Biology II **Credits:** (5)
BIOL 183 - General Biology III **Credits:** (5)
BIOL 213 - Introductory Biostatistics **Credits:** (4)
BIOL 321 - Genetics **Credits:** (5)
BIOL 499S - Senior Seminar **Credits:** (1)

General Chemistry and Laboratory Credits: (15)

CHEM 181 - General Chemistry I **Credits:** (4)

CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)
CHEM 182 - General Chemistry II **Credits:** (4)
CHEM 182LAB - General Chemistry Laboratory II **Credits:** (1)
CHEM 183 - General Chemistry III **Credits:** (4)
CHEM 183LAB - General Chemistry Laboratory III **Credits:** (1)

Total Core Credits: 40

Additional Required Courses

CHEM 361 - Organic Chemistry I **Credits:** (3)
CHEM 361LAB - Organic Chemistry Laboratory I **Credits:** (2)
MATH 170 - Intuitive Calculus **Credits:** (5)
OR MATH 172 - Calculus I **Credits:** (5)
PHYS 111 - Introductory Physics **Credits:** (4)
AND PHYS 111LAB - Introductory Physics Laboratory **Credits:** (1)
OR PHYS 181 - General Physics **Credits:** (4)
AND PHYS 181LAB - General Physics Laboratory **Credits:** (1)

Select from the following:

1 course from the Biological Diversity Group **Credits:** (4-5)
1 course from the Ecology Group **Credits:** (4-5)*
1 course from the Evolution Group **Credits:** (4-5)*
1 additional course from the Ecology OR Evolution Group **Credits:** (4-5)*
1 additional course from the Molecular/Cell OR Structure/Function Group **Credits:** (3-10)
(*NOTE: Courses can only be counted once.)

Department-approved electives Credits: 15-26

Total Credits: 100

Biological Diversity Group

BIOL 322 - Introductory Microbiology **Credits:** (5)
BIOL 323 - Microbiology **Credits:** (5)
BIOL 341 - Plant Taxonomy **Credits:** (5)
BIOL 344 - Dendrology **Credits:** (4)
BIOL 351 - General Entomology **Credits:** (5)
BIOL 352 - Parasitology **Credits:** (5)
BIOL 421 - General Virology **Credits:** (5)
BIOL 443 - Mycology **Credits:** (5)
BIOL 444 - Algae and Bryophytes **Credits:** (5)
BIOL 445 - Field Mycology **Credits:** (5)
BIOL 450 - Ichthyology **Credits:** (4)
BIOL 451 - Herpetology **Credits:** (4)
BIOL 452 - Ornithology **Credits:** (4)
BIOL 453 - Mammalogy **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Ecology Group

BIOL 360 - General Ecology **Credits:** (5)
BIOL 362 - Biomes of the Pacific Northwest **Credits:** (4)
BIOL 377 - Regional Natural History **Credits:** (2)
AND BIOL 377LAB - Regional Natural History **Credits:** (3)
BIOL 420 - Environmental Microbiology **Credits:** (5)
BIOL 461 - Community Ecology **Credits:** (3)
BIOL 462 - Wildlife and Fisheries Ecology **Credits:** (5)
BIOL 463 - Limnology **Credits:** (5)
BIOL 464 - Terrestrial Plant Ecology **Credits:** (5)
BIOL 466 - Conservation Biology **Credits:** (5)
BIOL 467 - Biological Field Techniques **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Evolution Group

BIOL 421 - General Virology **Credits:** (5)
BIOL 465 - Biology of Animal Behavior **Credits:** (4)
BIOL 470 - Mechanisms of Evolution **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Molecular and Cell Group

BIOL 354 - Developmental Biology **Credits:** (5)
BIOL 421 - General Virology **Credits:** (5)
BIOL 422 - Immunology **Credits:** (5)
BIOL 423 - Techniques in Immunology and Virology **Credits:** (5)
BIOL 425 - Molecular Biotechnology **Credits:** (5)
BIOL 430 - Cell Biology **Credits:** (5)
BIOL 441 - Plant Physiology **Credits:** (5)
BIOL 457 - Fundamentals of Neuroscience **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Structure/Function Group

BIOL 343 - Plant Anatomy **Credits:** (5)
BIOL 353 - Integrative Anatomy **Credits:** (6)
BIOL 354 - Developmental Biology **Credits:** (5)
BIOL 355 - Human Anatomy and Physiology I **Credits:** (5)

AND BIOL 356 - Human Anatomy and Physiology II **Credits:** (5)
BIOL 422 - Immunology **Credits:** (5)
BIOL 423 - Techniques in Immunology and Virology **Credits:** (5)
BIOL 426 - Medical Microbiology **Credits:** (3)
BIOL 426LAB - Medical Microbiology Laboratory **Credits:** (2)
BIOL 441 - Plant Physiology **Credits:** (5)
BIOL 454 - Histology **Credits:** (3)
BIOL 455 - Integrative Animal Physiology **Credits:** (5)
BIOL 457 - Fundamentals of Neuroscience **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Biology BS, General Biology Specialization

The BS Biology major offers undergraduate students a degree program with depth of training in the biological sciences and supporting fields. This program prepares students for immediate entrance into careers in biological sciences or for graduate work (for preparation for teaching high school biology, see biology teaching specialization).

Students consult with the appropriate biology advisor for approval of their BS program and electives, which must be submitted for approval to the biological sciences department at least one academic year preceding graduation. All students in the BS Biology major must complete all BS core requirements, plus additional specific requirements. Additionally, students will need to choose a specified number of courses from different groupings of upper division courses. A maximum of 15 credits in BIOL 295, BIOL 490, BIL 495 and BIOL 496 may be included in the major. CHEM 181 has a prerequisite of high school chemistry and qualification for MATH 153. BIOL 181 has a pre or co-requisite of CHEM 181.

Biology Core Requirements

BIOL 181 - General Biology I **Credits:** (5)
BIOL 182 - General Biology II **Credits:** (5)
BIOL 183 - General Biology III **Credits:** (5)
BIOL 213 - Introductory Biostatistics **Credits:** (4)
BIOL 321 - Genetics **Credits:** (5)
BIOL 499S - Senior Seminar **Credits:** (1)

General Chemistry and Laboratory Credits: (15)

CHEM 181 - General Chemistry I **Credits:** (4)
CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)
CHEM 182 - General Chemistry II **Credits:** (4)
CHEM 182LAB - General Chemistry Laboratory II **Credits:** (1)
CHEM 183 - General Chemistry III **Credits:** (4)
CHEM 183LAB - General Chemistry Laboratory III **Credits:** (1)

Total Core Credits: 40

Additional Required Courses

CHEM 361 - Organic Chemistry I **Credits:** (3)
CHEM 361LAB - Organic Chemistry Laboratory I **Credits:** (2)
PHYS 111 - Introductory Physics **Credits:** (4)
AND PHYS 111LAB - Introductory Physics Laboratory **Credits:** (1)
OR PHYS 181 - General Physics **Credits:** (4)
AND PHYS 181LAB - General Physics Laboratory **Credits:** (1)

Select from the following:

1 course from the Biological Diversity Group **Credits:** (4-5)
1 course from the Ecology Group **Credits:** (4-5)*
1 course from the Evolution Group **Credits:** (4-5)*
1 course from the Molecular/Cell Group **Credits:** (5)*
1 course from the Structure/Function Group **Credits:** (3-10)
(*NOTE: Courses can only be counted once.)

Department-approved electives Credits: 20-30

Total Credits: 100

Biological Diversity Group

BIOL 322 - Introductory Microbiology **Credits:** (5)
BIOL 323 - Microbiology **Credits:** (5)
BIOL 341 - Plant Taxonomy **Credits:** (5)
BIOL 344 - Dendrology **Credits:** (4)
BIOL 351 - General Entomology **Credits:** (5)
BIOL 352 - Parasitology **Credits:** (5)
BIOL 421 - General Virology **Credits:** (5)
BIOL 443 - Mycology **Credits:** (5)
BIOL 444 - Algae and Bryophytes **Credits:** (5)
BIOL 445 - Field Mycology **Credits:** (5)
BIOL 450 - Ichthyology **Credits:** (4)
BIOL 451 - Herpetology **Credits:** (4)
BIOL 452 - Ornithology **Credits:** (4)
BIOL 453 - Mammalogy **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Ecology Group

BIOL 360 - General Ecology **Credits:** (5)
BIOL 362 - Biomes of the Pacific Northwest **Credits:** (4)
BIOL 377 - Regional Natural History **Credits:** (2)
AND BIOL 377LAB - Regional Natural History **Credits:** (3)
BIOL 420 - Environmental Microbiology **Credits:** (5)
BIOL 461 - Community Ecology **Credits:** (3)
BIOL 462 - Wildlife and Fisheries Ecology **Credits:** (5)
BIOL 463 - Limnology **Credits:** (5)
BIOL 464 - Terrestrial Plant Ecology **Credits:** (5)
BIOL 466 - Conservation Biology **Credits:** (5)
BIOL 467 - Biological Field Techniques **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Evolution Group

BIOL 421 - General Virology **Credits:** (5)
BIOL 465 - Biology of Animal Behavior **Credits:** (4)
BIOL 470 - Mechanisms of Evolution **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Molecular and Cell Group

BIOL 354 - Developmental Biology **Credits:** (5)
BIOL 421 - General Virology **Credits:** (5)
BIOL 422 - Immunology **Credits:** (5)
BIOL 423 - Techniques in Immunology and Virology **Credits:** (5)
BIOL 425 - Molecular Biotechnology **Credits:** (5)
BIOL 430 - Cell Biology **Credits:** (5)
BIOL 441 - Plant Physiology **Credits:** (5)
BIOL 457 - Fundamentals of Neuroscience **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Structure/Function Group

BIOL 343 - Plant Anatomy **Credits:** (5)
BIOL 353 - Integrative Anatomy **Credits:** (6)
BIOL 354 - Developmental Biology **Credits:** (5)
BIOL 355 - Human Anatomy and Physiology I **Credits:** (5)
AND BIOL 356 - Human Anatomy and Physiology II **Credits:** (5)
BIOL 422 - Immunology **Credits:** (5)
BIOL 423 - Techniques in Immunology and Virology **Credits:** (5)
BIOL 426 - Medical Microbiology **Credits:** (3)
BIOL 426LAB - Medical Microbiology Laboratory **Credits:** (2)
BIOL 441 - Plant Physiology **Credits:** (5)
BIOL 454 - Histology **Credits:** (3)
BIOL 455 - Integrative Animal Physiology **Credits:** (5)
BIOL 457 - Fundamentals of Neuroscience **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Biology BS, Molecular and Cell Biology Specialization

Molecular and Cell Biology is the study of fundamental processes that form the basis of biological life and the techniques used to study these processes. The study of molecular and cell biology facilitates understanding of a wide variety of disciplines, including genetics, developmental biology, physiology, and evolutions of organisms. The goal of the MCB emphasis is to prepare graduates to be competitive in applications for entry into graduate degree programs, professional programs in the biomedical fields, or jobs in biomedical/agricultural research labs in government and industry.

Students consult with the appropriate biology advisor for approval of their BS program and electives, which must be submitted for approval to the Biological Sciences Department at least one academic year preceding graduation. All students in the BS Biology major must complete all BS core requirements, plus additional specific requirements. Additionally, students will need to choose a specified number of courses from different groupings of upper division courses. A maximum of 15 credits in BIOL 295, BIOL 490, BIOL 495, and BIOL 496 may be included in the major. CHEM 181 has a prerequisite of high school chemistry and qualification for MATH 153. BIOL 181 has a pre or co-requisite of CHEM 181.

Biology Core Requirements

BIOL 181 - General Biology I **Credits:** (5)
BIOL 182 - General Biology II **Credits:** (5)
BIOL 183 - General Biology III **Credits:** (5)
BIOL 213 - Introductory Biostatistics **Credits:** (4)
BIOL 321 - Genetics **Credits:** (5)
BIOL 499S - Senior Seminar **Credits:** (1)

General Chemistry and Laboratory Credits: (15)

CHEM 181 - General Chemistry I **Credits:** (4)
CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)
CHEM 182 - General Chemistry II **Credits:** (4)

CHEM 182LAB - General Chemistry Laboratory II **Credits:** (1)
CHEM 183 - General Chemistry III **Credits:** (4)
CHEM 183LAB - General Chemistry Laboratory III **Credits:** (1)

Total Core Credits: 40

Additional Required Courses

BIOL 425 - Molecular Biotechnology **Credits:** (5)
BIOL 430 - Cell Biology **Credits:** (5)
CHEM 361 - Organic Chemistry I **Credits:** (3)
CHEM 361LAB - Organic Chemistry Laboratory I **Credits:** (2)
CHEM 362 - Organic Chemistry II **Credits:** (3)
CHEM 431 - Biochemistry I **Credits:** (3)
1 course from the Molecular/Cell Group **Credits:** (5)
2 courses* from the Ecology, Evolution, and/or Structure/Function Groups **Credits:** (7-14) (*NOTE: Courses must come from two different groups.)

Department-approved electives Credits: 20-27

Total Credits: 100

Ecology Group

BIOL 360 - General Ecology **Credits:** (5)
BIOL 362 - Biomes of the Pacific Northwest **Credits:** (4)
BIOL 377 - Regional Natural History **Credits:** (2)
AND BIOL 377LAB - Regional Natural History **Credits:** (3)
BIOL 420 - Environmental Microbiology **Credits:** (5)
BIOL 461 - Community Ecology **Credits:** (3)
BIOL 462 - Wildlife and Fisheries Ecology **Credits:** (5)
BIOL 463 - Limnology **Credits:** (5)
BIOL 464 - Terrestrial Plant Ecology **Credits:** (5)
BIOL 466 - Conservation Biology **Credits:** (5)
BIOL 467 - Biological Field Techniques **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Evolution Group

BIOL 421 - General Virology **Credits:** (5)
BIOL 465 - Biology of Animal Behavior **Credits:** (4)
BIOL 470 - Mechanisms of Evolution **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Molecular and Cell Group

BIOL 354 - Developmental Biology **Credits:** (5)
BIOL 421 - General Virology **Credits:** (5)
BIOL 422 - Immunology **Credits:** (5)
BIOL 423 - Techniques in Immunology and Virology **Credits:** (5)
BIOL 425 - Molecular Biotechnology **Credits:** (5)
BIOL 430 - Cell Biology **Credits:** (5)
BIOL 441 - Plant Physiology **Credits:** (5)
BIOL 457 - Fundamentals of Neuroscience **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Structure/Function Group

BIOL 343 - Plant Anatomy **Credits:** (5)
BIOL 353 - Integrative Anatomy **Credits:** (6)
BIOL 354 - Developmental Biology **Credits:** (5)
BIOL 355 - Human Anatomy and Physiology I **Credits:** (5)
AND BIOL 356 - Human Anatomy and Physiology II **Credits:** (5)
BIOL 422 - Immunology **Credits:** (5)
BIOL 423 - Techniques in Immunology and Virology **Credits:** (5)
BIOL 426 - Medical Microbiology **Credits:** (3)
BIOL 426LAB - Medical Microbiology Laboratory **Credits:** (2)
BIOL 441 - Plant Physiology **Credits:** (5)
BIOL 454 - Histology **Credits:** (3)
BIOL 455 - Integrative Animal Physiology **Credits:** (5)
BIOL 457 - Fundamentals of Neuroscience **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Electives

Additionally, courses from the following group may also be used as electives:

Biological Diversity Group

BIOL 322 - Introductory Microbiology **Credits:** (5)
BIOL 323 - Microbiology **Credits:** (5)
BIOL 341 - Plant Taxonomy **Credits:** (5)
BIOL 344 - Dendrology **Credits:** (4)
BIOL 351 - General Entomology **Credits:** (5)
BIOL 352 - Parasitology **Credits:** (5)
BIOL 421 - General Virology **Credits:** (5)
BIOL 443 - Mycology **Credits:** (5)
BIOL 444 - Algae and Bryophytes **Credits:** (5)
BIOL 445 - Field Mycology **Credits:** (5)
BIOL 450 - Ichthyology **Credits:** (4)
BIOL 451 - Herpetology **Credits:** (4)
BIOL 452 - Ornithology **Credits:** (4)

BIOL 453 - Mammalogy **Credits:** (5)
(NOTE: Courses are listed in multiple groups; a course may only count in one area.)

Registered Microbiologists

With guidance from their advisor, students following the molecular and cell biology specialization will be eligible to become registered microbiologists (National Registry of Microbiologists, American Academy of Microbiology) upon completing the following requirements:

A minimum of a baccalaureate degree in biological science with 30 quarter credits in microbiology courses.

Acceptable experience equivalent to one year of full-time work in a microbiology laboratory related to the specialty area in which certification is sought. Experience must have been gained within the immediate past three years. Certification as a conditional registrant is offered to individuals who possess the academic qualifications for registered microbiologist, but who lack the required year of full-time laboratory experience.

Biology Minor

Not available to biology majors.

Required Courses

- BIOL 181 - General Biology I **Credits:** (5)
- BIOL 182 - General Biology II **Credits:** (5)
- BIOL 183 - General Biology III **Credits:** (5)
- BIOL 213 - Introductory Biostatistics **Credits:** (4)

General Chemistry and Laboratory: Credits 15

- CHEM 181 - General Chemistry I **Credits:** (4)
- CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)
- CHEM 182 - General Chemistry II **Credits:** (4)
- CHEM 182LAB - General Chemistry Laboratory II **Credits:** (1)
- CHEM 183 - General Chemistry III **Credits:** (4)
- CHEM 183LAB - General Chemistry Laboratory III **Credits:** (1)

Electives in Biological Sciences: Credits 10

Total Credits: 44

Biology: Teaching Secondary Minor

This minor is restricted to students working on a teaching major in chemistry, earth science, physics, or general science if not the chosen designated science area. Students completing this minor are required to demonstrate proficiency of student learning outcomes through a program portfolio prior to student teaching. Students may satisfy the biology reaching requirement by either taking BIOL 492 or through an independent live science teaching experience. In addition, students must pass the WEST-E exam for biology to receive a biology endorsement.

Required Courses

- BIOL 181 - General Biology I **Credits:** (5)
- BIOL 182 - General Biology II **Credits:** (5)
- BIOL 183 - General Biology III **Credits:** (5)
- BIOL 213 - Introductory Biostatistics **Credits:** (4)
- BIOL 321 - Genetics **Credits:** (5)
- BIOL 360 - General Ecology **Credits:** (5)
- CHEM 181 - General Chemistry I **Credits:** (4)
- CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)
- CHEM 182 - General Chemistry II **Credits:** (4)
- CHEM 182LAB - General Chemistry Laboratory II **Credits:** (1)
- CHEM 183 - General Chemistry III **Credits:** (4)
- CHEM 183LAB - General Chemistry Laboratory III **Credits:** (1)

Total Credits: 44

Business Administration Department

See Finance and Supply Chain Management Department or Management Department.

Business Degrees Offered

- BSBA with a Specialization in Finance
- BSBA with a Specialization in General Business
- BSBA with a Specialization in Human Resource Management
- BSBA with a Specialization in Management and Organization
- BSBA with a Specialization in Marketing Management
- BSBA with a Specialization in Supply Chain Management

- Business Minor
- Sport Business Certificate
- Supply Chain Management Certificate Program

Career and Technical Education Program

Ellensburg
Michaelsen Hall, room 136

509-963-2304
www.cwu.edu/family-consumer/career-technical-education
See website for how this certificate may be used for educational and career purposes.

Faculty and Staff
Director
Kim Bartel, PhD, career and technical education

Faculty
Kim Bartel, PhD, career and technical education
Scott Calahan, MEd, industrial education
Robert Perkins, EdD, business and marketing education

Non-tenured Faculty
Sheri Adkinson
Bryan Erickson
Jay Leviton
Kevin Plambeck
Paul Randall

Regional Coordinators
Jay Leviton
Kevin Plambeck
Paul Randall

Career and Technical Education Teacher Preparation Certificate
This two-year competency block certificate program is intended for business or industry professionals who are interested in obtaining a career and technical teaching certificate. The program will provide the tools necessary for success in the classroom.

During the program participants will complete a mentored teaching experience or practicum each year. The program is offered through the office of Continuing Education in collaboration with Occupational Education.

Prerequisites:

1. Current Career and Technical Education Probationary Teaching Certificate, OR
2. 6,000 hours paid occupational experience in the area you wish to teach, and fingerprint clearance from both the Washington State Patrol and the FBI must be on file at the office of Superintendent of Public Instruction (OSPI).
3. Successful completion of all three sections in the Washington Educator Skills Test - Basic (WEST-B). Test scores must be submitted prior to completing the program in order to receive CWU's recommendation for career and technical education teacher certification, OR
4. Washington State Residency Permit or professional teacher certification.

Included in each year of the program is a 70-hour practicum. Passing grades in all courses grants the individual the competencies in general and specific safety requirement.

Occupational Education

Included in each year of the program is a 70 hour practicum. Passing grades in all courses grants the individual the competencies in general and specific safety requirement.

Required Courses

Block 1:

- OCED 310A - Vocational-Technical Teaching Methods **Credits:** (3-5)
  Must be taken for 4 credits.
- OCED 310B - Vocational-Technical Occupational Analysis **Credits:** (3-5)
  Must be taken for 3 credits.
- OCED 310C - Vocational-Technical Course Organization and Curriculum Design **Credits:** (3-5)
  Must be taken for 5 credits.

Block 2:

- OCED 311A - Vocational-Technical Coordination Techniques of Cooperative Education **Credits:** (3-5)
  Must be taken for 3 credits.
- OCED 311B - Vocational-Technical History and Philosophy of Vocational Education **Credits:** (3-5)
  Must be taken for 3 credits.

- OCED 311C - Vocational-Technical Student and Professional Leadership Development **Credits:** (3-5)
  Must be taken for 4 credits.
- OCED 311D - Vocational-Technical School Law and Issues Related to Abuse **Credits:** (3-5)
  Must be taken for 4 credits.

Total Credits: 24

Center for Excellence in Science and Math Education

College of the Sciences
Center for Excellence in Science and Math Education
Science Building, room 107
cesme@cwu.edu
509-963-2135
Mail Stop 7540

Director
Martha Kurtz, PhD

Staff
Dannica Price, event coordinator

Center for Teaching and Learning

College of Education and Professional Studies
Ellensburg
Black Hall, room 228

Alternative Pathway to Teaching-Online
Jesslyn Hollar
Manager
509-963-2433
hollarje@cwu.edu

General Information
Central Washington University's Center for Teaching and Learning has been approved by the State to offer a hybrid online alternative certification program in partnership with school districts in the central corridor of Washington (ESD 171, 105, and 123). The program's mission is to serve the most disadvantaged school districts having the most difficulty in hiring and retaining teachers in high need areas. All candidates will begin with one intensive (eight hrs/day-ten day) summer session on campus, and complete the remaining three transitions online while completing an internship in district schools. During the internship candidates will co-teach with a mentor teacher. They will prepare to take the Washington TPA.

Admission Requirements:

- Hold a baccalaureate degree from a regionally accredited institution of higher education;
- Have external validation of qualifications, including demonstrated successful experience with students or children, such as reference letters and letters of support from previous employers;
- Meet the age, good moral character, and personal fitness requirements for all teachers (all applicants must have current fingerprint clearance as a condition of admission into the program); and
- Provide evidence of successful passage of the statewide basic skills exam (WEST-B) and content area test (WEST-E) for the endorsement area
- Must be willing to complete internship in a school in the school districts in the central corridor of Washington (ESD 171, 105 and 123)

Course Requirements

Summer:
ECTL 470 and ECTL 480. Total of 6 credits.

Fall, winter and spring:
ECTL 490 Internship. 6 credits each quarter. Total credits: 18.

Chemistry Department

College of the Sciences
Ellensburg
Science Bldg., room 302
Mail Stop 7539
509-963-2811
Fax: 509-963-1050
www.cwu.edu/chemistry
See website for how this program may be used for educational and career purposes.

Faculty and Staff
Chair
Levente Fabry-Asztalos, PhD

Professor
Anthony Diaz, PhD, inorganic, solid state
Levente Fabry-Asztalos, PhD, organic
Anne Johansen, PhD, environmental, analytical
Martha J. Kurtz, PhD, chemistry and science education

JoAnn Peters, PhD, organic, mechanistic
Carin Thomas, PhD, biochemistry, toxicology

Associate Professors
Gil Belofsky, PhD, organic
Yingbin Ge, PhD, physical
Dion Rivera, PhD, physical, analytical
Tim Sorey, PhD, chemistry education

Assistant Professor
Todd Kroll, PhD, biochemistry

Lecturers
Tatiana Fadeeva, PhD, general/analytical
Young Kim, PhD, organic
Robert Rittenhouse, PhD, physical
P. Whitney Swain, PhD, biochemistry

Staff
Emil Babik, instrument technician
Tony Brown, stockroom manager
Brian Finn, computer technician
Daniel Hall, stockroom assistant
Julie Khyler, safety officer
Lisa Stowe, secretary
Jeff Wilcox, instrument technician

Department Information
The department offers three majors. In each major, courses in the first two years emphasize fundamental topics in chemistry, mathematics, and physics. Students then choose advanced courses in chemistry and related areas to complete the requirements in their major.

These majors provide opportunities for practical experience in chemistry. Students are encouraged to do research on campus with a faculty member, and to participate in the department's seminar program. Two minors are offered to supplement career related fields.

Department Standards
Students must have earned a grade of C- or higher in all prerequisites to be admitted to a course. To graduate, all chemistry majors are required to achieve at least a 2.0 cumulative GPA and a 2.25 GPA in courses required for the major.

Lab Fees
All chemistry labs have fees associated with them that must be paid when registering for the course.

Chemistry: Teaching Major, BA

This major satisfies the criteria for an endorsement in chemistry and qualifies students to teach chemistry at the high school, middle, or junior high levels. Students should seriously consider working toward endorsement in a second area, such as biology, general science, Earth science, middle level science, middle level mathematics, physics, or mathematics. Students taking this major are required to apply to the Teacher Certification Program and complete the Professional Education Program requirements offered through the Department of Educational Foundations and Curriculum, with the exception of EFC 416 and EFC 350 (44 total credits required). Students completing this program are required to demonstrate knowledge, skill, and disposition proficiency through a program portfolio prior to student teaching. Students must pass the WEST-E exam for chemistry to receive a chemistry endorsement.

Students are recommended to take MATH 273 before taking CHEM 381.

(NOTE: Students seeking a BA degree must complete one year college/university study or two years high school study of a single world language.)

Required Courses

General Chemistry Credits: 15

- CHEM 181 - General Chemistry I **Credits:** (4)
- CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)
- CHEM 182 - General Chemistry II **Credits:** (4)
- CHEM 182LAB - General Chemistry Laboratory II **Credits:** (1)
- CHEM 183 - General Chemistry III **Credits:** (4)
- CHEM 183LAB - General Chemistry Laboratory III **Credits:** (1)

Analytical Chemistry Credits: 5

- CHEM 332 - Quantitative Analysis **Credits:** (3)
- CHEM 332LAB - Quantitative Analysis Laboratory **Credits:** (2)
- **OR** CHEM 345 - Environmental Chemistry **Credits:** (5)

Organic Chemistry Credits: 8

- CHEM 361 - Organic Chemistry I **Credits:** (3)

- CHEM 361LAB - Organic Chemistry Laboratory I **Credits:** (2)
- CHEM 362 - Organic Chemistry II **Credits:** (3)

Biochemistry Credits: 5

- CHEM 431 - Biochemistry I **Credits:** (3)
- CHEM 431LAB - Biochemistry Laboratory **Credits:** (2)

Other Courses Credits: 23

- CHEM 350 - Inorganic Chemistry **Credits:** (3)
- CHEM 381 - Physical Chemistry (Thermodynamics) **Credits:** (5)
- CHEM 492 - Laboratory Experience in Teaching Chemistry **Credits:** (2)
- SCED 301 - Interdisciplinary Science and Engineering Inquiry **Credits:** (5)
- SCED 324 - Science Education in Middle and Secondary Schools I **Credits:** (3)
- SCED 325 - Science Education in Middle and Secondary Schools II **Credits:** (3)
- SCED 487 - Teaching Middle and Secondary Science Seminar **Credits:** (2)

Introductory Physics or General Physics Credits: 15

- PHYS 111 - Introductory Physics **Credits:** (4)
- PHYS 111LAB - Introductory Physics Laboratory **Credits:** (1)
- PHYS 112 - Introductory Physics II **Credits:** (4)
- PHYS 112LAB - Introductory Physics Laboratory II **Credits:** (1)
- PHYS 113 - Introductory Physics III **Credits:** (4)
- PHYS 113LAB - Introductory Physics Laboratory III **Credits:** (1)
  OR
- PHYS 181 - General Physics **Credits:** (4)
- PHYS 181LAB - General Physics Laboratory **Credits:** (1)
- PHYS 182 - General Physics II **Credits:** (4)
- PHYS 182LAB - General Physics Laboratory II **Credits:** (1)
- PHYS 183 - General Physics III **Credits:** (4)
- PHYS 183LAB - General Physics Laboratory III **Credits:** (1)

Mathematics Credits: 15

- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)
- MATH 272 - Multivariable Calculus I **Credits:** (5)

Total Credits: 86

Chemistry Major, BS

The bachelor of science major is designed for students who plan a career in chemistry or related fields. The program prepares students for further study in graduate programs, or to enter the workplace directly. The BS degree is certified by the American Chemical Society if the nine department-approved electives come from a designated set of upper-division courses within chemistry. Consult your major advisor about department-approved electives.

Students are recommended to take MATH 273 before taking CHEM 381.

BS Chemistry Core Requirements

General Chemistry and Laboratory: Credits 15

- CHEM 181 - General Chemistry I **Credits:** (4)
- CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)
- CHEM 182 - General Chemistry II **Credits:** (4)
- CHEM 182LAB - General Chemistry Laboratory II **Credits:** (1)
- CHEM 183 - General Chemistry III **Credits:** (4)
- CHEM 183LAB - General Chemistry Laboratory III **Credits:** (1)

Organic Chemistry: Credits 13

- CHEM 361 - Organic Chemistry I **Credits:** (3)
- CHEM 361LAB - Organic Chemistry Laboratory I **Credits:** (2)
- CHEM 362 - Organic Chemistry II **Credits:** (3)
- CHEM 363 - Organic Chemistry III **Credits:** (3)
- CHEM 363LAB - Organic Chemistry Laboratory II **Credits:** (2)

Total Core Credits: 28

Required Courses

Quantitative Analysis Credits: 5

- CHEM 332 - Quantitative Analysis **Credits:** (3)
- CHEM 332LAB - Quantitative Analysis Laboratory **Credits:** (2)

Chemistry Credits: 14

- CHEM 350 - Inorganic Chemistry **Credits:** (3)
- CHEM 431 - Biochemistry I **Credits:** (3)

- CHEM 431LAB - Biochemistry Laboratory **Credits:** (2)
- CHEM 452 - Instrumental Analysis Lecture **Credits:** (3)
- CHEM 452LAB - Instrumental Analysis Laboratory **Credits:** (2)
- CHEM 488 - Colloquium **Credits:** (1)

Physical Chemistry Credits: 15

- CHEM 381 - Physical Chemistry (Thermodynamics) **Credits:** (5)
- CHEM 382 - Physical Chemistry (Quantum Chemistry) **Credits:** (3)
- CHEM 382LAB - Integrated Physical/Inorganic Laboratory I **Credits:** (2)
- CHEM 383 - Physical Chemistry (Quantum, Statistical Mechanics, Kinetics) III **Credits:** (3)
- CHEM 383LAB - Integrated Physical/Inorganic Laboratory II **Credits:** (2)

Introductory Physics or General Physics Credits: 15

- PHYS 111 - Introductory Physics **Credits:** (4)
- PHYS 111LAB - Introductory Physics Laboratory **Credits:** (1)
- PHYS 112 - Introductory Physics II **Credits:** (4)
- PHYS 112LAB - Introductory Physics Laboratory II **Credits:** (1)
- PHYS 113 - Introductory Physics III **Credits:** (4)
- PHYS 113LAB - Introductory Physics Laboratory III **Credits:** (1)
  OR
- PHYS 181 - General Physics **Credits:** (4)
- PHYS 181LAB - General Physics Laboratory **Credits:** (1)
- PHYS 182 - General Physics II **Credits:** (4)
- PHYS 182LAB - General Physics Laboratory II **Credits:** (1)
- PHYS 183 - General Physics III **Credits:** (4)
- PHYS 183LAB - General Physics Laboratory III **Credits:** (1)

Calculus Credits: 15

- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)
- MATH 272 - Multivariable Calculus I **Credits:** (5)

Department-approved electives Credits: 9

Total Credits: 101

Chemistry Major BS, Biochemistry Specialization

This specialization is designed for students who plan a career in biochemistry or a related health science area such as medicine or dentistry. Majors may pursue further graduate studies, a career in biotechnology or a related industry.

Students are recommended to take MATH 273 before taking CHEM 381.

BS Chemistry Core Requirements

General Chemistry and Laboratory: Credits 15

- CHEM 181 - General Chemistry I **Credits:** (4)
- CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)
- CHEM 182 - General Chemistry II **Credits:** (4)
- CHEM 182LAB - General Chemistry Laboratory II **Credits:** (1)
- CHEM 183 - General Chemistry III **Credits:** (4)
- CHEM 183LAB - General Chemistry Laboratory III **Credits:** (1)

Organic Chemistry: Credits 13

- CHEM 361 - Organic Chemistry I **Credits:** (3)
- CHEM 361LAB - Organic Chemistry Laboratory I **Credits:** (2)
- CHEM 362 - Organic Chemistry II **Credits:** (3)
- CHEM 363 - Organic Chemistry III **Credits:** (3)
- CHEM 363LAB - Organic Chemistry Laboratory II **Credits:** (2)

Total Core Credits: 28

Required Courses

- BIOL 321 - Genetics **Credits:** (5)
- CHEM 350 - Inorganic Chemistry **Credits:** (3)
- CHEM 488 - Colloquium **Credits:** (1)

General Biology Credits: 15

- BIOL 181 - General Biology I **Credits:** (5)
- BIOL 182 - General Biology II **Credits:** (5)
- BIOL 183 - General Biology III **Credits:** (5)

Quantitative Analysis Credits: 5

- CHEM 332 - Quantitative Analysis **Credits:** (3)
- CHEM 332LAB - Quantitative Analysis Laboratory **Credits:** (2)

Physical Chemistry Credits: 10

- CHEM 381 - Physical Chemistry (Thermodynamics) **Credits:** (5)
- CHEM 382 - Physical Chemistry (Quantum Chemistry) **Credits:** (3)
- CHEM 382LAB - Integrated Physical/Inorganic Laboratory I **Credits:** (2)

Biochemistry Credits: 13

- CHEM 431 - Biochemistry I **Credits:** (3)
- CHEM 431LAB - Biochemistry Laboratory **Credits:** (2)
- CHEM 432 - Biochemistry II **Credits:** (3)
- CHEM 433 - Biochemistry III **Credits:** (3)
- CHEM 433LAB - Biochemistry Lab II **Credits:** (2)

Introductory Physics or General Physics Credits: 15

- PHYS 111 - Introductory Physics **Credits:** (4)
- PHYS 111LAB - Introductory Physics Laboratory **Credits:** (1)
- PHYS 112 - Introductory Physics II **Credits:** (4)
- PHYS 112LAB - Introductory Physics Laboratory II **Credits:** (1)
- PHYS 113 - Introductory Physics III **Credits:** (4)
- PHYS 113LAB - Introductory Physics Laboratory III **Credits:** (1)
  OR
- PHYS 181 - General Physics **Credits:** (4)
- PHYS 181LAB - General Physics Laboratory **Credits:** (1)
- PHYS 182 - General Physics II **Credits:** (4)
- PHYS 182LAB - General Physics Laboratory II **Credits:** (1)
- PHYS 183 - General Physics III **Credits:** (4)
- PHYS 183LAB - General Physics Laboratory III **Credits:** (1)

Calculus Credits: 15

- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)
- MATH 272 - Multivariable Calculus I **Credits:** (5)

Select from the following: Credits 2-5

- BIOL 323 - Microbiology **Credits:** (5)
- BIOL 425 - Molecular Biotechnology **Credits:** (5)
- BIOL 430 - Cell Biology **Credits:** (5)
- CHEM 383 - Physical Chemistry (Quantum, Statistical Mechanics, Kinetics) III **Credits:** (3)
- CHEM 383LAB - Integrated Physical/Inorganic Laboratory II **Credits:** (2)
- CHEM 452 - Instrumental Analysis Lecture **Credits:** (3)
- CHEM 452LAB - Instrumental Analysis Laboratory **Credits:** (2)
- CHEM 495 - Senior Research **Credits:** (1-6)

Total Credits: 112-115

Chemistry Minor

Required Courses

General Chemistry and Laboratory: Credits 15

- CHEM 181 - General Chemistry I **Credits:** (4)
- CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)
- CHEM 182 - General Chemistry II **Credits:** (4)
- CHEM 182LAB - General Chemistry Laboratory II **Credits:** (1)
- CHEM 183 - General Chemistry III **Credits:** (4)
- CHEM 183LAB - General Chemistry Laboratory III **Credits:** (1)

Department-approved upper-division electives in chemistry Credits: 16

Total Credits: 31

Chemistry: Teaching Minor

This minor is restricted to students working on a teaching major in biology, Earth science, or physics. Students completing this minor are required to demonstrate knowledge, skill, and disposition proficiency through a program portfolio prior to student teaching. Students must pass the WEST-E exam for chemistry to receive a chemistry endorsement.

Required Courses

General Chemistry and Laboratory Credits: 15

- CHEM 181 - General Chemistry I **Credits:** (4)
- CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)

- CHEM 182 - General Chemistry II **Credits:** (4)
- CHEM 182LAB - General Chemistry Laboratory II **Credits:** (1)
- CHEM 183 - General Chemistry III **Credits:** (4)
- CHEM 183LAB - General Chemistry Laboratory III **Credits:** (1)

Analytical Chemistry Credits: 5

- CHEM 332 - Quantitative Analysis **Credits:** (3)
- CHEM 332LAB - Quantitative Analysis Laboratory **Credits:** (2)
- **OR** CHEM 345 - Environmental Chemistry **Credits:** (5)

Organic Chemistry and Laboratory Credits: 8

- CHEM 361 - Organic Chemistry I **Credits:** (3)
- CHEM 361LAB - Organic Chemistry Laboratory I **Credits:** (2)
- CHEM 362 - Organic Chemistry II **Credits:** (3)

Biochemistry and Laboratory Credits: 5

- CHEM 431 - Biochemistry I **Credits:** (3)
- CHEM 431LAB - Biochemistry Laboratory **Credits:** (2)

Additional Course Credits: 2

- CHEM 492 - Laboratory Experience in Teaching Chemistry **Credits:** (2)

Total Credits: 35

Communication Department

College of Arts and Humanities
Ellensburg
Bouillon Hall, room 232A
Mail Stop 7438
509-963-1055
Fax: 509-963-1060
www.cwu.edu/communication
See website for how the communication programs may be used for educational and career purposes.

Faculty and Staff
Chair
César García, PhD

Professors
Philip Backlund, PhD, communication studies
James L. Gaudino, PhD, communication studies
Michael R. Ogden, PhD, journalism, film and video studies

Associate Professors
César García, PhD, public relations
Cynthia Mitchell, MBA, journalism

Assistant Professors
Elizabeth Kerns, MA, public relations
Sacheen Mobley, PhD, communication studies
Maria Sanders, MA, film and video studies
Nadene Vevea, PhD, communication

Lecturers
Yong Cao, ABD, communication
Emily DuPlessis, MA, communication
Jennifer Green, MA, journalism
Helen Harrison, MA, film and video studies, advertising, communication
Terri Reddout, MA, public relations and advertising
Toby Staab, MA, journalism
Jon Ward, MA, film and video studies
Steve Woodward, MA, journalism

Staff
Kristin Gaskill, Observer business manager
Vicki Winegar, secretary senior

Department Information
The Department of Communication prepares students to become active participants in communicating with and the shaping of modern culture in a global society. The department emphasizes student-centered instruction in gathering and disseminating written, spoken, and visual

information, as well as course work in the processes, effects, and theories of human communication. The department is committed to a liberal education in written, oral, visual, and convergent media communication, as well as to training in diverse professional fields.

Department Standards

Admission Requirements
Admission to the communication department majors in Public Relations, Journalism and Communication Studies is selective. Before admission to the communication department, students must demonstrate the following: a minimum overall GPA of 2.4 (for Digital Journalism) or a 2.7 (for Public Relations and Communication Studies); completion of two communication gateway courses with a B average or higher; a score of at least six (6) on the Write Placer test; and submission of a cover letter stating the reasons for their interest in the field. Should students wish to change within the department, students must re-apply to the new major.

Exit Requirements

1. Students must maintain a 2.4 GPA with a minimum grade of C- in all courses counted toward fulfilling any major or minor requirements.
2. No course may be counted twice in fulfilling an internal or external minor.

Financial Obligations
Production courses required for broadcast journalism and/or film and video studies have associated lab fees.

Bachelor of Arts
(NOTE: Students seeking a BA degree must complete one year college/university study or two years high school study of a single world language.)

Communication Foundation Core Requirements
COM 201 - Introduction to Mass Communication Credits: 5
COM 207 - Introduction to Human Communication Credits: 5
Total Core Credits: 10

Communication Studies Major, BA

The communication studies major begins with a traditional liberal arts perspective, infuses an international/intercultural perspective, and then focuses on practical application of communication knowledge and skill. The major is intended for students who wish to be at home in a wide range of situations and cultures and who value the role of communication in creating effective relationships locally and globally. The major is also an effective foundation for advanced study (academic or professional). Students must complete the communication foundation courses prior to acceptance into the communication studies major.

Communication Foundation Core Requirements

- COM 201 - Introduction to Mass Communication **Credits:** (5)
- COM 207 - Introduction to Human Communication **Credits:** (5)

Total Core Requirements Credits: 10

Required Courses

- COM 251 - Small Group Dynamics **Credits:** (4)
- COM 253 - Interpersonal Communication **Credits:** (4)
- COM 302 - Intercultural Communication **Credits:** (4)
- COM 345 - Business and Professional Speaking **Credits:** (4)
- COM 350 - Persuasion and Culture **Credits:** (4)
- COM 365 - Organizational Communication **Credits:** (4)
- COM 380 - Nonverbal Communication **Credits:** (4)
- COM 401 - Communication Theory **Credits:** (4)
- COM 450 - Advanced Public Speaking **Credits:** (4)
- COM 451 - Communication Analysis and Research **Credits:** (4)
- COM 485 - Senior Seminar **Credits:** (4)
- COM 489 - Portfolio Assessment **Credits:** (1)

Total Required Course Credits: 45

Media Requirement

Choose a minimum of four credits.

- COM 315 - Studies in Communication **Credits:** (1) (May be repeated up to 4 times)
- COM 321 - Visual Storytelling **Credits:** (4)
- COM 330 - Media Aesthetics **Credits:** (5)
- COM 348 - Publication Design **Credits:** (4)
- COM 369 - Mass Media and Society **Credits:** (4)
- FVS 250 - Introduction to Film and Video Studies **Credits:** (5)

Total Media Credits: 4-5

Specialization or Study Abroad

Study Abroad Option

Twelve (12) pre-approved credits from CWU or participating international institution.

Non-Study Abroad Option

Twelve (12) pre-approved credits: You must take at least eight (8) credits from Intercultural/International Communication or at least eight (8) credits from Organizational Communication.

Intercultural and International Communication

- COM 362 - Conflict and Communication **Credits:** (4)
- COM 402 - Gender Communication **Credits:** (4)
- COM 407 - Advanced Intercultural Communication **Credits:** (4)
- COM 490 - Cooperative Education **Credits:** (1-12) (May be repeated up to 4 times)

Organizational Communication

- COM 375 - Interviewing Principles and Techniques **Credits:** (4)
- COM 460 - Communication Law **Credits:** (4)
- COM 465 - Communication and Organizational Leadership **Credits:** (4)
- COM 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 4 credits)

Specialization or Study Abroad Total Credits: 12

Department-approved upper-division electives in COM Credits: 4

May include COM 315.

Total Credits: 75

Digital Journalism Major BA, Broadcast Journalism Specialization

In today's environment of converging media, successful journalists need the necessary skills and concepts to tell meaningful stories for a variety of outlets. In this major, students learn how to conceive ideas and collect and present information using words, pictures, and sounds to craft news stories that are accurate, fair, clear, and compelling. Whether destined for print, online or broadcast presentation, the focus is on preparing students to research, report and communicate news and non-fiction stories that engage audiences and make a difference in people's lives. Students will learn how to build an online platform for their journalism and how to engage with their audience. Students will also understand the ethical, legal, historical and societal environment of journalism and the fundamental role media plays in our social, political and economic systems. A specialization in journalistic reporting and writing or broadcast journalism is required. Students must complete the communication foundation courses prior to acceptance into the journalism major.

Communication Foundation Core Requirements

- COM 201 - Introduction to Mass Communication **Credits:** (5)
- COM 207 - Introduction to Human Communication **Credits:** (5)

Total Core Requirements Credits: 10

Digital Journalism Core

Required Courses

- COM 226 - Introduction to Writing and Reporting for Digital Journalism **Credits:** (5)
- COM 306 - Introduction to Transmedia **Credits:** (4)
- COM 321 - Visual Storytelling **Credits:** (4)
- COM 489 - Portfolio Assessment **Credits:** (1)
- COM 490 - Cooperative Education **Credits:** (1-12) (Must take at least 5 credits total)

Select three from the following - Credits: (12)

- COM 333 - Communication Ethics **Credits:** (4)
- COM 369 - Mass Media and Society **Credits:** (4)

- COM 382 - History of American Journalism **Credits:** (4)
- COM 460 - Communication Law **Credits:** (4)

Total Digital Journalism Core Credits: 41

Broadcast Journalism Specialization

The broadcast journalism specialization builds professional skills and ethical awareness in broadcast reporting and video production, from a general knowledge of journalism and mass media studies. Courses are offered in broadcast news writing, studio and field production, and news producing and directing. Students will also get on-the-job education and training in a broadcast internship. Rigorous and demanding, this program is designed to provide a blend of theory and hands-on training in on-air and behind-the-scenes operations, which are required for graduates to enjoy successful careers in a highly competitive industry. Students will put those skills to use on Newswatch, Central's weekly student-run newscast, and also have the option of putting those skills to use at The Observer, Central's weekly student-run newspaper, and at Pulse, Central's twice-quarterly student lifestyle magazine. They will also get on-the-job education and training in a broadcast internship.

Required Courses

- COM 310 - Writing and Reporting for Broadcast Journalism **Credits:** (5)
- COM 322 - Introduction to Studio Production **Credits:** (4)
- COM 322LAB - Introduction to Studio Production Lab **Credits:** (1)
- COM 341 - Introduction to Field Production **Credits:** (4)
- COM 341LAB - Introduction to Field Production Lab **Credits:** (1)
- COM 342 - Broadcast News Producing **Credits:** (1)
- FVS 215 - Production Technology Skills **Credits:** (1) (Take twice; must get major advisor approval for topics)

Select from the following - Credits: (8)

Must take at least 4 credits of NewsWatch Management.

- COM 442 - News Watch Reporting **Credits:** (2)
- COM 446 - Pulse **Credits:** (2)
- COM 452 - Applied Video Production **Credits:** (1-2)
- COM 462 - NewsWatch Management **Credits:** (2)
- COM 468 - Observer **Credits:** (1-2)

Total Specialization Credits: 26

Total Credits: 67

Digital Journalism Major BA, Journalistic Writing and Reporting Specialization

In today's environment of converging media, successful journalists need the necessary skills and concepts to tell meaningful stories for a variety of outlets. In this major, students learn how to conceive ideas and collect and present information using words, pictures, and sounds to craft news stories that are accurate, fair, clear, and compelling. Whether destined for print, online or broadcast presentation, the focus is on preparing students to research, report and communicate news and non-fiction stories that engage audiences and make a difference in people's lives. Students will learn how to build an online platform for their journalism and how to engage with their audience. Students will also understand the ethical, legal, historical and societal environment of journalism and the fundamental role media plays in our social, political and economic systems. A specialization in journalistic reporting and writing or broadcast journalism is required. Students must complete the communication foundation courses prior to acceptance into the journalism major.

Communication Foundation Core Requirements

- COM 201 - Introduction to Mass Communication **Credits:** (5)
- COM 207 - Introduction to Human Communication **Credits:** (5)

Total Core Requirements Credits: 10

Digital Journalism Core

Required Courses

- COM 226 - Introduction to Writing and Reporting for Digital Journalism **Credits:** (5)
- COM 306 - Introduction to Transmedia **Credits:** (4)
- COM 321 - Visual Storytelling **Credits:** (4)

- COM 489 - Portfolio Assessment **Credits:** (1)
- COM 490 - Cooperative Education **Credits:** (1-12) (Must take at least 5 credits total)

Select three from the following - Credits: (12)

- COM 333 - Communication Ethics **Credits:** (4)
- COM 369 - Mass Media and Society **Credits:** (4)
- COM 382 - History of American Journalism **Credits:** (4)
- COM 460 - Communication Law **Credits:** (4)

Total Digital Journalism Core Credits: 41

Journalistic Writing and Reporting Specialization

The journalistic writing and reporting specialization teaches students the skills, concepts and perspectives they need to be successful in print and online media. Students will learn how to conceive story ideas, gather information, write and edit stories, incorporate digital and multimedia elements into those stories, and present those stories for print and/or online publication. Students will put those skills to use on The Observer, Central's weekly student-run newspaper, and also have the option of putting those skills to use at Pulse, Central's twice-quarterly student lifestyle magazine, and at Newswatch, Central's weekly student-run newscast. They will also get on-the-job education and training in a print or online internship.

Required Courses

- COM 308 - Public Affairs Reporting and Writing **Credits:** (5)
- COM 347 - Copy Editing **Credits:** (4)
- COM 466 - Investigative Reporting and Writing **Credits:** (3)
- COM 466LAB - Investigative Reporting and Writing Lab **Credits:** (2)

Select one of the following - Credits: (4)

- COM 408 - Feature Writing **Credits:** (4)
- COM 409 - Magazine Freelancing **Credits:** (4)
- COM 486 - Advanced Journalism Seminar **Credits:** (4)

Select eight credits from the following - Credits :(8)

Must take at least 4 credits of Observer.

- COM 442 - News Watch Reporting **Credits:** (2)
- COM 446 - Pulse **Credits:** (2)
- COM 468 - Observer **Credits:** (1-2)
- COM 478 - Advanced Newspaper Editing **Credits:** (3-6)

Total Specialization Credits: 26

Total Credits: 67

Public Relations Major, BA

Public relations has become an indispensable part of any organization, company, institution, or government trying to create a body of public opinion to support its mission, vision, or values. Understood as a management function in modern organizations in the corporate world, this same professional level has been adopted by NGOs, non-profit organizations, and even governments and countries as a whole. This new scenario offers plenty of opportunities for multifaceted public relations practitioners with skills in written and interpersonal communication, research, negotiation, leadership, creativity, logistics, and problem solving. Students must complete the communication foundation courses prior to acceptance into the public relations major.

Communication Foundation Core Requirements

COM 201 - Introduction to Mass Communication **Credits:** (5)
COM 207 - Introduction to Human Communication **Credits:** (5)

Total Core Requirements Credits: 10

Required Courses

COM 208 - Introduction to Public Relations Writing **Credits:** (4)
COM 270 - Introduction to Public Relations **Credits:** (4)
COM 345 - Business and Professional Speaking **Credits:** (4)
COM 370 - Advanced Public Relations Writing **Credits:** (4)
COM 470 - Public Relations Strategies **Credits:** (4)
COM 475 - Public Relations Management **Credits:** (4)
COM 489 - Portfolio Assessment **Credits:** (1)
COM 490 - Cooperative Education **Credits:** (1-12) (must be taken for 5 credits)
MKT 360 - Principles of Marketing **Credits:** (5)

Select eight (8) credits in media from the following:

COM 306 - Introduction to Transmedia **Credits:** (4)
COM 442 - News Watch Reporting **Credits:** (2)
COM 446 - Pulse **Credits:** (2)
COM 468 - Observer **Credits:** (1-2)
COM 478 - Advanced Newspaper Editing **Credits:** (3-6)
COM 481 - Central Communication Agency **Credits:** (2)
COM 483 - Advanced Central Communication Agency **Credits:** (3)

Select eight (8) credits in public relations specializations from the following:

COM 371 - Event Planning and Management **Credits:** (4)
COM 372 - Social Media Strategies **Credits:** (4)
COM 472 - Global Public Relations **Credits:** (4)
COM 473 - Crisis Communication Management **Credits:** (4)
COM 474 - Public Opinion **Credits:** (4)
COM 487 - Advanced Public Relations Seminar **Credits:** (4)

Select fourteen (14) pre-approved upper-division elective credits from the following:

Student may choose additional COM course with advisor pre-approval. Credits cannot be counted twice in the major and electives.

COM 300 - Media Research **Credits:** (5)
COM 302 - Intercultural Communication **Credits:** (4)
COM 305 - Advertising Copywriting **Credits:** (4)
COM 312 - Introduction to Non-Profit Leadership **Credits:** (4)
COM 315 - Studies in Communication **Credits:** (1)
COM 321 - Visual Storytelling **Credits:** (4)
COM 333 - Communication Ethics **Credits:** (4)
COM 347 - Copy Editing **Credits:** (4)
COM 348 - Publication Design **Credits:** (4)
COM 350 - Persuasion and Culture **Credits:** (4)
COM 362 - Conflict and Communication **Credits:** (4)
COM 365 - Organizational Communication **Credits:** (4)
COM 369 - Mass Media and Society **Credits:** (4)
COM 371 - Event Planning and Management **Credits:** (4)
COM 372 - Social Media Strategies **Credits:** (4)
COM 375 - Interviewing Principles and Techniques **Credits:** (4)
COM 380 - Nonverbal Communication **Credits:** (4)
COM 388 - Advertising Planning **Credits:** (4)
COM 401 - Communication Theory **Credits:** (4)
COM 402 - Gender Communication **Credits:** (4)
COM 403 - Family Communication **Credits:** (4)
COM 420 - Media Buying and Placement **Credits:** (4)
COM 427 - Grant Writing **Credits:** (4)
COM 460 - Communication Law **Credits:** (4)
COM 465 - Communication and Organizational Leadership **Credits:** (4)
COM 472 - Global Public Relations **Credits:** (4)
COM 473 - Crisis Communication Management **Credits:** (4)
COM 474 - Public Opinion **Credits:** (4)
COM 481 - Central Communication Agency **Credits:** (2)
COM 483 - Advanced Central Communication Agency **Credits:** (3)
COM 487 - Advanced Public Relations Seminar **Credits:** (4)

Total Credits: 75

Advertising Minor

The minor in advertising is open to students majoring in all fields. The program prepares students with effective written and visual communication, critical thinking, planning, production, distribution, and research skills related to advertising.

Required Courses

- COM 201 - Introduction to Mass Communication **Credits:** (5)
- COM 280 - Advertising Fundamentals **Credits:** (4)
- COM 300 - Media Research **Credits:** (5)
- COM 388 - Advertising Planning **Credits:** (4)

Select four (4) credits from the following:

- COM 305 - Advertising Copywriting **Credits:** (4)
- COM 309 - Writing Broadcast Advertising **Credits:** (4)

Select four (4) credits from the following:

- COM 481 - Central Communication Agency **Credits:** (2) (Repeatable for credit)
- COM 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 4 credits)
- COM 492 - Communication Practicum **Credits:** (2) (Repeatable for credit)

Total Credits: 25

Communication Minor

The communication minor introduces students to the study of communication within a modern social and cultural context.

Students in teacher education must meet with the department chair and the certification director to determine the course of study necessary for endorsement.

Required Courses

- COM 201 - Introduction to Mass Communication **Credits:** (5)
- COM 207 - Introduction to Human Communication **Credits:** (5)

Department-approved Electives Credits: (18)

Total Credits: 28

Non-profit Organization Management Minor

The minor in non-profit organization management is an interdisciplinary minor designed to provide an understanding of the organization, financing and management issues in non-profit organizations. It is designed to complement majors in artistic, advocacy and educational endeavors. The minor provides practical, hands-on skills as well as discussion of the issues facing non-profit organizations.

Required Courses: Credits (13)

- ACCT 301 - Financial Accounting Analysis **Credits:** (5)
- COM 312 - Introduction to Non-Profit Leadership **Credits:** (4)
- COM 427 - Grant Writing **Credits:** (4)

Select 12 credits from at least two prefixes from the following electives:

- ANTH 360 - Introduction to Museum Studies **Credits:** (4)
- ANTH 361 - Museum Exhibit Design **Credits:** (4)
- COM 208 - Introduction to Public Relations Writing **Credits:** (4)
- COM 270 - Introduction to Public Relations **Credits:** (4)
- COM 315 - Studies in Communication **Credits:** (1)
- COM 348 - Publication Design **Credits:** (4)
- COM 362 - Conflict and Communication **Credits:** (4)
- COM 365 - Organizational Communication **Credits:** (4)
- COM 370 - Advanced Public Relations Writing **Credits:** (4)
- COM 371 - Event Planning and Management **Credits:** (4)
- COM 375 - Interviewing Principles and Techniques **Credits:** (4)
- COM 487 - Advanced Public Relations Seminar **Credits:** (4)
- SOC 365 - Minority Groups **Credits:** (5)
- SOC 442 - Social Welfare Policy **Credits:** (5)
- SOC 445 - Social Inequality **Credits:** (5)
- SOC 459 - Organizations **Credits:** (5)
- SOC 460 - Community Structure and Organization **Credits:** (5)
- TH 350 - Theatre and Arts Management I **Credits:** (4)
- TH 351 - Theatre and Arts Management II **Credits:** (4)
- TH 360 - Stage Management **Credits:** (3)

Choose one from the following: Credits (5)

- ANTH 490 - Cooperative Education **Credits:** (1-12)
- ART 490 - Cooperative Education **Credits:** (1-12)
- COM 490 - Cooperative Education **Credits:** (1-12)
- MUS 490 - Cooperative Education **Credits:** (1-12)
- TH 490 - Cooperative Education **Credits:** (1-12)

Total Credits: 30

Organizational Communication Minor

The minor in organizational communication is designed to complement a broad spectrum of majors leading to careers in government, education, social and community services. Emphasis is placed on an understanding of the basic nature of communication in organizations, and on the fundamental knowledge and skills necessary for effective communication in organizations at the interpersonal small group, and public (large group) levels.

Required Courses

- Department-approved Electives **Credits:** (4)

- COM 251 - Small Group Dynamics **Credits:** (4)
- **OR** COM 302 - Intercultural Communication **Credits:** (4)
- COM 345 - Business and Professional Speaking **Credits:** (4)
- COM 365 - Organizational Communication **Credits:** (4)
- COM 375 - Interviewing Principles and Techniques **Credits:** (4)
- COM 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 5 credits)

Total Credits: 25

Non-profit Organization Management Certificate

The certificate in non-profit organization management is an interdisciplinary approach to provide an understanding of the organization, financing, and management issues in non-profit organizations. It is designed to complement majors in artistic, advocacy, and educational endeavors. The courses provide practical, hands-on skills as well as discussion of the issues facing non-profit organizations.

Required Courses: Credits (13)

- ACCT 301 - Financial Accounting Analysis **Credits:** (5)
- COM 312 - Introduction to Non-Profit Leadership **Credits:** (4)
- COM 427 - Grant Writing **Credits:** (4)

Select 8 credits at least two prefixes from the following electives:

- ANTH 360 - Introduction to Museum Studies **Credits:** (4)
- ANTH 361 - Museum Exhibit Design **Credits:** (4)
- COM 208 - Introduction to Public Relations Writing **Credits:** (4)
- COM 270 - Introduction to Public Relations **Credits:** (4)
- COM 315 - Studies in Communication **Credits:** (1)
- COM 348 - Publication Design **Credits:** (4)
- COM 362 - Conflict and Communication **Credits:** (4)
- COM 370 - Advanced Public Relations Writing **Credits:** (4)
- COM 371 - Event Planning and Management **Credits:** (4)
- COM 487 - Advanced Public Relations Seminar **Credits:** (4)
- SOC 365 - Minority Groups **Credits:** (5)
- SOC 442 - Social Welfare Policy **Credits:** (5)
- SOC 445 - Social Inequality **Credits:** (5)
- SOC 459 - Organizations **Credits:** (5)
- SOC 460 - Community Structure and Organization **Credits:** (5)
- TH 350 - Theatre and Arts Management I **Credits:** (4)
- TH 351 - Theatre and Arts Management II **Credits:** (4)
- TH 360 - Stage Management **Credits:** (3)

Total Credits: 21

Professional Writing Certificate

The professional writing certificate allows students to develop their writing skills for professional and business environments. It is delivered entirely online to serve professionals already working in careers as well as students planning to begin professional or business careers. Students will learn the rhetorical requirements for specific forms of written communication, including letters, memos, reports, proposals, promotional materials, and press releases. They will also learn to edit their own writing for clarity, correctness, and style.

Required Courses

ENG 301 - Introduction to Professional Writing **Credits:** (5)
ENG 310 - Technical Writing **Credits:** (4)
COM 347 - Copy Editing **Credits:** (4)
COM 370 - Advanced Public Relations Writing **Credits:** (4)

Total Credits: 17

Computer Science Department

College of the Sciences
Ellensburg
Hebeler Hall, room 219
Mail Stop 7520
509-963-1495
Fax: 509-963-1449
www.cwu.edu/computer-science
See website for how this program may be used for educational and career purposes.

Faculty and Staff
Chair
Razvan Andonie, PhD

Professors
Razvan Andonie, PhD, computational intelligence, machine learning, parallel/distributed computing, big data analytics, data mining
Holly Johnson, PhD, social informatics, HCI, on-line information systems
Boris Kovalerchuk, PhD, artificial intelligence, simulation and optimization, computer architecture

Assistant Professors
John Anvik, PhD, associate chair, software engineering, machine learning, computer supported collaborative work
Filip Jagodzinski, PhD, graduate program director, computational structural biology, web/server software engineering and application developer

Staff
Brandy Bradley, secretary senior
Zachary Geesaman, systems analyst

Department Information
The Department of Computer Science (CS) offers a degree program leading to the Bachelor of science in computer science. The department also jointly offers a program with the industrial engineering technology (IET) department in the College of Education and Professional Studies in computer engineering technology. Information related to the computer engineering technology program can be found in the IET section of the catalog.

The field of computer science can trace its beginnings and much of its foundation to both mathematics and engineering. Because of this, studies in computer science range from theory through experimental techniques to engineering methodology. The purpose of the computer science curriculum is to expose students to aspects of each of these disciplines and foster an appreciation and understanding of them. To accomplish this, students are exposed to the broad theoretical basis of computer science as well as a strong laboratory component. The laboratory experience is more than simple programming. Rather, it is through the laboratories that students are introduced to both the experimental and the design aspects of computer science.

Using this philosophy as a base, the CS department has designed a curricular model that seeks to increase relevance to the real world. In particular, the senior project, a capstone course series- CS 480 and 481- adopts a theme that expands upon the experimental and design approach of typical computer science curricula. This capstone series addresses the creativity and productivity elements required for business and industry applications today. Students become engaged in projects that investigate each stage of transforming a creative idea into a productivity-enhancing system in a realistic context.

Computer Science Major, BS

In order to expose computer science majors to a broad theoretical base while emphasizing the laboratory experience, students will complete the CS core courses. To add depth and flexibility to their academic programs, with major advisor, students will work out a focus area and choose the elective courses approved by the department. A specific focus may be developed in many areas of computer science; examples include: software engineering, intelligent systems, computational science, graphics, visualization and computer vision, human-computer interaction, big data analytics cybersecurity. General university requirements ENG 101 and ENG 102.

Standards for Admission
Admission to the computer science major or minor is selective. The minimum grade for each pre-admission required course listed below is B-. Students should submit their application during the quarter in which they are completing the pre-admission requirements. Applications will be accepted through the last day of classes (i.e., the week before finals) of the fall, winter, and spring quarters for admission the following quarter. A completed application must include the standard major application form and an advisor-approved graduation plan.

Students should request admission to the computer science pre-major prior to completion of the pre-admission requirements.
Students must be accepted as a computer science major or minor prior to enrolling in computer science classes beyond CS 301 with the exception of CS 311. Students applying for admission to the major may register for

courses for the following quarter but will be dropped if not admitted.

The computer science department believes that advising is one of the keys to success in an undergraduate program. To that end, majors and minors are required to meet with a faculty advisor every term in order to register. Pre-majors are also encouraged to meet with their designated faculty advisor each term. Advisors and advising times are listed with the CS office.

Pre-admission Requirements
General University Requirements
ENG 101, Composition I: Critical Reading and Responding 4
ENG 102, Composition II: Reasoning and Research 4
CS Core Requirements
CS 110, Programming Fundamentals I 4
CS 111, Programming Fundamentals II 4
CS 301, Data Structures 4
MATH 172, Calculus I 5
Pre-admission Total Credits: 25

CS Pre-admission Requirements Credits: 17

- CS 110 - Programming Fundamentals I **Credits:** (4)
- CS 111 - Programming Fundamentals II **Credits:** (4)
- CS 301 - Data Structures **Credits:** (4)
- MATH 172 - Calculus I **Credits:** (5)

Required Courses Credits: 65

- CS 112 - Foundations of Computer Science **Credits:** (4)
- CS 302 - Advanced Data Structures and File Processing **Credits:** (4)
- CS 311 - Computer Architecture I **Credits:** (4)
- CS 312 - Computer Architecture II **Credits:** (4)
- CS 325 - Technical Writing in Computer Science **Credits:** (3)
- CS 361 - Principles of Language Design I **Credits:** (4)
- CS 362 - Principles of Language Design II **Credits:** (4)
- CS 392 - Lab Experience in Teaching Computer Science **Credits:** (1)
- CS 420 - Database Management Systems **Credits:** (4)
- CS 427 - Algorithm Analysis **Credits:** (4)
- CS 446 - User Interface Design and Development **Credits:** (4)
- CS 470 - Operating Systems **Credits:** (4)
- CS 480 - Advanced Software Engineering **Credits:** (4)
- CS 481 - Software Engineering Project **Credits:** (4)
- CS 489 - Senior Colloquium **Credits:** (1)
- CS 492 - Laboratory Experience in Teaching Computer Science **Credits:** (1-2)
- MATH 260 - Sets and Logic **Credits:** (5)
- MATH 330 - Discrete Mathematics **Credits:** (5)

Electives Credits: 24

Total Credits: 106

Applied Computer Science Minor

This minor is designed for students who wish to integrate a computer science component into their curriculum. This minor is appropriate for any student who wishes to include an enhanced technical computer science background as part of their overall curriculum.

Required Courses

- BUS 221 - Introductory Business Statistics **Credits:** (5)
- **OR** MATH 154 - Pre-Calculus Mathematics II **Credits:** (5)
- CS 110 - Programming Fundamentals I **Credits:** (4)
- CS 111 - Programming Fundamentals II **Credits:** (4)
- CS 301 - Data Structures **Credits:** (4)
- MATH 130 - Finite Mathematics **Credits:** (5)

Department-approved electives - Credits: 12-14

At least one course will be in computer science. The other electives will be computer related and may be selected from the student's major with the approval of an advisor.

Total Credits: 34-36

Computer Science Minor

This minor is designed for students who wish to investigate and basic core of the computer science discipline. This minor is appropriate for any student, including those in teacher education, seeking to enhance their technical computer science background.

Required Courses

- CS 110 - Programming Fundamentals I **Credits:** (4)
- CS 111 - Programming Fundamentals II **Credits:** (4)
- CS 301 - Data Structures **Credits:** (4)
- CS 311 - Computer Architecture I **Credits:** (4)
- MATH 130 - Finite Mathematics **Credits:** (5)
- MATH 154 - Pre-Calculus Mathematics II **Credits:** (5)
- MATH 260 - Sets and Logic **Credits:** (5)

Total Credits: 31

Craft Brewing Program

Program Director
Steve Wagner, PhD

Faculty
Roger Beardsley, PE
Jim Johnson, PhD
Dan Lee, MBA
Wayne Quirk, PhD
Allen Sullivan, PhD
Steve Wagner, PhD

The Craft Brewing Program provides students with an in-depth understanding of the brewing industry. The BS in Craft Brewing is built upon a strong foundation in science and is focused on providing students with content, experience, and skills in brewing science, analytical laboratory techniques, quality assurance, and management. Additionally, courses incorporate hands-on and inquiry based learning opportunities through case studies, pilot brewing, field trips, industry speakers, and research activities. The program prepares graduates for a career in the brewing production, quality assurance, brewery management, beer merchandising, distribution, brewing technology, packaging, safety, sanitation, sensory evaluation, and entrepreneurship. This is an interdisciplinary program involving departments and faculty across the university that is administered in the College of the Sciences.

Craft Brewing, BS

Pre-Admission Requirements
Students wishing to attain full admission to the BS Craft Brewing must meet the following requirements:

- Successful completion of CHEM 111 Introduction to Chemistry, CHEM 111ALB Chemistry Laboratory, CHEM 112 Introduction to Organic Chemistry, CHEM 112LAB Introduction to Organic Chemistry Laboratory, CHEM 113 Introduction to Biochemistry, CHEM 113LAB Introduction to Biochemistry Laboratory, MATH 153 or its equivalent, ECON 201 Principles of Economics Micro, PHYS 111 Introductory Physics, PHYS 111LAB Introductory Physics Laboratory, PHYS 112 General Physics, PHYS 112LAB General Physics Laboratory, with a C (2.0) or higher in each course before bring admitted to the major.
- Overall minimum 2.5 GPA will be required for admission.
- Students must fill out an application that includes an essay of motivation and goals.
- Upon admittance to the program students must agree to sign a written statement regarding professional conduct and responsibility.
- Student must be at least 21 years old before enrolling in courses that may involve tasting beer (CRBW 317 Brewing Processes and Biochemistry (5), CRBW 350 Sensory Analysis for Brewing (5), CRBW 496 Brewing Special Topics (3), CRBW 498 Brewing Research (5), and CRBW 499 Brewing Seminar (2).

Students are highly encouraged to also obtain a minor or degree in Biology, Chemistry, Administrative Management, Industrial Technology, Safety and Health Management and complete at least five credits of CRBW 490, Cooperative Education.

Special Requirements
Students will be expected to spend significant time outside the classroom working on assignments and projects. Some sessions may meet on Saturdays.

Additional Information
The requirement for CHEM 111, 111LAB, Introduction of Chemistry and Laboratory, may be met by satisfactorily completing CHEM 181, 181LAB, 182, 182LAB, and 183, 183LAB General Chemistry and Laboratory. The requirement for CHEM 112, 112LAB, Introduction to Organic Chemistry and Laboratory, may be met by satisfactorily completing CHEM 361, 361LAB, 362, Organic Chemistry and Laboratory. The requirement for

CHEM 113, 113LAB, Introduction to Biochemistry, may be met by satisfactorily completing CHEM 431, 431LAB and 432, Biochemistry and Laboratory.

Required Courses

Basic and Breadth Requirement Courses Credits: 10

- ECON 201 - Principles of Economics Micro **Credits:** (5)

  Choose one of the following mathematics courses:
- MATH 153 - Pre-Calculus Mathematics I **Credits:** (5)
- MATH 154 - Pre-Calculus Mathematics II **Credits:** (5)
- MATH 170 - Intuitive Calculus **Credits:** (5)
- MATH 172 - Calculus I **Credits:** (5)

Professional Core Requirement Credits: 31

- ADMG 201 - Introduction to Business **Credits:** (3)
- CHEM 111 - Introduction to Chemistry **Credits:** (4)
- CHEM 111LAB - Introductory Chemistry Laboratory **Credits:** (1)
- CHEM 112 - Introduction to Organic Chemistry **Credits:** (4)
- CHEM 112LAB - Introduction to Organic Chemistry Laboratory **Credits:** (1)
- CHEM 113 - Introduction to Biochemistry **Credits:** (4)
- CHEM 113LAB - Introduction to Biochemistry Laboratory **Credits:** (1)
- SHM 325 - Manufacturing Safety and Health **Credits:** (3)

  Select 10 credits from the following sequences:
- PHYS 111 - Introductory Physics **Credits:** (4)
- PHYS 111LAB - Introductory Physics Laboratory **Credits:** (1)
- PHYS 112 - Introductory Physics II **Credits:** (4)
- PHYS 112LAB - Introductory Physics Laboratory II **Credits:** (1)
  OR
- PHYS 181 - General Physics **Credits:** (4)
- PHYS 181LAB - General Physics Laboratory **Credits:** (1)
- PHYS 182 - General Physics II **Credits:** (4)
- PHYS 182LAB - General Physics Laboratory II **Credits:** (1)

Required Advanced Craft Brewing Core Courses Credits: 31

- CRBW 312 - Brewing Microbiology **Credits:** (4)
- CRBW 317 - Principles and Biochemistry of Brewing **Credits:** (4)
- CRBW 450 - Sensory Analysis for Brewing **Credits:** (5)
- CRBW 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 5 credits)
- CRBW 498 - Special Topics **Credits:** (1-6) (Must be taken for 3 credits)
- CRBW 499 - Seminar **Credits:** (1-5) (Must be taken for 2 credits)
- ETSC 360 - Brewing Process Technology **Credits:** (3)
- RMT 320 - Principles of Merchandising Management for Micro Brewing **Credits:** (5)

Total Credits: 72

Craft Beer Trade Certificate

College of the Sciences
Craft Brewing Program

Director
Steve Wagner, PhD

In interdisciplinary certificate program designed to be completed in an intensive 10-week session. The program provides an overview of the science, technology, and sales/merchandising aspects of the craft beer brewing industry. Topics include principles of malting and brewing, brewing process technology, brewing microbiology, and principles of merchandising management for micro brewing industry. Students learn about the trade using a variety of approaches including lab work, hands on experiences, lectures, field trips, and industry speakers.

Pre-admission Requirements Credits: 10

- MATH 153 - Pre-Calculus Mathematics I **Credits:** (5)

  And one of the following:
- CHEM 101 - Contemporary Chemistry **Credits:** (5)
  OR
- CHEM 111 - Introduction to Chemistry **Credits:** (4)
- **AND** CHEM 111LAB - Introductory Chemistry Laboratory **Credits:** (1)

OR

- CHEM 181 - General Chemistry I **Credits:** (4)
- **AND** CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)

Admission Requirements

Students must be 21 years of age or older to enroll in the program and must apply for acceptance into the program.

Special Requirements

Students will be expected to spend significant time outside the classroom working on assignments and projects. Some sessions may meet on Saturdays. In order to receive the certificate, students must earn a grade of B- or above in each of the four courses.

Required Courses Credits: 16

- CRBW 312 - Brewing Microbiology **Credits:** (4)
- CRBW 317 - Principles and Biochemistry of Brewing **Credits:** (4)
- RMT 320 - Principles of Merchandising Management for Micro Brewing **Credits:** (5)
- ETSC 360 - Brewing Process Technology **Credits:** (3)

Total Credits: 26

Economics Department

College of Business
Ellensburg
Shaw-Smyser Hall, room 413
Mail Stop 7486
509-963-2664
Fax: 509-963-1992
www.cwu.edu/economics
See the website for how these programs may be used for educational and career purposes.

Faculty and Staff
Chair
Carlo D. Smith, PhD

Professors
Robert J. Carbaugh, PhD
Koushik Ghosh, PhD
David W. Hedrick, PhD
Peter J. Saunders, PhD
Charles S. Wassell Jr., PhD

Assistant Professor
Toni Sipic, PhD

Staff
Shirley Hood, secretary senior

Department Information
Positions of responsibility in today's world are usually held by individuals who have the capacity to analyze complex problems and make intelligent decisions. Learning economics will help students think logically and improve their ability to use economic concepts to analyze "real world" problems and opportunities. In addition to preparation for business and government agency employment, an economics major is excellent preparation for law schools, masters of business administration programs, and graduate programs in economics, agricultural economics, and natural resource management. The economics department offers a Bachelor of Science degree in economics with specializations in managerial economics, general economics, and economic and business forecasting. Economics minors are offered to complement accounting, business administration, and other majors.

The BS economics major is comprised of the following components:

- Pre-admission courses providing necessary theoretical and quantitative skills to pursue studies in economics
- Core courses in both micro and macro-economic theory
- A choice of supporting courses for each of the three economics major specializations

Transfer Credits
Equivalent lower-division (100-200 level) courses may be transferred toward meeting the pre-admission requirements for any BS degree in the College of Business.

Upper-division (300-400 level) courses may be transferred toward meeting the major requirements only with the approval of the department chair and the college dean or designee.

Transfer students must earn a minimum of 45 quarter credits at CWU to be eligible for the BS economics degree. Transfer students earning less than 45 quarter credits in their major at CWU must receive approval from the college dean prior to graduation.

Service to Other Majors
Students majoring outside the College of Business who are required to take courses in this college for either their major or minor will be eligible to enroll on a space-

available basis. These students will be given priority over other non-college majors wishing to enroll in courses.

Admission Information
A cumulative grade point average of 2.5 in the economics foundation requirements must be achieved with a minimum grade of C- (1.70) in each course. The credit/no credit option will not be accepted for any of these courses. The student must have earned a minimum cumulative GPA of 2.0 in all collegiate study. These criteria also apply to equivalent courses transferred from other institutions. Applicants must have also completed ENG 101 and 102.

Students who have met all the above requirements will be admitted unless the number of eligible applicants exceeds available spaces. In that case, acceptance will be competitive, based on a selection index. Students who have not met all of the above requirements may be admitted provisionally by permission of the college dean or designee.

Graduation Requirements for all Department Specializations
A cumulative grade point average of 2.25 in the above courses must be achieved with a minimum grade of C- in each course. The credit/no credit option will not be accepted for any of these courses. The student must have earned a minimum cumulative GPA of 2.25 in all collegiate study. These criteria also apply to equivalent courses transferred from other institutions.

Graduation Requirements for Economics I and II Minors
A cumulative grade point average of 2.25 in the above courses must be achieved with a minimum grade of C- in each course. The credit/no credit option will not be accepted for any of these courses. The student must have earned a minimum cumulative GPA of 2.25 in all collegiate study. These criteria also apply to equivalent courses transferred from other institutions.

Economics BS, Economic and Business Forecasting Specialization

Economics Foundation Requirements

Students must apply and be admitted to the major. Admission will be determined by the grades earned in the Economic Foundation and appropriate specialization pre-admission courses.

Admission Information

Coursework counting toward the major cannot be taken credit/no credit by economics majors. Double majors are available. Interested students should consult with their advisor or the department chair for details prior to enrolling.

The economics faculty has determined the following objectives which apply to all BS economics graduates:

- Students completing an economics degree will possess the tools which enable them to analyze and understand macro and micro economic problems and policies.
- Students will possess qualifications and knowledge which will help them to find employment in fields related to economics.
- Students will acquire and be able to use basic tools to enable them to carry out quantitatively oriented tasks in their employment or their field of graduate studies.
- Students completing the program should possess the communication and economic skills desirable in their future employment or graduate studies.

Additional Admission Information

A cumulative grade point average of 2.5 in the economics foundation requirements must be achieved with a minimum grade of C- (1.70) in each course. The credit/no credit option will not be accepted for any of these courses. The student must have earned a minimum cumulative GPA of 2.0 in all collegiate study. These criteria also apply to equivalent courses transferred from other institutions. Applicants must have also completed ENG 101 and 102.

Students who have met all the above requirements will be admitted unless the number of eligible applicants exceeds available spaces. In that case, acceptance will be competitive, based on a selection index. Students who have not met all of the above requirements may be

admitted provisionally by permission of the college dean or designee.

Economic Foundation Core Requirements

- BUS 221 - Introductory Business Statistics **Credits:** (5)
- ECON 201 - Principles of Economics Micro **Credits:** (5)
- ECON 202 - Principles of Economics Macro **Credits:** (5)
- ECON 130 – Foundations for Business Analytics **Credits:** (5)
- **OR** MATH 130 - Finite Mathematics **Credits:** (5)

Select one of the following for 5 credits:

- MATH 153 - Pre-Calculus Mathematics I **Credits:** (5)
- MATH 170 - Intuitive Calculus **Credits:** (5)
- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)

Economics Foundation Core Requirements Total Credits: 25

Economics Business Foundation Courses

- ACCT 251 – Financial Accounting **Credits:** (5)
- ACCT 252 –Managerial Accounting **Credits:** (5)
- BUS 241 – Legal Environment of Business **Credits:** (5)

Economics Business Foundation Total Credits: 15

Economics Business Core Courses

- FIN 370 - Introductory Financial Management **Credits:** (5)
- MGT 382 - Principles of Management **Credits:** (5)
- MIS 386 - Management Information Systems **Credits:** (5)
- MKT 362 - Essential Marketing Concepts **Credits:** (5)
- SCM 310 - Supply Chain Management **Credits:** (5)

Select one of the following for 4-5 credits:

- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- COM 345 - Business and Professional Speaking **Credits:** (4)
- ENG 310 - Technical Writing **Credits:** (4)

Economics Business Core Total Credits: 29-30

Economic and Business Forecasting Specialization

This specialization is for students who seek careers involving research in economics and business, including forecasting.

Economics Core Courses

- ECON 325 - Introduction to Forecasting **Credits:** (5)
- ECON 401 - Intermediate Microeconomic Analysis **Credits:** (5)
- ECON 402 - Intermediate Macroeconomic Analysis **Credits:** (5)
- ECON 406 - Economics Assessment **Credits:** (5)
- ECON 424 - Introduction to Econometrics **Credits:** (5)
- ECON 426 - Economic Research **Credits:** (5)

Economics Core Total Credits: 30

Total Credits: 99-100

Economics BS, General Economics Specialization

Economics Foundation Requirements

Students must apply and be admitted to the major. Admission will be determined by the grades earned in the Economic Foundation and appropriate specialization pre-admission courses.

Admission Information

Coursework counting toward the major cannot be taken credit/no credit by economics majors. Double majors are available. Interested students should consult with their advisor or the department chair for details prior to enrolling.

The economics faculty has determined the following objectives which apply to all BS economics graduates:

- Students completing an economics degree will possess the tools which enable them to analyze and understand macro and micro economic problems and policies.

- Students will possess qualifications and knowledge which will help them to find employment in fields related to economics.
- Students will acquire and be able to use basic tools to enable them to carry out quantitatively oriented tasks in their employment or their field of graduate studies.
- Students completing the program should possess the communication and economic skills desirable in their future employment or graduate studies.

Additional Admission Information

A cumulative grade point average of 2.5 in the economics foundation requirements must be achieved with a minimum grade of C- (1.70) in each course. The credit/no credit option will not be accepted for any of these courses. The student must have earned a minimum cumulative GPA of 2.0 in all collegiate study. These criteria also apply to equivalent courses transferred from other institutions. Applicants must have also completed ENG 101 and 102.

Students who have met all the above requirements will be admitted unless the number of eligible applicants exceeds available spaces. In that case, acceptance will be competitive, based on a selection index. Students who have not met all of the above requirements may be admitted provisionally by permission of the college dean or designee.

Economic Foundation Core Requirements

- BUS 221 - Introductory Business Statistics **Credits:** (5)
- ECON 201 - Principles of Economics Micro **Credits:** (5)
- ECON 202 - Principles of Economics Macro **Credits:** (5)
- ECON 130 – Foundations for Business Analytics **Credits:** (5)
- **OR** MATH 130 - Finite Mathematics **Credits:** (5)

Select one of the following for 5 credits:

- MATH 153 - Pre-Calculus Mathematics I **Credits:** (5)
- MATH 170 - Intuitive Calculus **Credits:** (5)
- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)

Economics Foundation Core Requirements Total Credits: 25

General Economics Specialization

This specialization is recommended for students desiring the traditional Economics major. Highly recommended supporting courses: MATH 172, MATH 173, and FIN 370.

There are no additional pre-admission courses required.

Required Courses

- ECON 401 - Intermediate Microeconomic Analysis **Credits:** (5)
- ECON 402 - Intermediate Macroeconomic Analysis **Credits:** (5)
- ECON 406 - Economics Assessment **Credits:** (5)
- ECON 424 - Introduction to Econometrics **Credits:** (5)
- ECON 426 - Economic Research **Credits:** (5)

Select one of the following: Credits 4-5

- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- COM 345 - Business and Professional Speaking **Credits:** (4)
- ENG 310 - Technical Writing **Credits:** (4)

Total Required Courses Credits: 29-30

Department-approved electives selected from the following:

- Any 300- to 400-level economics courses; one accounting course (5) may be selected in place of one economics course.

Total Electives Credits: 30

Total Credits: 84-85

Economics BS, Managerial Economics Specialization

Economics Foundation Requirements

Students must apply and be admitted to the major. Admission will be determined by the grades earned in the Economic Foundation and appropriate specialization pre-admission courses.

Admission Information

Coursework counting toward the major cannot be taken credit/no credit by economics majors. Double majors are available. Interested students should consult with their advisor or the department chair for details prior to enrolling.

The economics faculty has determined the following objectives which apply to all BS economics graduates:

- Students completing an economics degree will possess the tools which enable them to analyze and understand macro and micro economic problems and policies.
- Students will possess qualifications and knowledge which will help them to find employment in fields related to economics.
- Students will acquire and be able to use basic tools to enable them to carry out quantitatively oriented tasks in their employment or their field of graduate studies.
- Students completing the program should possess the communication and economic skills desirable in their future employment or graduate studies.

Additional Admission Information

A cumulative grade point average of 2.5 in the economics foundation requirements must be achieved with a minimum grade of C- (1.70) in each course. The credit/no credit option will not be accepted for any of these courses. The student must have earned a minimum cumulative GPA of 2.0 in all collegiate study. These criteria also apply to equivalent courses transferred from other institutions. Applicants must have also completed ENG 101 and 102.

Students who have met all the above requirements will be admitted unless the number of eligible applicants exceeds available spaces. In that case, acceptance will be competitive, based on a selection index. Students who have not met all of the above requirements may be admitted provisionally by permission of the college dean or designee.

Economic Foundation Core Requirements

- BUS 221 - Introductory Business Statistics **Credits:** (5)
- ECON 201 - Principles of Economics Micro **Credits:** (5)
- ECON 202 - Principles of Economics Macro **Credits:** (5)
- ECON 130 – Foundations for Business Analytics **Credits:** (5)
- **OR** MATH 130 - Finite Mathematics **Credits:** (5)

Select one of the following for 5 credits:

- MATH 153 - Pre-Calculus Mathematics I **Credits:** (5)
- MATH 170 - Intuitive Calculus **Credits:** (5)
- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)

Economics Foundation Core Requirements Total Credits: 25

Managerial Economics Specialization

This specialization is for students with an interest in both public and private sector employment and preparation for law school. Highly recommended supporting courses: MATH 170 or MATH 172. The managerial economics specialization can be used as part of a double major. See your advisor for details.

Pre-admission Requirements

- ACCT 251 - Financial Accounting **Credits:** (5)
- ACCT 252 - Managerial Accounting **Credits:** (5)
- BUS 241 - Legal Environment of Business **Credits:** (5)

Total Pre-admission Requirement Credits: 15

Required Courses

- ECON 352 - Managerial Economics **Credits:** (5)
- ECON 401 - Intermediate Microeconomic Analysis **Credits:** (5)
- ECON 402 - Intermediate Macroeconomic Analysis **Credits:** (5)
- ECON 406 - Economics Assessment **Credits:** (5)

- FIN 370 - Introductory Financial Management **Credits:** (5)

Select one of the following: Credits 4-5

- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- COM 345 - Business and Professional Speaking **Credits:** (4)
- ENG 310 - Technical Writing **Credits:** (4)

Total Required Courses Credits: 29-30

Department-approved electives selected from the following:

- 300- to 400-level economics courses (except ECON 396, ECON 490, ECON 496) **Credits:** (15)
- Other 300- to 400-level accounting, business administration, and economics courses **Credits:** (5)

Total Elective Credits: 20

Total Credits: 89-90

Economics Minor I

This minor is designed to accompany the business administration and accounting majors. Prior approval of electives by the Economics advisor is required.

Required Courses

- ECON 201 - Principles of Economics Micro **Credits:** (5)
- ECON 202 - Principles of Economics Macro **Credits:** (5)

Additional Credits - Credits: 15

- Other 300-400 level economics courses with departmental approval excluding ECON 406 and ECON 490. Credits: (15)

Total Credits: 25

Additional Graduation Requirements

A cumulative grade point average of 2.25 in the above courses must be achieved with a minimum grade of C- in each course. The credit/no credit option will not be accepted for any of these courses. The student must have earned a minimum cumulative GPA of 2.25 in all collegiate study. These criteria also apply to equivalent courses transferred from other institutions.

Economics Minor II

This minor is designed for all majors with the exception of business administration and accounting. Prior approval of electives by the Economics advisor is required.

Required Courses

- ECON 201 - Principles of Economics Micro **Credits:** (5)
- ECON 202 - Principles of Economics Macro **Credits:** (5)

Additional Electives - Credits: 10

- 300-400 level economics courses with departmental approval excluding ECON 406 and ECON 490. Credits: (10)

Total Credits: 20

Additional Graduation Requirements

A cumulative grade point average of 2.25 in the above courses must be achieved with a minimum grade of C- in each course. The credit/no credit option will not be accepted for any of these courses. The student must have earned a minimum cumulative GPA of 2.25 in all collegiate study. These criteria also apply to equivalent courses transferred from other institutions.

Educational Foundations and Curriculum Department

College of Education and Professional Studies
Ellensburg
Black Hall, room 101
Mail Stop 7410
509-963-1461
Fax: 509-963-1162
www.cwu.edu/education-foundation
See the website for how these programs may be used for educational and career purposes.

Faculty and Staff
Chair
Ian Loverro, PhD

Graduate Programs Coordinator
Kelly Benson, EdD

Director of Field Experience
Ian Loverro, PhD (interim)

Professors
Catherine Bertelson, PhD, educational technology
Barry Donahue, EdD, philosophy, research design
Kim M. Jones, PhD, curriculum and instruction

Associate Professors
Gary Ballou, PhD, field supervision
Kelly Benson, EdD, leadership, law
Ian Loverro, PhD, educational technology and communication
Naomi Petersen, EdD, philosophy, assessment, STEM, informal settings
Lee Plourde, PhD curriculum and instruction, supervision, administration
Molly Ross, EdD, field supervisor

Assistant Professors
Jan Byers-Kirsch, EdD, curriculum and instruction, literacy and supervision
Susana Y. Flores, PhD, multicultural education
James Hollar, PhD, multicultural education
Eric Hougan, PhD., educational leadership and policy studies
Denise Shaw, PhD, curriculum and instruction

Lecturers
Frank Foster, MEd, field supervisor
Judy Longstreth, MEd, field supervisor
Jerry St. George, MEd, field supervisor
Brita Williams, MiT, field supervisor

Staff
Jan Case, program support supervisor
Debbie Strand, secretary senior

Department Information
In order to be certified in the state of Washington, a student must complete the courses required in an endorsement area as well as the Professional Education Program. The Educational Foundations and Curriculum Department provides the courses and experiences necessary to complete the Professional Education Program.

Department Standards
All students completing an educational endorsement must maintain a 3.0 GPA or higher for the last 45 graded credits. Failure to maintain this level of achievement may result in suspension or expulsion from the Teacher Certification Program. Students must also earn a minimum grade of C in all required Professional Education Program courses.

Admission Requirements
Students may not enroll in Professional Education Program courses other than EFC 210, EFC 310, and PSY 314 until they have been fully admitted into the Teacher Certification Program. Please see the admission requirements for the Teacher Certification Program at the Teacher Certification website, www.cwu.edu/~cert.

Exit Requirements
Students admitted into the Teacher Certification Program are required to present a complete electronic portfolio demonstrating their content, pedagogical, and professional knowledge, skills, and dispositions as a partial fulfillment of their graduation requirements. Please see the exit requirements for the Teacher Certification Program.

Pre-admission Observation Experience
In special circumstances, this experience may be completed concurrent with the first three weeks of EFC 210. However, because it will generally not be possible for students to find placements and complete their observation within this time, students are strongly encouraged to complete their Pre-admission Observation Experience prior to enrolling in EFC 210.

Student Teaching
Students must complete a minimum of 16 quarter credits of student teaching on an all-day basis for one quarter. To qualify for certification to teach in more than one specialization, students must meet all requirements listed in the catalog for each specialization. All prerequisites in the course description for student teaching must be

completed.

1. One quarter in residence at CWU is required before a student may be assigned to student teaching, unless an exception is approved by the chair of the Department of Educational Foundations and Curriculum.
2. Students must be endorsed for student teaching by their major and minor departments. The endorsement requires completion of 75 percent of the major and minor areas prior to student teaching. See major and minor departments for advising.
3. Most student teaching assignments will be made at centers outside Kittitas County.
4. While student requests for choice of student teaching centers and grade levels will be considered, final responsibility for student teaching placement rests with the director of field experiences.
5. Student teachers wishing to enroll in additional coursework during their student teaching experience must obtain the approval of the director of field experiences.
6. A minimum GPA of 3.0 for the last 45 quarter credits is required prior to applying for student teaching.
7. Fingerprint clearance from both the Washington State Patrol and the FBI must be on file in the office of the dean of the College of Education and Professional Studies (CEPS) prior to applying for student teaching. Clearance must be valid for the entire period in which students will be in the classroom.
8. Applications for certification must be on file in the office of the dean of CEPS one quarter prior to student teaching.
9. At the time of application submission, students must provide proof of purchase of $1M of liability insurance for student teaching, valid for the quarter in which student teaching will occur.
10. At the time of application submission, students must provide West-E results or proof of having registered for a West-E test date that will occur prior to the first day of student teaching.

Professional Education Program

The purpose of the Professional Education Program is to prepare prospective teachers to become facilitators of learning within the school and community. The Professional Education Program curriculum provides opportunities to acquire the pedagogical knowledge and skills that allow students to demonstrate a positive impact on P-12 student learning. To this end, the program offers information about and experience in integrating research and pedagogy constructs for a spectrum of diverse learning situations.

See important information above under Pre-admission Observation Experience and Student Teaching.

Students should enroll for EFC 330 prior to their junior year.

Students should check the university catalog for course descriptions and pre-requisite information. Some courses must be taken in sequence. Students should consult their advisor for assistance in developing an academic plan.

Required Courses

EDBL 401 - Principles and Practices for Educating Linguistically Diverse Students 3
OR
EDBL 430 - Sheltering Instruction for Linguistically Diverse Students (3)
EDSE 302 - Introduction to Students with Exceptionalities 3
EFC 210 - Seminar 1
EFC 310 - Orientation to Teaching 3
EFC 315 - Educational Assessment 3
EFC 320 - Multicultural Education 3
EFC 330 - Field Experience 2
EFC 340 - Methods of Instruction 3
EFC 350 - Classroom Management 3
EFC 416 - Educational Technology 3
EFC 440 - Education Law 3
EFC 480 - Student Teaching 16
PSY 314 - Human Development and the Learner 4
Total Credits: 50

Instructional Foundations, BA

This degree program is designed to meet the needs of students who wish to have a background in instructional pedagogy, but who do not wish to complete the requirements for teaching certification. Students who complete the program will be prepared to work in settings that require expertise in the foundations of education, such as training programs in business and industry, service programs at educational institutions, private child care facilities, etc.

The student will select a focus area, which must be approved by the department. The focus area will be a cohesive set of courses, which will be designed to provide the student with the knowledge and skills required to take a leadership role in an education-related organization. The practicum will be done in the focus area after all other course work is completed.

Students must achieve a grade of C or higher in all courses in the major, and must have a cumulative grade point average of 3.0 or higher in the major in order to graduate.

Admission to the program requires the following:

1. A passing score on each section of the Washington Educator Skills Test - Basic (WEST-B). See www.west.nesinc.com to register and for additional information.
2. A cumulative GPA of 3.0 or higher.
3. Completion of each of the following with a grade of C or higher.
   a. ENG 101
   b. ENG 102
   c. MATH 101, 153, 154, 164, 170, or 172.
4. Proof of purchase of the College LiveText Edu Solutions software program.

Required Courses

- EDCS 492 - Practicum **Credits:** (1-15) (Must be taken for 15 credits)
- EFC 210 - Seminar **Credits:** (1)
- EFC 310 - Orientation to Teaching **Credits:** (3)
- EFC 315 - Educational Assessment **Credits:** (3)
- EFC 320 - Multicultural Education **Credits:** (3)
- EFC 330 - Field Experience **Credits:** (2)
- EFC 340 - Methods of Instruction **Credits:** (3)
- EFC 416 - Educational Technology **Credits:** (3)
- ENG 310 - Technical Writing **Credits:** (4)
- PSY 314 - Human Development and the Learner **Credits:** (4)

Department-approved focus area electives Credits: 19

Total Credits: 60

Professional Education Program

The purpose of the Professional Education Program is to prepare prospective teachers to become facilitators of learning within the school and community. The Professional Education Program curriculum provides opportunities to acquire the pedagogical knowledge and skills that allow students to demonstrate a positive impact on P-12 student learning. To this end, the program offers information about and experience in integrating research and "best practice" based pedagogical constructs, for a spectrum of diverse learning situations.

Students should enroll for EFC 330 prior to their junior year. Student teaching is completed at one of the approved off-campus locations.

Check the University catalog for course descriptions and pre-requisites information. Some courses must be taken in sequence. Consult your education advisor for assistance in developing an academic plan.

Required Courses

- EDBL 401 - Principles and Practices for Educating Linguistically Diverse Students **Credits:** (3)
- **OR** EDBL 430 - Sheltering Instruction for Linguistically Diverse Students **Credits:** (3)
- EDSE 302 - Introduction to Students with Exceptionalities **Credits:** (3)
- EFC 210 - Seminar **Credits:** (1)
- EFC 310 - Orientation to Teaching **Credits:** (3)
- EFC 315 - Educational Assessment **Credits:** (3)
- EFC 320 - Multicultural Education **Credits:** (3)
- EFC 330 - Field Experience **Credits:** (2)
- EFC 340 - Methods of Instruction **Credits:** (3)
- EFC 350 - Classroom Management **Credits:** (3)
- EFC 416 - Educational Technology **Credits:** (3)
- EFC 440 - Education Law **Credits:** (3)
- EFC 480 - Student Teaching **Credits:** (16)
- PSY 314 - Human Development and the Learner **Credits:** (4)

Total Credits: 50

Engineering Technologies, Safety, and Construction Department

College of Education and Professional Studies
Ellensburg (E)
Hogue Technology Building, room 101
CWU-Des Moines (DM)

509-963-1756 (E)
206-439-3800 (DM)
www.cwu.edu/engineering
See website for how these programs may be used for educational and career purposes.

Faculty and Staff
Chair
Lad Holden, MT

Professors
David Carns, MS, construction management
Craig Johnson, PhD, mechanical engineering technology
Taiqian Q. Yang, PhD, electronics engineering technology

Associate Professors
Roger Beardsley, MS, mechanical engineering technology
Scott Calahan, MEd, industrial/technology education
David Martin, construction management
Lad Holden, MT, electronics engineering technology
Darren Olson, PhD, industrial technology
P. Warren Plugge, PhD, construction management
Charles Pringle, MS, mechanical engineering technology
Michael L. Whelan, PhD, construction management

Assistant Professors
Nathan Davis, MA, electronics engineering technology
Sathyanarayanan Rajendran, PhD, safety and health management
Allen Sullivan, PhD, safety and health management

Emeritus Professors
D. Ken Calhoun, EdD
Stanley A. Dudley, MEd
Robert M. Envick, EdD
Ronald M. Frye
Robert Wieking, PhD
Norman H. Wolford, MS
Tim Yoxtheimer, MS

Staff
Matthew Burvee, instructional and classroom support technician
Greg Lyman, instructional and classroom support technician
Susan Van de Venter, department manager

Department Overview
The Department of Engineering Technologies, Safety, and Construction offers BS and BAS degree programs in various technologies.

Accrediting Information
The Construction Management program is fully accredited by the American Council for Construction Education (ACCE).

The Electronics Engineering Technology Program and Mechanical Engineering Technology Program are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (TAC/ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202-4012,
Telephone 410-347-7700.

Department Information
Some programs have specific admission requirements and admission deadlines. Specific information for each program can be found on the program Web site.

Students should seek advising from their program advisor prior to registration each quarter.

Courses with an additional fee are identified in the special course fee section of the student handbook published by the registrar.

Construction Management Major, BS

Co-Coordinators
David Carns, MS
P. Warren Plugge, PhD

Advisors
David Martin, MS
Michael Whelan, PhD

This major prepares the graduate for management positions in the construction industry. Students must be accepted into the major prior to taking upper-division CMGT courses. See www.cwu.edu/engineering for details. Students pursuing this degree should work closely with their program advisor to ensure that prerequisites for entry into the major have been satisfied.

Construction management students have the choice to concentrate on one of two different construction types; general building or heavy civil construction.

Exit Requirements
Students are required to complete the Associate Constructor exam administered by American Institute of Constructors and achieve a minimum score of 60 percent to graduate with a BS in construction management.

Required Courses

- ACCT 301 - Financial Accounting Analysis **Credits:** (5)
- BUS 241 - Legal Environment of Business **Credits:** (5)
- CMGT 265 - Blueprint Reading and Construction Graphics **Credits:** (4)
- CMGT 320 - Electrical Systems Design **Credits:** (3)
- CMGT 343 - Construction Estimating I **Credits:** (3)
- CMGT 343LAB - Construction Estimating I Laboratory **Credits:** (1)
- CMGT 346 - Construction Methods and Materials **Credits:** (4)
- **OR** CMGT 347 - Heavy Civil Methods and Materials **Credits:** (4)
- CMGT 440 - Temporary Structures **Credits:** (4)
- **OR** CMGT 441 - Wood and Steel Construction **Credits:** (4)
- CMGT 442 - Building Service Systems **Credits:** (3)
- **OR** CMGT 443 - Heavy Civil Utilities **Credits:** (3)
- CMGT 444 - Codes, Contracts, and Specifications **Credits:** (4)
- **OR** CMGT 445 - Heavy Civil Contract Law **Credits:** (4)
- CMGT 447 - Construction Planning, Scheduling, and Control **Credits:** (4)
- CMGT 450 - Soils and Foundations **Credits:** (4)
- CMGT 455 - Principles of Construction Management **Credits:** (4)
- **OR** CMGT 456 - Principles of Heavy Civil Construction Management **Credits:** (4)
- CMGT 460 - Concrete Construction **Credits:** (4)
- **OR** CMGT 461 - Pavement Design and Construction **Credits:** (4)
- CMGT 485 - Construction Accounting, Finance, and Contemporary Topics **Credits:** (4)
- CMGT 488 - Professional Certification **Credits:** (1)
- COM 345 - Business and Professional Speaking **Credits:** (4)
- ECON 201 - Principles of Economics Micro **Credits:** (5)
- ETSC 161 - Architectural Computer Aided Design **Credits:** (3)
- ETSC 301 - Engineering Project Cost Analysis **Credits:** (4)
- ETSC 311 - Statics **Credits:** (4)
- ETSC 312 - Strength of Materials **Credits:** (4)
- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)
- PHYS 181 - General Physics **Credits:** (4)
- PHYS 181LAB - General Physics Laboratory **Credits:** (1)
- SHM 323 - Construction Safety and Health **Credits:** (3)

Select one of the following:

- CMGT 245 - Light Commercial Construction **Credits:** (5)
- CMGT 452 - LEED in Sustainable Construction **Credits:** (4)
- ETSC 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 4 credits)

Select either

- CHEM 111 - Introduction to Chemistry **Credits:** (4)
- CHEM 111LAB - Introductory Chemistry Laboratory **Credits:** (1)
  OR
- CHEM 181 - General Chemistry I **Credits:** (4)
- CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)

Select from the following - Credits: 5

- GEOL 101 - Physical Geology **Credits:** (4)
- GEOL 101LAB - Physical Geology Laboratory **Credits:** (1)
  OR
- GEOL 108 - Introduction to Environmental Geology **Credits:** (5)

Select two of the following:

- HRM 381 - Management of Human Resources **Credits:** (5)
- MGT 380 - Organizational Management **Credits:** (5)
- MKT 360 - Principles of Marketing **Credits:** (5)
- ADMG 201 - Introduction to Business **Credits:** (3)
- **and** ADMG 372 - Leadership and Supervision **Credits:** (4)

Select from the following - Credits: 4

- CMGT 267 - Plane Surveying **Credits:** (3)
- CMGT 267LAB - Plane Surveying Field Session **Credits:** (1)
  OR
  CMGT 267 - Plane Surveying **Credits:** (3)
- CMGT 267LABHC - Heavy Civil Highway Field Session **Credits:** (1)

Select from the following - Credits: 4

- CMGT 344 - Construction Estimating II **Credits:** (3)
- CMGT 344LAB - Construction Estimating II Laboratory **Credits:** (1)
  OR
- CMGT 345 - Heavy Civil Estimating II **Credits:** (3)
- CMGT 345LAB - Heavy Civil Estimating II Laboratory **Credits:** (1)

Total Credits: 131-133

Electronic Engineering Technology Major, BS

Advisors
Nathan Davis, MA
Lad Holden, MT
Taiqian Yang, PhD

The technologists graduating from this program are applications oriented, building upon a background of mathematics, science, and technology. They interface with engineers at the product level and produce practical, workable results quickly, install and operate technical systems, devise hardware and software from proven concepts, develop and produce products, service machines, programs, and systems, manage production facilities and work groups, and provide support for technical systems' hardware and software.

Students pursuing this degree should work with the department. Due to the number of hours required, some students may find that this program requires additional time to complete.

Core Requirement - Credits: 76

- CS 110 - Programming Fundamentals I **Credits:** (4)
- EET 221 - Basic Electricity **Credits:** (4)
- EET 271 - Digital Circuits **Credits:** (4)
- EET 312 - Basic Electronics **Credits:** (4)
- EET 323 - Active Linear Circuits **Credits:** (4)
- EET 325 - Electrical Networks **Credits:** (4)
- EET 372 - Advanced Digital Circuits **Credits:** (4)
- EET 373 - Introduction to Embedded Programming **Credits:** (4)
- EET 374 - Microprocessors **Credits:** (4)
- EET 376 - Advanced Microprocessors **Credits:** (4)
- EET 426 - Advanced Electrical Network **Credits:** (4)
- ETSC 160 - Computer-aided Design and Drafting **Credits:** (4)
- ETSC 242 - Instrumentation **Credits:** (4)
- ETSC 301 - Engineering Project Cost Analysis **Credits:** (4)
- ETSC 380 - Quality Control **Credits:** (4)
- ETSC 455 - Engineering Project Management **Credits:** (4)
  Select one of the following sequences:
- EET 231 - Introduction to Electrical Power **Credits:** (4)
- EET 332 - Generation of Electrical Power **Credits:** (4)
- EET 433 - Transmission and Distribution of Electrical Power **Credits:** (4)
  OR
- EET 343 - Process Control **Credits:** (4)
- EET 444 - Supervisory Control Networks **Credits:** (4)
- ETSC 241 - Programmable Logic Controller Applications **Credits:** (4)

Mathematics Requirement - Credits: 17-19

- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)
- MATH 265 - Linear Algebra I **Credits:** (4)
  Select one of the following:
- MATH 260 - Sets and Logic **Credits:** (5)
- MATH 272 - Multivariable Calculus I **Credits:** (5)
- MATH 311 - Statistical Concepts and Methods **Credits:** (5)
- MATH 330 - Discrete Mathematics **Credits:** (5)
- MATH 376 - Differential Equations I **Credits:** (3)

Physics Requirement - Credits: 15

- PHYS 181 - General Physics **Credits:** (4)
- PHYS 181LAB - General Physics Laboratory **Credits:** (1)
- PHYS 182 - General Physics II **Credits:** (4)
- PHYS 182LAB - General Physics Laboratory II **Credits:** (1)

- PHYS 183 - General Physics III **Credits:** (4)
- PHYS 183LAB - General Physics Laboratory III **Credits:** (1)
  (CHEM 181/181LAB may be substituted for PHYS 182/182LAB)

Speech Requirement - Credits: 4-5

Select one of the following:

- COM 207 - Introduction to Human Communication **Credits:** (5)
- COM 345 - Business and Professional Speaking **Credits:** (4)

Written Communications Requirement - Credits: 3-5

Select one of the following:

- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- CS 325 - Technical Writing in Computer Science **Credits:** (3)
- ENG 310 - Technical Writing **Credits:** (4)

Capstone Sequence - Credits: 6

- EET 487 - Senior Project I **Credits:** (2)
- EET 488 - Senior Project II **Credits:** (2)
  OR
- EET 489 - Senior Technical Presentations **Credits:** (2)
- ETSC 490 - Cooperative Education **Credits:** (1-12)

Department-approved Electives - Credits: 9-13

- Technical Electives approved by your advisor.

Total Credits: 134

Industrial Engineering Technology Major, BS

Coordinator
Lad Holden, MT

Advisors
Scott Calahan, MS
Craig Johnson, PhD
Darren Olson, PhD

This major prepares the graduate for leadership positions in industry and technical distribution. The program applies algebra, trigonometry, and the physical sciences to industrial systems. Students select 40-41 credits by advisement in an area of technical interest. Areas of interest may include technology (general), industrial distribution, industrial electronics, industrial manufacturing, industrial supervision, power systems, cast metals, metal fabrication, non-destructive testing, wood production, or other technical areas by departmental advisement. With departmental approval, transfer students from technical programs may elect to use their technical degree as the elective area of interest.

Students pursuing this degree should work closely with their department advisor to assure that they have met the prerequisites for the upper-division electives.

Required Courses

- CHEM 111 - Introduction to Chemistry **Credits:** (4)
- **AND** CHEM 111LAB - Introductory Chemistry Laboratory **Credits:** (1)
  OR
- CHEM 181 - General Chemistry I **Credits:** (4)
- **AND** CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)

- EET 221 - Basic Electricity **Credits:** (4)
- EET 271 - Digital Circuits **Credits:** (4)
- ETSC 160 - Computer-aided Design and Drafting **Credits:** (4)
- ETSC 241 - Programmable Logic Controller Applications **Credits:** (4)
- ETSC 242 - Instrumentation **Credits:** (4)
- ETSC 301 - Engineering Project Cost Analysis **Credits:** (4)
- ETSC 380 - Quality Control **Credits:** (4)
- ETSC 385 - Product Design and Development **Credits:** (4)
- ETSC 442 - Alternative Energy Resources and Technology **Credits:** (5)
- ETSC 455 - Engineering Project Management **Credits:** (4)
- ETSC 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 4 credits)
- IT 101 - Computer Applications **Credits:** (3)
- MATH 154 - Pre-Calculus Mathematics II **Credits:** (5)
- MET 310 - Hydraulics/Pneumatics **Credits:** (4)
- MET 345 - Production Technology **Credits:** (4)
- MET 351 - Metallurgy/Materials and Processes **Credits:** (4)
- PHYS 111 - Introductory Physics **Credits:** (4)
- PHYS 111LAB - Introductory Physics Laboratory **Credits:** (1)

- SHM 325 - Manufacturing Safety and Health **Credits:** (3)

Select one of the following Credits: 4-5

- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- **OR** ENG 310 - Technical Writing **Credits:** (4)

Total Required Courses Credits: 82-83

Technical Specialization

- Courses by advisement.

Total Specialization Credits: 27-29

Total Credits: 109-112

Additional Information

Transfer students MUST complete a minimum of 25 credits from the ETSC Department.

Mechanical Engineering Technology Major, BS

Coordinator
Craig Johnson, PhD

Advisors
Roger Beardsley, MS
Charles Pringle, MS

The Bachelor of Science degree in mechanical engineering technology (MET) has specializations in mechanical or manufacturing technology. The major provides a broad foundation in the practical application of mechanical engineering principles. Graduates concentrating in mechanical technology may pursue one of the following career paths: machine and product design, product and system evaluation, plant operation and management, technical sales, field service, environmental quality control, and energy production. Graduates specializing in manufacturing technology are prepared to enter career paths as tool designers, tool and production planners, numerical control programmers, machine planners, computer-assisted machine planners, manufacturing process analysts, quality assurance, and technical field representatives.

Those students who are interested in taking advanced engineering courses after graduation should complete the general physics sequence, (PHYS 181, 182, 183) and mathematics through differential equations.

Students pursuing the MET degree should work with the departmental advisor to ensure that the prerequisites for the upper-division electives have been met. Due to the number of hours in this program, some students may find that this program requires additional time to complete.

Core Requirements

- CHEM 181 - General Chemistry I **Credits:** (4)
- CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)
- COM 345 - Business and Professional Speaking **Credits:** (4)
- EET 221 - Basic Electricity **Credits:** (4)
- ENG 310 - Technical Writing **Credits:** (4)
- ETSC 160 - Computer-aided Design and Drafting **Credits:** (4)
- ETSC 265 - Three-dimensional Modeling **Credits:** (4)
- ETSC 301 - Engineering Project Cost Analysis **Credits:** (4)
- ETSC 311 - Statics **Credits:** (4)
- ETSC 312 - Strength of Materials **Credits:** (4)
- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)
- MET 255 - Machining **Credits:** (4)
- MET 314 - Applied Thermodynamics **Credits:** (4)
- MET 314LAB - Applied Thermodynamics Laboratory **Credits:** (1)
- MET 315 - Fluid Dynamics **Credits:** (5)
- MET 327 - Technical Dynamics **Credits:** (4)
- MET 327LAB - Technical Dynamics Laboratory **Credits:** (1)
- MET 351 - Metallurgy/Materials and Processes **Credits:** (4)
- MET 418 - Mechanical Design I **Credits:** (4)
- MET 418LAB - Mechanical Design I Laboratory **Credits:** (1)
- MET 419 - Mechanical Design II **Credits:** (5)
- MET 426 - Applications in Strength of Materials **Credits:** (4)
- MET 488 - Professional Certification Exam Preparation **Credits:** (2)
- MET 495A - Senior Project I **Credits:** (3)
- MET 495B - Senior Project II **Credits:** (3)
- MET 495C - Senior Project III **Credits:** (3)
- **Computer Science Elective (must be taken for 3 credits) Credits:** (3)

General or Introductory Physics - Credits: 5

- PHYS 111 - Introductory Physics **Credits:** (4)
- PHYS 111LAB - Introductory Physics Laboratory **Credits:** (1)
  OR
- PHYS 181 - General Physics **Credits:** (4)
- PHYS 181LAB - General Physics Laboratory **Credits:** (1)

General or Introductory Physics - Credits: 5

- PHYS 112 - Introductory Physics II **Credits:** (4)
- PHYS 112LAB - Introductory Physics Laboratory II **Credits:** (1)
  OR
- PHYS 182 - General Physics II **Credits:** (4)
- PHYS 182LAB - General Physics Laboratory II **Credits:** (1)

General or Introductory Physics - Credits: 5

- PHYS 113 - Introductory Physics III **Credits:** (4)
- PHYS 113LAB - Introductory Physics Laboratory III **Credits:** (1)
  OR
- PHYS 183 - General Physics III **Credits:** (4)
- PHYS 183LAB - General Physics Laboratory III **Credits:** (1)

Total Core Credits: 113

Department-approved Technical Electives - Credits: 23

- BUS 221 - Introductory Business Statistics **Credits:** (5)
- EET 477 - Robotics **Credits:** (4)
- ETSC 242 - Instrumentation **Credits:** (4)
- ETSC 260 - NURBS Modeling **Credits:** (4)
- ETSC 241 - Programmable Logic Controller Applications **Credits:** (4)
- ETSC 380 - Quality Control **Credits:** (4)
- ETSC 455 - Engineering Project Management **Credits:** (4)
- ETSC 457 - Advanced Foundry **Credits:** (4)
- ETSC 490 - Cooperative Education **Credits:** (1-12) (can be taken for up to 4 credits)
- MET 257 - Casting Processes **Credits:** (4)
- MET 310 - Hydraulics/Pneumatics **Credits:** (4)
- MET 316 - Applied Heat Transfer **Credits:** (5)
- MET 320 - Fundamentals of Laser Technology **Credits:** (4)
- MET 345 - Production Technology **Credits:** (4)
- MET 355 - Advanced Machining and CNC Programming **Credits:** (4)
- MET 357 - Welding/Fabrication **Credits:** (4)
- MET 382 - Plastics and Composites **Credits:** (4)
- MET 388 - Tool Design **Credits:** (4)
- MET 411 - Energy Systems I **Credits:** (5)
- MET 412 - Alternative Energy Systems **Credits:** (5)
- MET 420 - Finite Element Analysis **Credits:** (4)
- MET 423 - Computer-aided Design and Manufacturing **Credits:** (4)
- MET 483 - Ceramics and Composites **Credits:** (4)

Total Credits: 136

Safety and Health Management Major, BS

Coordinator
Sathyanarayanan Rajendran, PhD, CSP

Advisors
Allen Sullivan, PhD
Michael Andler, senior lecturer

Program Information
The mission of the CWU Safety and Health Management (SHM) Program is to prepare our graduates to be safety and health professionals who have the technical proficiency to help create injury and incident-free workplace. The safety and health field includes many industries, functions, and occupations. Graduates from the curriculum have a history of high employment rates and competitive starting salaries.

The BS in safety and health management is the primary program for the student seeking a baccalaureate degree leading to a career in safety and health management.

Admission Requirements
SHM pre-major applications are accepted throughout the academic year. Major applications are accepted during spring quarter, and students officially start in the fall quarter. Admission to the program is based upon a review of completed prerequisite courses, and application materials. Please see the program application at www.cwu.edu/engineering.

Admission to any course requires a grade of C or higher in each prerequisite listed. Students who do not meet the prerequisite grade requirement will be dropped from the course.

A student is expected to complete each course used to fulfill a degree program requirement with a grade of C or

higher. Students must complete all CWU basic and breadth requirements prior to beginning 400-level SHM coursework.

Required Basic and Breadth Requirement Courses Credits: 30

- BIOL 201 - Human Physiology **Credits:** (5)
- MATH 130 - Finite Mathematics **Credits:** (5)
- PHYS 106 - Physics Inquiry **Credits:** (5)
- PSY 101 - General Psychology **Credits:** (5)

Choose one of the following mathematics courses: (5)

- MATH 153 - Pre-Calculus Mathematics I **Credits:** (5)
- MATH 154 - Pre-Calculus Mathematics II **Credits:** (5)

Choose one of the following chemistry courses: (5)

- CHEM 101 - Contemporary Chemistry **Credits:** (5)
  OR
- CHEM 111 - Introduction to Chemistry **Credits:** (4)
- CHEM 111LAB - Introductory Chemistry Laboratory **Credits:** (1)
  OR
- CHEM 181 - General Chemistry I **Credits:** (4)
- CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)

Required Courses Credits: 35-37

- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- BUS 241 - Legal Environment of Business **Credits:** (5)
- COM 345 - Business and Professional Speaking **Credits:** (4)
- HED 210 - Drugs and Health **Credits:** (3)
- HRM 381 - Management of Human Resources **Credits:** (5)

Choose one of the following statistics courses: (5)

- BUS 221 - Introductory Business Statistics **Credits:** (5)
- PSY 362 - Introductory Statistics **Credits:** (5)

Choose one of the following management courses: (4-5)

- MGT 380 - Organizational Management **Credits:** (5)
- PSY 456 - Industrial and Organizational Psychology **Credits:** (4)

Choose one of the following project management courses: (4-5)

- ADMG 374 - Project Management **Credits:** (5)
- ETSC 455 - Engineering Project Management **Credits:** (4)

Required Core Courses Credits: 60

- SHM 301 - Fundamentals of Safety and Health Management **Credits:** (3)
- SHM 323 - Construction Safety and Health **Credits:** (3)
- **OR** SHM 325 - Manufacturing Safety and Health **Credits:** (3)
- SHM 351 - Incident Analysis **Credits:** (3)
- SHM 352 - Systems and Design **Credits:** (3)
- SHM 353 - Risk and Insurance **Credits:** (4)
- SHM 371 - Emergency Planning and Preparedness **Credits:** (4)
- SHM 375 - Transportation and Fleet Safety **Credits:** (4)
- SHM 377 - Hazardous Materials Management **Credits:** (4)
- SHM 379 - Facility and Building Safety **Credits:** (4)
- SHM 471 - Fundamentals of Industrial Hygiene **Credits:** (4)
- SHM 472 - Ergonomics **Credits:** (3)
- SHM 474 - Safety and Health Management Systems **Credits:** (4)
- SHM 477 - Environmental Management **Credits:** (4)
- SHM 480 - Safety and Health Laboratory **Credits:** (2)
- SHM 481 - Evolving Issues in Safety and Health Management **Credits:** (2)
- SHM 485 - Safety and Health Management Capstone **Credits:** (3)
- SHM 490 - Cooperative Education **Credits:** (1-12) (Must be taken for at least 6 credits)

Department-approved Elective Course Credits: 4-5

Total Credits: 129-132

Technology Education Broad Area Major, BS

This Bachelor of Science teaching major satisfies the endorsement for technology education.

Students selecting this major must have a basic background in woods, metals, drafting, and mathematics through trigonometry. IET 430 is a prerequisite for student teaching. Students taking this major are required to apply to the Teacher Certification Program and complete the Professional Education Program requirements offered through the Department of Educational Foundations and Curriculum.

Pre-admission Requirements Credits: 15

- CHEM 111 - Introduction to Chemistry **Credits:** (4)
- CHEM 111LAB - Introductory Chemistry Laboratory **Credits:** (1)
- MATH 153 - Pre-Calculus Mathematics I **Credits:** (5)
- PHYS 111 - Introductory Physics **Credits:** (4)
- PHYS 111LAB - Introductory Physics Laboratory **Credits:** (1)

Required Courses

- EET 271 - Digital Circuits **Credits:** (4)
- ETSC 145 - Machine Woodworking **Credits:** (4)
- ETSC 160 - Computer-aided Design and Drafting **Credits:** (4)
- ETSC 210 - Energy Sources and Power **Credits:** (3)
- ETSC 265 - Three-dimensional Modeling **Credits:** (4)
- ETSC 277 - Introduction to Robotics **Credits:** (4)
- ETSC 385 - Product Design and Development **Credits:** (4)
- ETSC 430 - Methods of Teaching Technology Education **Credits:** (3)
- ETSC 433 - Technology Education Laboratory Planning **Credits:** (3)
- ETSC 435 - Technology Education Exit Assessment **Credits:** (1)
- MET 255 - Machining **Credits:** (4)
- MET 310 - Hydraulics/Pneumatics **Credits:** (4)
- MET 345 - Production Technology **Credits:** (4)
- MET 357 - Welding/Fabrication **Credits:** (4)
- MET 382 - Plastics and Composites **Credits:** (4)
- OCED 410 - Career and Technical Education School to Work Programs **Credits:** (4)
- SHM 325 - Manufacturing Safety and Health **Credits:** (3)

Department-approved electives Credits: 7-10

Total Credits: 83-86

Technology Education Major, BS

Coordinator
Scott Calahan, MEd

This Bachelor of Science teaching major satisfies the endorsement for technology education.

Students selecting this major must also select a minor or other education endorsement. IET 430 is a prerequisite for student teaching. Students taking this major are required to apply to the Teacher Certification Program and complete the Professional Education Program requirements offered through the Department of Educational Foundations and Curriculum.

Preadmission Requirements Credits: 15

- CHEM 111 - Introduction to Chemistry **Credits:** (4)
- CHEM 111LAB - Introductory Chemistry Laboratory **Credits:** (1)
- MATH 153 - Pre-Calculus Mathematics I **Credits:** (5)
- PHYS 111 - Introductory Physics **Credits:** (4)
- PHYS 111LAB - Introductory Physics Laboratory **Credits:** (1)

Required Courses

- EET 271 - Digital Circuits **Credits:** (4)
- ETSC 145 - Machine Woodworking **Credits:** (4)
- ETSC 160 - Computer-aided Design and Drafting **Credits:** (4)
- ETSC 210 - Energy Sources and Power **Credits:** (3)
- ETSC 265 - Three-dimensional Modeling **Credits:** (4)
- ETSC 385 - Product Design and Development **Credits:** (4)
- ETSC 430 - Methods of Teaching Technology Education **Credits:** (3)
- ETSC 433 - Technology Education Laboratory Planning **Credits:** (3)
- ETSC 435 - Technology Education Exit Assessment **Credits:** (1)

- MET 255 - Machining **Credits:** (4)
- MET 310 - Hydraulics/Pneumatics **Credits:** (4)
- MET 345 - Production Technology **Credits:** (4)
- MET 357 - Welding/Fabrication **Credits:** (4)
- OCED 410 - Career and Technical Education School to Work Programs **Credits:** (4)

Total Credits: 69

Additional Information

The ETSC department strongly suggests for a student to be more competitive in the job market, the following additional courses should be taken.

- ETSC 210 - Energy Sources and Power **Credits:** (3)
- MET 382 - Plastics and Composites **Credits:** (4)

SHM 325 - Manufacturing Safety and Health Credits: **(3)**

Construction Safety Minor

Advisor
P. Warren Plugge, PhD

Program Information
The construction safety minor provides a broad coverage of construction management issues that affect safety and health performance during construction work. Enrollment in upper-division CMGT courses is based upon space availability.

Admission to any course requires a grade of C or higher in each prerequisite listed. Students who do not meet the prerequisite grade requirement will be dropped from the course. Students are expected to complete each course used to fulfill a program requirement with a grade of C or better.

Admission Requirements
The construction safety minor is only available to BS Safety and Health Management majors. Applications are accepted throughout the academic year. Please see the program application available on the Web at www.cwu.edu/engineering for additional information.

Required Courses

- BUS 241 - Legal Environment of Business **Credits:** (5)
- CMGT 265 - Blueprint Reading and Construction Graphics **Credits:** (4)
- CMGT 346 - Construction Methods and Materials **Credits:** (4)
- **OR** CMGT 347 - Heavy Civil Methods and Materials **Credits:** (4)
- CMGT 442 - Building Service Systems **Credits:** (3)
- **OR** CMGT 443 - Heavy Civil Utilities **Credits:** (3)
- CMGT 444 - Codes, Contracts, and Specifications **Credits:** (4)
- **OR** CMGT 445 - Heavy Civil Contract Law **Credits:** (4)
- ETSC 490 - Cooperative Education **Credits:** (1-12) (Must be taken for at least 3 credits)
- SHM 323 - Construction Safety and Health **Credits:** (3)

Total Credits: 26

Industrial Technology Minor

Advisors
Scott Calahan, MEd
Lad Holden, MT
Craig Johnson, PhD

Required Courses

Courses to be selected from Department of Industrial Technology courses under department advisement.

Total Credits: 25

Safety and Health Management Minor

Advisors
Sathyanarayanan Rajendran, PhD, CSP
Allen Sullivan, PhD
Michael Andler, senior lecturer

Program Information
The safety and health management minor is designed for students who are interested in safety and health in the workplace. The program provides course options for the student to tailor the program to their specific career interests. Course selections should best fit the student's major program. Admission to any course required a grade of C or better in each prerequisite listed. Students who do not meet the prerequisite grade requirement will be dropped from the course. Students are expected to complete each course used to fulfill a degree program requirement with a grade of C or better.

Admission Requirements
The safety and health management minor is not available to students majoring in either the BS safety and health management or BAS occupational safety and health programs. Applications are accepted during the spring quarter, and the students will start in the fall quarter. Please see the program application for preferences and evaluation available at www.cwu.edu/engineering.

Required Courses

- SHM 301 - Fundamentals of Safety and Health Management **Credits:** (3)
- SHM 323 - Construction Safety and Health **Credits:** (3)
- **OR** SHM 325 - Manufacturing Safety and Health **Credits:** (3)
- SHM 351 - Incident Analysis **Credits:** (3)
- SHM 352 - Systems and Design **Credits:** (3)
- SHM 353 - Risk and Insurance **Credits:** (4)

Select two elective courses from the following: Credits: 8

- SHM 371 - Emergency Planning and Preparedness **Credits:** (4)
- SHM 375 - Transportation and Fleet Safety **Credits:** (4)
- SHM 377 - Hazardous Materials Management **Credits:** (4)
- SHM 379 - Facility and Building Safety **Credits:** (4)

Total Credits: 24

Traffic Safety Education Minor

Advisor
Scott Calahan, MEd (Summer On)

Students desiring an endorsement to teach traffic safety education in the public schools are required to take SED 382, SED 481, SED 482 and SED 484. These courses are taught concurrently during the six-week summer session.

Required Courses

- SED 382 - Driver Task Analysis **Credits:** (3)
  Required for state endorsement.
- SED 481 - Teaching Traffic Safety Education: Classroom and Simulation Instruction **Credits:** (3)
  Required for state endorsement.
- SED 482 - Teaching Traffic Safety Education: In Car **Credits:** (5)
  Required for state endorsement.
- SED 484 - Safety Program Supervision **Credits:** (3)
  Required for state endorsement.
- SHM 375 - Transportation and Fleet Safety **Credits:** (4)

Total Credits: 18

English Department

College of Arts and Humanities
Ellensburg
Language and Literature Bldg., room 423
Mail Stop 7558
509-963-1546
Fax: 509-963-1561
www.cwu.edu/english
See the website for how these programs may be used for educational and career purposes.

Faculty and Staff
Chair
George Drake, PhD

Professors
Laila Abdalla, PhD, English Medieval and Renaissance literature
Liahna Armstrong, PhD, American literature, popular culture, film
Patricia Callaghan, DA, rhetoric, world literature, English education
Toni Culjak, PhD, American, world and multicultural literature, film
Bobby Cummings, PhD, rhetoric, English education, computer composition
George Drake, PhD, British literature, literary theory
Loretta Gray, PhD, applied linguistics, composition, TESOL
Charles Xingzhong Li, PhD, linguistics, TESOL, linguistic approaches to literature
Teresa Martin, PhD, English education, women's literature
Steven Olson, PhD, American literature, film
Paulus Pimomo, PhD, British literature, post-colonial studies
Christopher Schedler, PhD, American and multicultural literature
Christine A. Sutphin, PhD, Victorian literature, English novel, women's literature
Katharine Whitcomb, MFA, creative writing

Associate Professors
Lisa Norris, MFA, creative writing
Joshua Welsh, PhD, rhetoric, scientific and technical communication

Emeritus Professors
Philip B. Garrison, MA, non-fiction, poetry writing, world, and Chicano literature
Karen Gookin, MA, general education, technical writing
Mark W. Halperin, MFA, poetry writing, folk literature, modern poetry
Virginia Mack, PhD, general education, Irish literature
Joseph Powell, MFA, creative writing, modern poetry
Gerald J. Stacy, PhD, English Renaissance literature
John L. Vifian, PhD 18th century literature, English novel

Senior Lecturers
Stephanie Dringenberg, MA
Ruthi Erdman, MA
Patricia Garrison, MA
Lila Harper, PhD
Karen Hull, MA
Marisa Humphrey, MA
Kevin Leaverton, MA
Robert Schnelle, MA

Lecturers
Melissa Brouwer, MA
Pedro Cavazos, MFA
Mindie Dieu, PhD
Shari Foster, MA
Eugene R. Hutchins, MA
Joseph J.P. Johnson, MA
Melissa Johnson, MA
Anne Joiner, MA (Des Moines)
Matthew Martinson, MA
Amanda Ross, MA
Travis Smith, MA

Staff
Kelly Zakel-Larson, secretary supervisor
Jo Richards, office assistant III

Department Information
The Department of English offers undergraduate and graduate courses in American, British, and world literature, English language and linguistics, English education, film study, and professional and creative writing. The study of English helps students to develop and enhance skills in critical analysis and written and oral communication. English program graduates pursue a variety of careers, including business, education, government, law, publishing, and writing.

Departmental Honors in English
The honors program in English recognizes the superior scholarship of qualified majors. To qualify for the program, students must have a minimum GPA of 3.4 overall and 3.7 in English and be recommended by three faculty members. In addition to their regular course of study, qualified students complete an individual study course culminating in an honors paper. A student whose honors paper is accepted will graduate with departmental honors in English. For additional details, consult the department website.

Bachelor of Arts in English
(NOTE: Students seeking a BA degree must complete one year college/university study or two years high school study of a single world language.)

English Language and Literature Major, BA

The study of literature trains students in reflective reading, theoretically based inquiry, critical analysis, and effective verbal and written expression. Students are taught to analyze literary works as representations of literary genres and in historical and cultural contexts as well as to examine literary influence and explore literature through the lens of critical theory. Majors are expected to complete English 302 and English 303 during their first quarter in the major.

Required Courses

- ENG 302 - Poetry and Poetics **Credits:** (5)
- ENG 303 - Principles of English Studies **Credits:** (5)
- ENG 320 - English Grammar **Credits:** (5)
- ENG 363 - Shakespeare **Credits:** (5)
- ENG 489 - Senior Colloquium **Credits:** (2)

Select two literary forms courses - Credits: 10

- ENG 380 - Studies in Drama **Credits:** (5)
- ENG 453 - Studies in Fiction **Credits:** (5)
- ENG 454 - Studies in Nonfiction **Credits:** (5)
- ENG 455 - Studies in Poetry **Credits:** (5)

Select one language and linguistics course- Credits: 5

- ENG 304 - English Linguistics **Credits:** (5)
- ENG 423 - History of the English Language **Credits:** (5)

Select two literature and history courses - Credits: 10

- ENG 371 - Literature and History I **Credits:** (5)
- ENG 372 - Literature and History II **Credits:** (5)
- ENG 373 - Literature and History III **Credits:** (5)
- ENG 374 - Literature and History IV **Credits:** (5)

Select one critical studies course - Credits: 5

- ENG 415 - Critical Studies in American Literature **Credits:** (5)
- ENG 417 - Critical Studies in World Literature **Credits:** (5)
- ENG 419 - Critical Studies in British Literature **Credits:** (5)

Select two literature and culture courses - Credits: 10

- ENG 330 - African American Literature **Credits:** (5)
- ENG 331 - Latina/o Literature **Credits:** (5)
- ENG 332 - American Indian Literature **Credits:** (5)
- ENG 333 - Asian American Literature **Credits:** (5)
- ENG 334 - American Indian Oral and Nonfiction Literature **Credits:** (5)
- ENG 335 - Women's Literature **Credits:** (5)

Department-approved electives - Credits: 10

Select 10 credits of English literature, language, writing or film studies (Elective credits may be taken from any English literature, language, or film studies course at the 300 level or above. No more than 5 credits of film studies may be counted as elective credits in the English language and literature major. One 200-level course (up to 3 credits) may be counted as an elective.)

Total Credits: 72

English Language Arts Teaching Major, BA

This major satisfies the endorsement for English/language arts. Majors must complete the Teacher Certification Program requirements for secondary certification available through the Department of Education Foundations and Curriculum. Majors are expected to complete ENG 302 and ENG 303 prior to enrolling in other upper-division major requirements. English 422, 430, 488 and 492 are required prior to student teaching. English 430, 488 and 492 must be taken concurrently. All other major requirements must be completed before enrollment in or taken concurrently with ENG 488. Enrollment in ENG 488 is by permission.

Required Courses

- ENG 222 - Multicultural Literature for Teachers **Credits:** (5)
- ENG 302 - Poetry and Poetics **Credits:** (5)
- ENG 303 - Principles of English Studies **Credits:** (5)
- ENG 304 - English Linguistics **Credits:** (5)
- ENG 320 - English Grammar **Credits:** (5)
- ENG 363 - Shakespeare **Credits:** (5)
- ENG 422 - Teaching Young Adult Literature **Credits:** (5)
  Prerequisite: admission to Teacher Education Program and 15 credits of professional sequence.
- ENG 430 - Teaching Writing in the Secondary School **Credits:** (5)
  Prerequisite: EDCS 311 and 28 credits in English.
- ENG 488 - Teaching Portfolio **Credits:** (2)
  Requires concurrent enrollment in ENG 430 and ENG 492.
- ENG 492 - Practicum **Credits:** (3)
  Requires concurrent enrollment in ENG 430 and ENG 488.

Select one literary forms course - Credits: 5

- ENG 380 - Studies in Drama **Credits:** (5)
- ENG 453 - Studies in Fiction **Credits:** (5)
- ENG 454 - Studies in Nonfiction **Credits:** (5)
- ENG 455 - Studies in Poetry **Credits:** (5)

Select two literature and history courses - Credits: 10

- ENG 371 - Literature and History I **Credits:** (5)
- ENG 372 - Literature and History II **Credits:** (5)
- ENG 373 - Literature and History III **Credits:** (5)
- ENG 374 - Literature and History IV **Credits:** (5)

Select one writing course - Credits: 5

- ENG 263 - Introduction to Creative Writing **Credits:** (5)
- ENG 364 - Fiction Writing **Credits:** (5)
- ENG 365 - Poetry Writing **Credits:** (5)
- ENG 366 - Creative Nonfiction Writing **Credits:** (5)

Select one critical studies course Credits: 5

- ENG 415 - Critical Studies in American Literature **Credits:** (5)
- ENG 417 - Critical Studies in World Literature **Credits:** (5)
- ENG 419 - Critical Studies in British Literature **Credits:** (5)

Total Credits: 70

English Professional and Creative Writing, BA

The major combines a liberal arts background in literature with specialized writing courses in creative writing (fiction, poetry, creative nonfiction, and screenwriting), business writing, professional writing, scientific and technical writing, editing, and publishing. Students in this specialization are expected to complete ENG 301 and ENG 303 prior to enrolling in other upper-division major requirements.

Required Courses

- ENG 263 - Introduction to Creative Writing **Credits:** (5)
- ENG 301 - Introduction to Professional Writing **Credits:** (5)
- ENG 302 - Poetry and Poetics **Credits:** (5)
- ENG 303 - Principles of English Studies **Credits:** (5)
- ENG 320 - English Grammar **Credits:** (5)
- ENG 323 - Writing and Editing for Publication **Credits:** (5)
- ENG 489 - Senior Colloquium **Credits:** (2)

Total Required Courses Credits: 32

Approved Writing Electives

Select 27 credits from a combination of creative writing, professional writing and editing, and practicum courses. At least 2 credits must be practicum credits and at least one 400-level elective class is required.

Creative Writing Courses:

- COM 267 - Screenwriting Fundamentals **Credits:** (4)
- **OR** ENG 267 - Screenwriting Fundamentals **Credits:** (4)
- COM 357 - Scriptwriting for Serial Media **Credits:** (4)
- **OR** ENG 357 - Scriptwriting for Serial Media **Credits:** (4)
- COM 367 - Narrative Screenwriting **Credits:** (4)
- **OR** ENG 367 - Narrative Screenwriting **Credits:** (4)
- COM 457 - Narrative Screenwriting II **Credits:** (5)
- ENG 364 - Fiction Writing **Credits:** (5)
- ENG 365 - Poetry Writing **Credits:** (5)
- ENG 366 - Creative Nonfiction Writing **Credits:** (5)
- ENG 368 - Multi-Genre Writing Workshop **Credits:** (5)
- ENG 369 - Variable Topics Writing Workshop **Credits:** (5)
- ENG 464 - Advanced Fiction Writing **Credits:** (5)
- ENG 465 - Advanced Poetry Writing **Credits:** (5)
- ENG 466 - Advanced Creative Nonfiction Writing **Credits:** (5)
- ENG 467 - Advanced Narrative Screenwriting **Credits:** (4)
- ENG 468 - Contemporary Writers Colloquium **Credits:** (5)
- TH 313 - Writing for Children's Theatre **Credits:** (3)
- TH 330 - Introduction to Playwriting **Credits:** (4)

Practicum Courses:

- COM 468 - Observer **Credits:** (1-2)
- ENG 484 - Manastash: Literary Editing **Credits:** (3)
- ENG 485 - Manastash: Literary Design and Production **Credits:** (2)
- ENG 490 - Cooperative Education **Credits:** (1-12)

Professional Writing and Editing Courses:

- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- COM 201 - Introduction to Mass Communication **Credits:** (5)
- COM 208 - Introduction to Public Relations Writing **Credits:** (4)
- COM 347 - Copy Editing **Credits:** (4)
- COM 348 - Publication Design **Credits:** (4)
- ENG 310 - Technical Writing **Credits:** (4)
- ENG 312 - Research Methods for Workplace Writers **Credits:** (5)
- ENG 402 - Writing Center Theory and Practice **Credits:** (1-5)
- ENG 404 - Advanced Technical Writing **Credits:** (5)
- IT 248 - Web Fundamentals **Credits:** (4)
- IT 288 - Business Presentation Applications **Credits:** (2)
- LAJ 410 - Legal Writing **Credits:** (4)

Total Approved Writing Electives Credits: 27

Literature Course

Select one course from the following:

- ENG 330 - African American Literature **Credits:** (5)
- ENG 331 - Latina/o Literature **Credits:** (5)
- ENG 332 - American Indian Literature **Credits:** (5)
- ENG 333 - Asian American Literature **Credits:** (5)
- ENG 334 - American Indian Oral and Nonfiction Literature **Credits:** (5)
- ENG 335 - Women's Literature **Credits:** (5)
- ENG 363 - Shakespeare **Credits:** (5)
- ENG 371 - Literature and History I **Credits:** (5)
- ENG 372 - Literature and History II **Credits:** (5)
- ENG 373 - Literature and History III **Credits:** (5)
- ENG 374 - Literature and History IV **Credits:** (5)
- ENG 380 - Studies in Drama **Credits:** (5)
- ENG 453 - Studies in Fiction **Credits:** (5)
- ENG 454 - Studies in Nonfiction **Credits:** (5)
- ENG 455 - Studies in Poetry **Credits:** (5)

Total Literature Course Credits: 5

Literature, Linguistics, and Film Studies Electives

Select 10 additional credits of literature, linguistics, and film studies courses at or above the 300-level. No more than 5 credits of film studies may be counted as elective credits in the professional and creative writing major.

Total Literature, Linguistics, and Film Studies Electives Credits: 10

Total Credits: 74

Creative Writing Minor

Required Courses

- ENG 302 - Poetry and Poetics **Credits:** (5)

Select 20 credits of creative writing courses:

- ENG 263 - Introduction to Creative Writing **Credits:** (5)
- ENG 364 - Fiction Writing **Credits:** (5)
- ENG 365 - Poetry Writing **Credits:** (5)
- ENG 366 - Creative Nonfiction Writing **Credits:** (5)
- ENG 367 - Narrative Screenwriting **Credits:** (4)
- ENG 464 - Advanced Fiction Writing **Credits:** (5)
- ENG 465 - Advanced Poetry Writing **Credits:** (5)
- ENG 466 - Advanced Creative Nonfiction Writing **Credits:** (5)
- ENG 467 - Advanced Narrative Screenwriting **Credits:** (4)
- ENG 468 - Contemporary Writers Colloquium **Credits:** (5)
- TH 313 - Writing for Children's Theatre **Credits:** (3)
- TH 330 - Introduction to Playwriting **Credits:** (4)

Select one literature course at the 300-level or above - Credits: 5

Total Credits: 30

English Language and Literature Minor

As with the English major, the English minor trains students in reflective reading, theoretically based inquiry, critical analysis, and effective verbal and written expression. The skills developed in the English minor readily complement a wide variety of majors across the university.

Required Courses

- ENG 302 - Poetry and Poetics **Credits:** (5)
- ENG 303 - Principles of English Studies **Credits:** (5)

Department-approved electives - Credits: 20

Select 20 credits of literature or language courses at the 300-level or above.

Total Credits: 30

Linguistics Minor

The linguistics minor allows students to gain a broader understanding of language and language acquisition. It draws on multiple disciplines and complements a wide range of majors.

Required Courses

- ENG 304 - English Linguistics **Credits:** (5)
- ENG 320 - English Grammar **Credits:** (5)
- ENG 432 - Phonetics and Phonology **Credits:** (5)

- ENG 437 - Pedagogical Grammar and Discourse **Credits:** (5)

Select 10 credits approved electives from the following or other courses by advisement Credits: 10

- ANTH 180 - Introduction to Linguistics **Credits:** (5)
- ANTH 381 - Language in Culture **Credits:** (4)
- ANTH 382 - Descriptive Linguistics **Credits:** (4)
- ANTH 384 - Language and Gender **Credits:** (4)
- COM 302 - Intercultural Communication **Credits:** (4)
- EDBL 433 - Educational Linguistics **Credits:** (3)
- EDBL 438 - Teaching English as a Second Language **Credits:** (3)
- EDBL 440 - Development of Literacy with Linguistically Diverse Students **Credits:** (3)
- ENG 423 - History of the English Language **Credits:** (5)
- ENG 435 - Linguistics, Literature, and TESOL **Credits:** (5)
- ENG 496 - Individual Study **Credits:** (1-6)
- WL 481 - Methods and Materials for Language Teaching **Credits:** (4)
- WL 482 - Second- and Foreign-language Acquisition **Credits:** (4)
- WL 483 - Sociolinguistics **Credits:** (4)

Total Credits: 25

Professional Writing Certificate

The professional writing certificate allows students to develop their writing skills for professional and business environments. It is delivered entirely online to serve professionals already working in careers as well as students planning to begin professional or business careers. Students will learn the rhetorical requirements for specific forms of written communication, including letters, memos, reports, proposals, promotional materials, and press releases. They will also learn to edit their own writing for clarity, correctness, and style.

Required Courses

- ENG 301 - Introduction to Professional Writing **Credits:** (5)
- ENG 310 - Technical Writing **Credits:** (4)
- COM 347 - Copy Editing **Credits:** (4)
- COM 370 - Advanced Public Relations Writing **Credits:** (4)

Total Credits: 17

Environmental Studies Program

College of the Sciences
Ellensburg
Science 207D

509-963-2164
Fax: 509-963-1050
www.cwu.edu/environmental
See website for how this program may be used for educational and career purposes.

Director
Anne Johansen, PhD

Staff
Nicole Ciraulo, secretary senior

Program Information
The Environmental Studies Program at CWU was established over 30 years ago to provide an interdisciplinary approach to the study of environmental issues. The program is administered through the College of the Sciences and has options for both a major (BS) in five areas of specialization and a minor. The program core features team-taught courses including General Education courses that are taught by faculty from multiple disciplines.

Bachelor of Science
Environmental Studies Major
The major in environmental studies provides students with an understanding of the natural science of environmental issues as well as the social, political, and economic factors that contribute to policy and planning decisions. Through this major, students will gain the necessary professional and technical skills for entry into successful environmental careers or for graduate studies in environmental fields. The major offers five specialization options in environmental biology, environmental chemistry, environmental geology, environmental geography, and environmental policy.

Requirements for Major (BS) in Environmental Studies

- Foundational courses in supporting disciplines. Some of these courses also serve as prerequisites for courses within the specializations. These foundational courses must be completed before students take ENST 304
- A core requirement consisting of six interdisciplinary ENST courses, two upper-level electives, and a capstone experience outside of

the classroom (research, internship, service learning, or study abroad)
- A specialization consisting of 6-8 courses that focus on one area of study
- A minimum 2.0 GPA for program credits, and at least a C- in all ENST core courses.

Requirements for a double major with BS in environmental studies
The following double major combinations will have the environmental studies specialization course requirements waived for the BS degree in environmental studies; all environmental studies foundation and core course requirements must be completed. Required courses for the first degree major may not be used to fulfill upper-division environmental studies elective requirements (7-10 credits).

Bachelor Degree (Disciplinary)
Bachelor Degree (Environmental Studies)

BS Biology
BS Environmental Studies: Environmental Biology Specialization

BS Chemistry
BS Environmental Studies: Environmental Chemistry Specialization

BS Environmental Geological Sciences
BS Environmental Studies: Environmental Geology Specialization

BA Geography
BS Environmental Studies: Environmental Geography Specialization

BS Public Policy
BS Environmental Studies: Environmental Policy Specialization

The interdisciplinary major in public policy (BS) may be combined with the environmental studies specialization in environmental policy by completing the specific course requirements for both majors. Students who combine majors in public policy and environmental studies with a specialization in environmental policy will receive a Bachelor of Science degree in public policy and a Bachelor of Science degree in environmental studies. As some public policy requirements and electives count toward both degrees or majors, the actual additional coursework needed to fulfill the requirements of the second degree or major may be as low as 19 credits.

Students may complete more than one specialization within the environmental studies major. To be eligible for a second specialization, a minimum of 20 unique credits must be completed. Unique means the credits have not been used as part of any other environmental studies specialization.

Environmental Studies BS, Environmental Biology Specialization

Environmental Studies Requirements

The major in environmental studies provides students with an understanding of the natural science of environmental issues as well as the social, political, and economic factors that contribute to policy and planning decisions. Through this major, students will gain the necessary professional and technical skills for entry into successful environmental careers or for graduate studies in environmental fields. The major offers five specialization options in environmental biology, environmental chemistry, environmental geology, environmental geography, and environmental policy.

Requirements for Major (BS) in Environmental Studies
The requirements for the major in environment studies have three parts:

Foundational courses in supporting disciplines. Some of these courses also serve as prerequisites for courses within the specializations. These foundational courses must be completed before students take ENST 304.
A core requirement consisting of six interdisciplinary ENST courses, two upper-level electives, and a capstone experience outside of the classroom (research, internship, service learning, or study abroad).
A specialization consisting of 6-8 courses that focus on one area of study.
A minimum 2.0 GPA for program credits, and at least a C- in all ENST core courses.

Requirements for a double major with BS in environmental studies
The following double major combinations will have the environmental studies specialization course requirements waived for the BS degree in environmental studies; all environmental studies foundation and core course requirements must be completed. Required courses for the first degree major may not be used to fulfill upper-division environmental studies elective requirements (7-10 credits).

Bachelor Degree (Disciplinary)
Bachelor Degree (Environmental Studies)

BS Biology
BS Environmental Studies: Environmental Biology Specialization

BS Chemistry
BS Environmental Studies: Environmental Chemistry Specialization

BS Environmental Geological Sciences
BS Environmental Studies: Environmental Geology Specialization

BA Geography
BS Environmental Studies: Environmental Geography Specialization

BS Public Policy
BS Environmental Studies: Environmental Policy Specialization

The interdisciplinary major in public policy (BS) may be combined with the environmental studies specialization in environmental policy by completing the specific course requirements for both majors. Students who combine majors in public policy and environmental studies with a specialization in environmental policy will receive a Bachelor of Science degree in public policy and a Bachelor of Science degree in environmental studies. As some public policy requirements and electives count toward both degrees or majors, the actual additional coursework needed to fulfill the requirements of the second degree or major may be as low as 19 credits.

Students may complete more than one specialization within the environmental studies major. To be eligible for a second specialization, a minimum of 20 unique credits must be completed. Unique means the credits have not been used as part of any other environmental studies specialization.

Foundational Courses (Required. Check for specialization specific requisites before making choices.)

Select one of the following: Credits: 5

BIOL 101 - Fundamentals of Biology **Credits:** (5)
BIOL 181 - General Biology I **Credits:** (5)
BIOL 200 - Plants in the Modern World **Credits:** (5)

Select one of the following: Credits: 5

CHEM 101 - Contemporary Chemistry **Credits:** (5)
CHEM 111 - Introduction to Chemistry **Credits:** (4)
AND CHEM 111LAB - Introductory Chemistry Laboratory **Credits:** (1)
CHEM 181 - General Chemistry I **Credits:** (4)
AND CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)

Select one of the following: Credits: 5

GEOG 107 - Our Dynamic Earth **Credits:** (5)
GEOL 101 - Physical Geology **Credits:** (4)
AND GEOL 101LAB - Physical Geology Laboratory **Credits:** (1)
GEOL 102 - Geology of National Parks **Credits:** (4) **AND** GEOL 101LAB - Physical Geology Laboratory **Credits:** (1)
GEOL 108 - Introduction to Environmental Geology **Credits:** (5)

Select one of the following: Credits: 5

ANTH 130 - Introduction to Cultural Anthropology **Credits:** (5)
GEOG 101 - World Regional Geography **Credits:** (5)
GEOG 108 - Introduction to Human Geography **Credits:** (5)

Select one of the following: Credits: 5

ECON 101 - Economic Issues **Credits:** (5)
ECON 201 - Principles of Economics Micro **Credits:** (5)

Total Foundation Credits: 25

Required Core Courses

ENST 201 - Earth as an Ecosystem **Credits:** (5)
OR ENST 202 - Ecosystems, Resources, Population, and Culture **Credits:** (5)
ENST 210 - Global Environment from a Local Perspective **Credits:** (4)
ENST 303 - Environmental Management **Credits:** (5)
ENST 304 - Environmental Methods and Analysis **Credits:** (5)
ENST 330 - Environmental Leadership and Advocacy **Credits:** (5)
OR ENST 455 - Environmental Literature **Credits:** (3)
ENST 444 - Environmental Policy Formulation **Credits:** (4)

Select one or a combination of the following for a total of: Credits: 3-5

ENST 490 - Cooperative Education **Credits:** (1-12)
ENST 495 - Senior Research **Credits:** (3-5) **OR** (other 495 Senior Research)
UNIV 309 - Civic Engagement **Credits:** (2)
Study Abroad Course, by permission **Credits:** (3-5)

Upper-level electives: Credits: 8-10

Select two of the following courses. These courses cannot be used to fulfill specialization requirements.

ANTH 440 - Ecology and Culture **Credits:** (4)
OR GEOG 440 - Ecology and Culture **Credits:** (4)
BIOL 302 - Sustainability and Environmental Change **Credits:** (5)
BIOL 362 - Biomes of the Pacific Northwest **Credits:** (4)
CMGT 452 - LEED in Sustainable Construction **Credits:** (4)
ECON 462 - Environmental and Resource Economics **Credits:** (5)
ENST 310 - Energy and Society **Credits:** (5)
ENST 460 - Environmental Law **Credits:** (5)
OR GEOG 445 - Natural Resources Policy **Credits:** (4)
GEOG 373 - Water Resources **Credits:** (4)
GEOG 441 - Climate Change: Human and Biophysical Dimensions **Credits:** (4)
GEOG 442 - Alternative Energy Resources and Technology **Credits:** (5)
OR ETSC 442 - Alternative Energy Resources and Technology **Credits:** (5)
GEOL 302 - Oceans and Atmosphere **Credits:** (4)
GEOL 380 - Natural Hazards **Credits:** (5)
HIST 454 - American Environmental History **Credits:** (5)
PHIL 306 - Environmental Ethics **Credits:** (5)

Total Core Credits: 38-44

Environmental Biology Specialization

BIOL 181 and CHEM 181/181LAB are required as foundational courses for this specialization.

BIOL 182 - General Biology II **Credits:** (5)
BIOL 183 - General Biology III **Credits:** (5)
BIOL 213 - Introductory Biostatistics **Credits:** (4)
BIOL 360 - General Ecology **Credits:** (5)
CHEM 182 - General Chemistry II **Credits:** (4)
AND CHEM 182LAB - General Chemistry Laboratory II **Credits:** (1)
CHEM 183 - General Chemistry III **Credits:** (4)
AND CHEM 183LAB - General Chemistry Laboratory III **Credits:** (1)

Choose one field course from the following: Credits: 4-5

BIOL 362 - Biomes of the Pacific Northwest **Credits:** (4)
BIOL 377 - Regional Natural History **Credits:** (2)
AND BIOL 377LAB - Regional Natural History **Credits:** (3)
BIOL 461 - Community Ecology **Credits:** (3)
AND BIOL 461LAB - Community Ecology Laboratory **Credits:** (2)
BIOL 462 - Wildlife and Fisheries Ecology **Credits:** (5)
BIOL 463 - Limnology **Credits:** (5)
BIOL 464 - Terrestrial Plant Ecology **Credits:** (5)
BIOL 466 - Conservation Biology **Credits:** (5)
BIOL 467 - Biological Field Techniques **Credits:** (5)

Specialization Subtotal Credits: 33-34

Total Credits: 96-103

Environmental Studies BS, Environmental Chemistry Specialization

Environmental Studies Requirements

The major in environmental studies provides students with an understanding of the natural science of environmental issues as well as the social, political, and economic factors that contribute to policy and planning decisions. Through this major, students will gain the necessary professional and technical skills for entry into successful environmental careers or for graduate studies in environmental fields. The major offers five specialization options in environmental biology, environmental chemistry, environmental geology, environmental geography, and environmental policy.

Requirements for Major (BS) in Environmental Studies
The requirements for the major in environment studies have three parts:

Foundational courses in supporting disciplines. Some of these courses also serve as prerequisites for courses within the specializations. These foundational courses must be completed before students take ENST 304.
A core requirement consisting of six interdisciplinary ENST courses, two upper-level electives, and a

capstone experience outside of the classroom (research, internship, service learning, or study abroad).

A specialization consisting of 6-8 courses that focus on one area of study.

A minimum 2.0 GPA for program credits, and at least a C- in all ENST core courses.

Requirements for a double major with BS in environmental studies

The following double major combinations will have the environmental studies specialization course requirements waived for the BS degree in environmental studies; all environmental studies foundation and core course requirements must be completed. Required courses for the first degree major may not be used to fulfill upper-division environmental studies elective requirements (7-10 credits).

Bachelor Degree (Disciplinary)
Bachelor Degree (Environmental Studies)

BS Biology
BS Environmental Studies: Environmental Biology Specialization

BS Chemistry
BS Environmental Studies: Environmental Chemistry Specialization

BS Environmental Geological Sciences
BS Environmental Studies: Environmental Geology Specialization

BA Geography
BS Environmental Studies: Environmental Geography Specialization

BS Public Policy
BS Environmental Studies: Environmental Policy Specialization

The interdisciplinary major in public policy (BS) may be combined with the environmental studies specialization in environmental policy by completing the specific course requirements for both majors. Students who combine majors in public policy and environmental studies with a specialization in environmental policy will receive a Bachelor of Science degree in public policy and a Bachelor of Science degree in environmental studies. As some public policy requirements and electives count toward both degrees or majors, the actual additional coursework needed to fulfill the requirements of the second degree or major may be as low as 19 credits.

Students may complete more than one specialization within the environmental studies major. To be eligible for a second specialization, a minimum of 20 unique credits must be completed. Unique means the credits have not been used as part of any other environmental studies specialization.

Foundational Courses (Required. Check for specialization specific requisites before making choices.)

Select one of the following: Credits: 5

BIOL 101 - Fundamentals of Biology **Credits:** (5)
BIOL 181 - General Biology I **Credits:** (5)
BIOL 200 - Plants in the Modern World **Credits:** (5)

Select one of the following: Credits: 5

CHEM 101 - Contemporary Chemistry **Credits:** (5)
CHEM 111 - Introduction to Chemistry **Credits:** (4)
AND CHEM 111LAB - Introductory Chemistry Laboratory **Credits:** (1)
CHEM 181 - General Chemistry I **Credits:** (4)
AND CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)

Select one of the following: Credits: 5

GEOG 107 - Our Dynamic Earth **Credits:** (5)
GEOL 101 - Physical Geology **Credits:** (4)
AND GEOL 101LAB - Physical Geology Laboratory **Credits:** (1)
GEOL 102 - Geology of National Parks **Credits:** (4) **AND** GEOL 101LAB - Physical Geology Laboratory **Credits:** (1)
GEOL 108 - Introduction to Environmental Geology **Credits:** (5)

Select one of the following: Credits: 5

ANTH 130 - Introduction to Cultural Anthropology **Credits:** (5)
GEOG 101 - World Regional Geography **Credits:** (5)
GEOG 108 - Introduction to Human Geography **Credits:** (5)

Select one of the following: Credits: 5

ECON 101 - Economic Issues **Credits:** (5)
ECON 201 - Principles of Economics Micro **Credits:** (5)

Total Foundation Credits: 25

Required Core Courses

ENST 201 - Earth as an Ecosystem **Credits:** (5)
OR ENST 202 - Ecosystems, Resources, Population, and Culture **Credits:** (5)
ENST 210 - Global Environment from a Local Perspective **Credits:** (4)
ENST 303 - Environmental Management **Credits:** (5)
ENST 304 - Environmental Methods and Analysis **Credits:** (5)
ENST 330 - Environmental Leadership and Advocacy **Credits:** (5)
OR ENST 455 - Environmental Literature **Credits:** (3)
ENST 444 - Environmental Policy Formulation **Credits:** (4)

Select one or a combination of the following for a total of: Credits: 3-5

ENST 490 - Cooperative Education **Credits:** (1-12)
ENST 495 - Senior Research **Credits:** (3-5) **OR** (other 495 Senior Research)
UNIV 309 - Civic Engagement **Credits:** (2)
Study Abroad Course, by permission **Credits:** (3-5)

Upper-level electives: Credits: 8-10

Select two of the following courses. These courses cannot be used to fulfill specialization requirements.

ANTH 440 - Ecology and Culture **Credits:** (4)
OR GEOG 440 - Ecology and Culture **Credits:** (4)
BIOL 302 - Sustainability and Environmental Change **Credits:** (5)
BIOL 362 - Biomes of the Pacific Northwest **Credits:** (4)
CMGT 452 - LEED in Sustainable Construction **Credits:** (4)
ECON 462 - Environmental and Resource Economics **Credits:** (5)
ENST 310 - Energy and Society **Credits:** (5)
ENST 460 - Environmental Law **Credits:** (5)
OR GEOG 445 - Natural Resources Policy **Credits:** (4)
GEOG 373 - Water Resources **Credits:** (4)
GEOG 441 - Climate Change: Human and Biophysical Dimensions **Credits:** (4)
GEOG 442 - Alternative Energy Resources and Technology **Credits:** (5)
OR ETSC 442 - Alternative Energy Resources and Technology **Credits:** (5)
GEOL 302 - Oceans and Atmosphere **Credits:** (4)
GEOL 380 - Natural Hazards **Credits:** (5)
HIST 454 - American Environmental History **Credits:** (5)
PHIL 306 - Environmental Ethics **Credits:** (5)

Total Core Credits: 38-44

Environmental Chemistry Specialization

CHEM 181/181LAB is required as a foundational course for this specialization.

CHEM 182 - General Chemistry II **Credits:** (4)
AND CHEM 182LAB - General Chemistry Laboratory II **Credits:** (1)
CHEM 183 - General Chemistry III **Credits:** (4)
AND CHEM 183LAB - General Chemistry Laboratory III **Credits:** (1)
CHEM 332 - Quantitative Analysis **Credits:** (3)
AND CHEM 332LAB - Quantitative Analysis Laboratory **Credits:** (2)
CHEM 345 - Environmental Chemistry **Credits:** (5)
MATH 154 - Pre-Calculus Mathematics II **Credits:** (5)

Select one of the following: Credits: 5

BIOL 220 - Introductory Cell Biology **Credits:** (5)
BIOL 322 - Introductory Microbiology **Credits:** (5)
CHEM 452 - Instrumental Analysis Lecture **Credits:** (3)
AND CHEM 452LAB - Instrumental Analysis Laboratory **Credits:** (2)
GEOL 425 - Environmental Geochemistry **Credits:** (5)

Specialization Subtotal Credits: 30

Total Credits: 92-98

Environmental Studies BS, Environmental Geography Specialization

Environmental Studies Requirements

The major in environmental studies provides students with an understanding of the natural science of environmental issues as well as the social, political, and economic factors that contribute to policy and planning decisions. Through this major, students will gain the necessary professional and technical skills for entry into successful environmental careers or for graduate studies in environmental fields. The major offers five specialization options in environmental biology, environmental chemistry, environmental geology, environmental geography, and environmental policy.

Requirements for Major (BS) in Environmental Studies
The requirements for the major in environment studies have three parts:

Foundational courses in supporting disciplines. Some of these courses also serve as prerequisites for courses within the specializations. These foundational courses must be completed before students take ENST 304.
A core requirement consisting of six interdisciplinary ENST courses, two upper-level electives, and a capstone experience outside of the classroom (research, internship, service learning, or study abroad).
A specialization consisting of 6-8 courses that focus on one area of study.
A minimum 2.0 GPA for program credits, and at least a C- in all ENST core courses.

Requirements for a double major with BS in environmental studies
The following double major combinations will have the environmental studies specialization course requirements waived for the BS degree in environmental studies; all environmental studies foundation and core course requirements must be completed. Required courses for the first degree major may not be used to fulfill upper-division environmental studies elective requirements (7-10 credits).

Bachelor Degree (Disciplinary)
Bachelor Degree (Environmental Studies)

BS Biology
BS Environmental Studies: Environmental Biology Specialization

BS Chemistry
BS Environmental Studies: Environmental Chemistry Specialization

BS Environmental Geological Sciences
BS Environmental Studies: Environmental Geology Specialization

BA Geography
BS Environmental Studies: Environmental Geography Specialization

BS Public Policy
BS Environmental Studies: Environmental Policy Specialization

The interdisciplinary major in public policy (BS) may be combined with the environmental studies specialization in environmental policy by completing the specific course requirements for both majors. Students who combine majors in public policy and environmental studies with a specialization in environmental policy will receive a Bachelor of Science degree in public policy and a Bachelor of Science degree in environmental studies. As some public policy requirements and electives count toward both degrees or majors, the actual additional coursework needed to fulfill the requirements of the second degree or major may be as low as 19 credits.

Students may complete more than one specialization within the environmental studies major. To be eligible for a second specialization, a minimum of 20 unique credits must be completed. Unique means the credits have not been used as part of any other environmental studies specialization.

Foundational Courses (Required. Check for specialization specific requisites before making choices.)

Select one of the following: Credits: 5

BIOL 101 - Fundamentals of Biology **Credits:** (5)
BIOL 181 - General Biology I **Credits:** (5)
BIOL 200 - Plants in the Modern World **Credits:** (5)

Select one of the following: Credits: 5

CHEM 101 - Contemporary Chemistry **Credits:** (5)
CHEM 111 - Introduction to Chemistry **Credits:** (4)
AND CHEM 111LAB - Introductory Chemistry Laboratory **Credits:** (1)
CHEM 181 - General Chemistry I **Credits:** (4)
AND CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)

Select one of the following: Credits: 5

GEOG 107 - Our Dynamic Earth **Credits:** (5)
GEOL 101 - Physical Geology **Credits:** (4)
AND GEOL 101LAB - Physical Geology Laboratory **Credits:** (1)
GEOL 102 - Geology of National Parks **Credits:** (4) **AND** GEOL 101LAB - Physical Geology Laboratory **Credits:** (1)
GEOL 108 - Introduction to Environmental Geology **Credits:** (5)

Select one of the following: Credits: 5

ANTH 130 - Introduction to Cultural Anthropology **Credits:** (5)

GEOG 101 - World Regional Geography **Credits:** (5)
GEOG 108 - Introduction to Human Geography **Credits:** (5)

Select one of the following: Credits: 5

ECON 101 - Economic Issues **Credits:** (5)
ECON 201 - Principles of Economics Micro **Credits:** (5)

Total Foundation Credits: 25

Required Core Courses

ENST 201 - Earth as an Ecosystem **Credits:** (5)
OR ENST 202 - Ecosystems, Resources, Population, and Culture **Credits:** (5)
ENST 210 - Global Environment from a Local Perspective **Credits:** (4)
ENST 303 - Environmental Management **Credits:** (5)
ENST 304 - Environmental Methods and Analysis **Credits:** (5)
ENST 330 - Environmental Leadership and Advocacy **Credits:** (5)
OR ENST 455 - Environmental Literature **Credits:** (3)
ENST 444 - Environmental Policy Formulation **Credits:** (4)

Select one or a combination of the following for a total of: Credits: 3-5

ENST 490 - Cooperative Education **Credits:** (1-12)
ENST 495 - Senior Research **Credits:** (3-5) **OR** (other 495 Senior Research)
UNIV 309 - Civic Engagement **Credits:** (2)
Study Abroad Course, by permission **Credits:** (3-5)

Upper-level electives: Credits: 8-10

Select two of the following courses. These courses cannot be used to fulfill specialization requirements.

ANTH 440 - Ecology and Culture **Credits:** (4)
OR GEOG 440 - Ecology and Culture **Credits:** (4)
BIOL 302 - Sustainability and Environmental Change **Credits:** (5)
BIOL 362 - Biomes of the Pacific Northwest **Credits:** (4)
CMGT 452 - LEED in Sustainable Construction **Credits:** (4)
ECON 462 - Environmental and Resource Economics **Credits:** (5)
ENST 310 - Energy and Society **Credits:** (5)
ENST 460 - Environmental Law **Credits:** (5)
OR GEOG 445 - Natural Resources Policy **Credits:** (4)
GEOG 373 - Water Resources **Credits:** (4)
GEOG 441 - Climate Change: Human and Biophysical Dimensions **Credits:** (4)
GEOG 442 - Alternative Energy Resources and Technology **Credits:** (5)
OR ETSC 442 - Alternative Energy Resources and Technology **Credits:** (5)
GEOL 302 - Oceans and Atmosphere **Credits:** (4)
GEOL 380 - Natural Hazards **Credits:** (5)
HIST 454 - American Environmental History **Credits:** (5)
PHIL 306 - Environmental Ethics **Credits:** (5)

Total Core Credits: 38-44

Environmental Geography Specialization

GEOG 107 AND GEOG 108 are required as foundational courses for this specialization. GEOG 107 is a prerequisite to most courses listed below. Additional prerequisites are noted with asterisks.

Choose three of the following physical geography courses: Credits: 10

GEOG 361 - Soils **Credits:** (5)
GEOG 382 - Hydrology **Credits:** (5)
GEOG 386 - Geomorphology **Credits:** (5)
GEOG 387 - Biogeography **Credits:** (5)
GEOG 388 - Weather and Climate **Credits:** (5)
GEOG 453 - Riparian and Wetlands Analysis **Credits:** (5)

Choose two of the following techniques courses: Credits: 10

GEOG 303 - Introductory GIS **Credits:** (5) *
GEOG 409 - Quantitative Methods in Geography **Credits:** (5)
GEOG 311 - Qualitative Methods in Geography **Credits:** (4)
GEOG 325 - Field Methods in Geography **Credits:** (5)
GEOG 330 - Airphoto Interpretation **Credits:** (5) *
GEOG 430 - Remote Sensing **Credits:** (5) **
* requires prerequisite of GEOG 230.
** requires prerequisite of GEOG 330 or GEOL 210 or consent of instructor.

Choose two of the following resource courses: Credits: 8-10

GEOG 373 - Water Resources **Credits:** (4)

GEOG 441 - Climate Change: Human and Biophysical Dimensions **Credits:** (4)
GEOG 442 - Alternative Energy Resources and Technology **Credits:** (5)
GEOG 444 - Mineral Resources **Credits:** (4)
GEOG 448 - Geographic Approaches to Environmental Resource Analysis **Credits:** (5) *
GEOG 449 - Environmental Hazard Analysis and Management **Credits:** (5)
* requires prerequisite of GEOG 250.
GEOG 458 - People, Parks, and Protected Areas **Credits:** (4)

Choose one of the following courses: Credits: 5

GEOG 450 - Arid Environments **Credits:** (5)
GEOG 451 - Mountain Environments **Credits:** (5)
GEOG 452 - Coastal Environments **Credits:** (5)
GEOG 454 - Forest Environments **Credits:** (5)
GEOG 479 - Geography of the West **Credits:** (1-12)

Specialization Subtotal Credits: 33-35

Total Credits: 95-103

Environmental Studies BS, Environmental Geology Specialization

Environmental Studies Requirements

The major in environmental studies provides students with an understanding of the natural science of environmental issues as well as the social, political, and economic factors that contribute to policy and planning decisions. Through this major, students will gain the necessary professional and technical skills for entry into successful environmental careers or for graduate studies in environmental fields. The major offers five specialization options in environmental biology, environmental chemistry, environmental geology, environmental geography, and environmental policy.

Requirements for Major (BS) in Environmental Studies
The requirements for the major in environment studies have three parts:

Foundational courses in supporting disciplines. Some of these courses also serve as prerequisites for courses within the specializations. These foundational courses must be completed before students take ENST 304.
A core requirement consisting of six interdisciplinary ENST courses, two upper-level electives, and a capstone experience outside of the classroom (research, internship, service learning, or study abroad).
A specialization consisting of 6-8 courses that focus on one area of study.
A minimum 2.0 GPA for program credits, and at least a C- in all ENST core courses.

Requirements for a double major with BS in environmental studies
The following double major combinations will have the environmental studies specialization course requirements waived for the BS degree in environmental studies; all environmental studies foundation and core course requirements must be completed. Required courses for the first degree major may not be used to fulfill upper-division environmental studies elective requirements (7-10 credits).

Bachelor Degree (Disciplinary)
Bachelor Degree (Environmental Studies)

BS Biology
BS Environmental Studies: Environmental Biology Specialization

BS Chemistry
BS Environmental Studies: Environmental Chemistry Specialization

BS Environmental Geological Sciences
BS Environmental Studies: Environmental Geology Specialization

BA Geography
BS Environmental Studies: Environmental Geography Specialization

BS Public Policy
BS Environmental Studies: Environmental Policy Specialization

The interdisciplinary major in public policy (BS) may be combined with the environmental studies specialization in environmental policy by completing the specific course requirements for both majors. Students who combine majors in public policy and environmental studies with a specialization in environmental policy will receive a Bachelor of Science degree in public policy and a Bachelor of Science degree in environmental studies. As some public policy requirements and electives count toward both degrees or majors, the actual additional coursework needed to fulfill the requirements of the second degree or

major may be as low as 19 credits.

Students may complete more than one specialization within the environmental studies major. To be eligible for a second specialization, a minimum of 20 unique credits must be completed. Unique means the credits have not been used as part of any other environmental studies specialization.

Foundational Courses (Required. Check for specialization specific requisites before making choices.)

Select one of the following: Credits: 5

BIOL 101 - Fundamentals of Biology **Credits:** (5)
BIOL 181 - General Biology I **Credits:** (5)
BIOL 200 - Plants in the Modern World **Credits:** (5)

Select one of the following: Credits: 5

CHEM 101 - Contemporary Chemistry **Credits:** (5)
CHEM 111 - Introduction to Chemistry **Credits:** (4)
AND CHEM 111LAB - Introductory Chemistry Laboratory **Credits:** (1)
CHEM 181 - General Chemistry I **Credits:** (4)
AND CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)

Select one of the following: Credits: 5

GEOG 107 - Our Dynamic Earth **Credits:** (5)
GEOL 101 - Physical Geology **Credits:** (4)
AND GEOL 101LAB - Physical Geology Laboratory **Credits:** (1)
GEOL 102 - Geology of National Parks **Credits:** (4) **AND** GEOL 101LAB - Physical Geology Laboratory **Credits:** (1)
GEOL 108 - Introduction to Environmental Geology **Credits:** (5)

Select one of the following: Credits: 5

ANTH 130 - Introduction to Cultural Anthropology **Credits:** (5)
GEOG 101 - World Regional Geography **Credits:** (5)
GEOG 108 - Introduction to Human Geography **Credits:** (5)

Select one of the following: Credits: 5

ECON 101 - Economic Issues **Credits:** (5)
ECON 201 - Principles of Economics Micro **Credits:** (5)

Total Foundation Credits: 25

Required Core Courses

ENST 201 - Earth as an Ecosystem **Credits:** (5)
OR ENST 202 - Ecosystems, Resources, Population, and Culture **Credits:** (5)
ENST 210 - Global Environment from a Local Perspective **Credits:** (4)
ENST 303 - Environmental Management **Credits:** (5)
ENST 304 - Environmental Methods and Analysis **Credits:** (5)
ENST 330 - Environmental Leadership and Advocacy **Credits:** (5)
OR ENST 455 - Environmental Literature **Credits:** (3)
ENST 444 - Environmental Policy Formulation **Credits:** (4)

Select one or a combination of the following for a total of: Credits: 3-5

ENST 490 - Cooperative Education **Credits:** (1-12)
ENST 495 - Senior Research **Credits:** (3-5) **OR** (other 495 Senior Research)
UNIV 309 - Civic Engagement **Credits:** (2)
Study Abroad Course, by permission **Credits:** (3-5)

Upper-level electives: Credits: 8-10

Select two of the following courses. These courses cannot be used to fulfill specialization requirements.

ANTH 440 - Ecology and Culture **Credits:** (4)
OR GEOG 440 - Ecology and Culture **Credits:** (4)
BIOL 302 - Sustainability and Environmental Change **Credits:** (5)
BIOL 362 - Biomes of the Pacific Northwest **Credits:** (4)
CMGT 452 - LEED in Sustainable Construction **Credits:** (4)
ECON 462 - Environmental and Resource Economics **Credits:** (5)
ENST 310 - Energy and Society **Credits:** (5)
ENST 460 - Environmental Law **Credits:** (5)
OR GEOG 445 - Natural Resources Policy **Credits:** (4)
GEOG 373 - Water Resources **Credits:** (4)
GEOG 441 - Climate Change: Human and Biophysical Dimensions **Credits:** (4)
GEOG 442 - Alternative Energy Resources and Technology **Credits:** (5)
OR ETSC 442 - Alternative Energy Resources and Technology **Credits:** (5)
GEOL 302 - Oceans and Atmosphere **Credits:** (4)
GEOL 380 - Natural Hazards **Credits:** (5)

HIST 454 - American Environmental History **Credits:** (5)
PHIL 306 - Environmental Ethics **Credits:** (5)

Total Core Credits: 38-44

Environmental Geology Specialization

GEOL 101/101LAB or GEOL 102/101LAB or GEOL 108 is required as foundational courses for this specialization and a prerequisite for most of the courses listed below.

GEOL 200 - Earth's Evolution and Global Change **Credits:** (5)
GEOL 302 - Oceans and Atmosphere **Credits:** (4)
GEOL 380 - Natural Hazards **Credits:** (5)
GEOL 386 - Geomorphology **Credits:** (5)
GEOL 445 - Hydrogeology **Credits:** (5)
MATH 154 - Pre-Calculus Mathematics II **Credits:** (5)

Choose one field course from the following: Credits: 4-5

GEOL 210 - Introduction to Geologic Field Methods **Credits:** (4)
GEOL 377 - Regional Natural History **Credits:** (2)
AND GEOL 377LAB - Regional Natural History **Credits:** (3)
GEOL 493 - Field Methods in Environmental Geology **Credits:** (4)

Specialization Subtotal Credits: 32-33

Total Credits: 94-101

Environmental Studies BS, Environmental Policy Specialization

Environmental Studies Requirements

The major in environmental studies provides students with an understanding of the natural science of environmental issues as well as the social, political, and economic factors that contribute to policy and planning decisions. Through this major, students will gain the necessary professional and technical skills for entry into successful environmental careers or for graduate studies in environmental fields. The major offers five specialization options in environmental biology, environmental chemistry, environmental geology, environmental geography, and environmental policy.

Requirements for Major (BS) in Environmental Studies
The requirements for the major in environment studies have three parts:

Foundational courses in supporting disciplines. Some of these courses also serve as prerequisites for courses within the specializations. These foundational courses must be completed before students take ENST 304.
A core requirement consisting of six interdisciplinary ENST courses, two upper-level electives, and a capstone experience outside of the classroom (research, internship, service learning, or study abroad).
A specialization consisting of 6-8 courses that focus on one area of study.
A minimum 2.0 GPA for program credits, and at least a C- in all ENST core courses.

Requirements for a double major with BS in environmental studies
The following double major combinations will have the environmental studies specialization course requirements waived for the BS degree in environmental studies; all environmental studies foundation and core course requirements must be completed. Required courses for the first degree major may not be used to fulfill upper-division environmental studies elective requirements (7-10 credits).

Bachelor Degree (Disciplinary)
Bachelor Degree (Environmental Studies)

BS Biology
BS Environmental Studies: Environmental Biology Specialization

BS Chemistry
BS Environmental Studies: Environmental Chemistry Specialization

BS Environmental Geological Sciences
BS Environmental Studies: Environmental Geology Specialization

BA Geography
BS Environmental Studies: Environmental Geography Specialization

BS Public Policy
BS Environmental Studies: Environmental Policy Specialization

The interdisciplinary major in public policy (BS) may be combined with the environmental studies specialization in

environmental policy by completing the specific course requirements for both majors. Students who combine majors in public policy and environmental studies with a specialization in environmental policy will receive a Bachelor of Science degree in public policy and a Bachelor of Science degree in environmental studies. As some public policy requirements and electives count toward both degrees or majors, the actual additional coursework needed to fulfill the requirements of the second degree or major may be as low as 19 credits.

Students may complete more than one specialization within the environmental studies major. To be eligible for a second specialization, a minimum of 20 unique credits must be completed. Unique means the credits have not been used as part of any other environmental studies specialization.

Foundational Courses (Required. Check for specialization specific requisites before making choices.)

Select one of the following: Credits: 5

BIOL 101 - Fundamentals of Biology **Credits:** (5)
BIOL 181 - General Biology I **Credits:** (5)
BIOL 200 - Plants in the Modern World **Credits:** (5)

Select one of the following: Credits: 5

CHEM 101 - Contemporary Chemistry **Credits:** (5)
CHEM 111 - Introduction to Chemistry **Credits:** (4)
AND CHEM 111LAB - Introductory Chemistry Laboratory **Credits:** (1)
CHEM 181 - General Chemistry I **Credits:** (4)
AND CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)

Select one of the following: Credits: 5

GEOG 107 - Our Dynamic Earth **Credits:** (5)
GEOL 101 - Physical Geology **Credits:** (4)
AND GEOL 101LAB - Physical Geology Laboratory **Credits:** (1)
GEOL 102 - Geology of National Parks **Credits:** (4) **AND** GEOL 101LAB - Physical Geology Laboratory **Credits:** (1)
GEOL 108 - Introduction to Environmental Geology **Credits:** (5)

Select one of the following: Credits: 5

ANTH 130 - Introduction to Cultural Anthropology **Credits:** (5)
GEOG 101 - World Regional Geography **Credits:** (5)
GEOG 108 - Introduction to Human Geography **Credits:** (5)

Select one of the following: Credits: 5

ECON 101 - Economic Issues **Credits:** (5)
ECON 201 - Principles of Economics Micro **Credits:** (5)

Total Foundation Credits: 25

Required Core Courses

ENST 201 - Earth as an Ecosystem **Credits:** (5)
OR ENST 202 - Ecosystems, Resources, Population, and Culture **Credits:** (5)
ENST 210 - Global Environment from a Local Perspective **Credits:** (4)
ENST 303 - Environmental Management **Credits:** (5)
ENST 304 - Environmental Methods and Analysis **Credits:** (5)
ENST 330 - Environmental Leadership and Advocacy **Credits:** (5)
OR ENST 455 - Environmental Literature **Credits:** (3)
ENST 444 - Environmental Policy Formulation **Credits:** (4)

Select one or a combination of the following for a total of: Credits: 3-5

ENST 490 - Cooperative Education **Credits:** (1-12)
ENST 495 - Senior Research **Credits:** (3-5) **OR** (other 495 Senior Research)
UNIV 309 - Civic Engagement **Credits:** (2)
Study Abroad Course, by permission **Credits:** (3-5)

Upper-level electives: Credits: 8-10

Select two of the following courses. These courses cannot be used to fulfill specialization requirements.

ANTH 440 - Ecology and Culture **Credits:** (4)
OR GEOG 440 - Ecology and Culture **Credits:** (4)
BIOL 302 - Sustainability and Environmental Change **Credits:** (5)
BIOL 362 - Biomes of the Pacific Northwest **Credits:** (4)
CMGT 452 - LEED in Sustainable Construction **Credits:** (4)
ECON 462 - Environmental and Resource Economics **Credits:** (5)
ENST 310 - Energy and Society **Credits:** (5)
ENST 460 - Environmental Law **Credits:** (5)

OR GEOG 445 - Natural Resources Policy **Credits:** (4)
GEOG 373 - Water Resources **Credits:** (4)
GEOG 441 - Climate Change: Human and Biophysical Dimensions **Credits:** (4)
GEOG 442 - Alternative Energy Resources and Technology **Credits:** (5)
OR ETSC 442 - Alternative Energy Resources and Technology **Credits:** (5)
GEOL 302 - Oceans and Atmosphere **Credits:** (4)
GEOL 380 - Natural Hazards **Credits:** (5)
HIST 454 - American Environmental History **Credits:** (5)
PHIL 306 - Environmental Ethics **Credits:** (5)

Total Core Credits: 38-44

Environmental Policy Specialization

ECON 201 is required as a foundation course.

ECON 462 - Environmental and Resource Economics **Credits:** (5)
ENST 460 - Environmental Law **Credits:** (5)
POSC 320 - Public Administration **Credits:** (5)
POSC 325 - Introduction to Public Policy **Credits:** (3)
POSC 429 - Research Seminar in Public Policy **Credits:** (3-5)

Select one of the following research tools courses: Credits: 5

BUS 221 - Introductory Business Statistics **Credits:** (5)
MATH 311 - Statistical Concepts and Methods **Credits:** (5)
PSY 362 - Introductory Statistics **Credits:** (5)
SOC 364 - Data Analysis in Sociology **Credits:** (5)

Select two of the following courses: Credits: 8-10

GEOG 303 - Introductory GIS **Credits:** (5)
GEOG 305 - Introduction to Land Use Planning **Credits:** (5)
GEOG 346 - Political Geography **Credits:** (4)
GEOG 373 - Water Resources **Credits:** (4)
GEOG 381 - Urban Geography **Credits:** (4)
GEOG 440 - Ecology and Culture **Credits:** (4)
OR ANTH 440 - Ecology and Culture **Credits:** (4)
GEOG 442 - Alternative Energy Resources and Technology **Credits:** (5)
GEOG 443 - Energy Policy **Credits:** (5)
GEOG 448 - Geographic Approaches to Environmental Resource Analysis **Credits:** (5)
GEOL 380 - Natural Hazards **Credits:** (5)
HIST 454 - American Environmental History **Credits:** (5)
PHIL 306 - Environmental Ethics **Credits:** (5)
POSC 318 - Political Parties and Interest Groups **Credits:** (5)
SOC 338 - Political Sociology **Credits:** (5)
SOC 380 - Social Ecology **Credits:** (5)

Specialization Subtotal Credits: 34-36

Total Credits: 96-104

Environmental Studies Minor

The environmental studies minor is designed primarily to serve undergraduate education and environmental literacy. Research and graduate education, and community education and service are other goals. Top priority is given to providing a large number of students with the opportunity to assess the nature, scope, and complexities of present and impending environmental problems. Other objectives include the provision of public education programs on environmental issues and the stimulation of interdisciplinary research on environmental problems. The development of expertise as an environmental specialist requires specialized work which can be pursued through the environmental studies major.

Required Courses Credits: 14

ENST 201 - Earth as an Ecosystem **Credits:** (5)
OR ENST 202 - Ecosystems, Resources, Population, and Culture **Credits:** (5)
ENST 210 - Global Environment from a Local Perspective **Credits:** (4)
ENST 303 - Environmental Management **Credits:** (5)

Select two from the following courses: Credits 7-10

ENST 304 - Environmental Methods and Analysis **Credits:** (5)
ENST 310 - Energy and Society **Credits:** (5)
ENST 330 - Environmental Leadership and Advocacy **Credits:** (5)
ENST 444 - Environmental Policy Formulation **Credits:** (4)
ENST 455 - Environmental Literature **Credits:** (3)

Department-approved elective Credits: 3-5

Total Credits: 24-29

Additional Information

Students choosing an environmental studies minor will propose an upper-division elective course in consultation with, and subject to, the pre-approval of the ENST Director. This elective course must be taken for a grade and be in a department outside the student's major. The following courses, however, will automatically be accepted without pre-approval provided they meet the other elective requirements: any other ENST course, ANTH/GEOG 440, BIOL 360, ECON 462, GEOG 445, HIST 454, SOC 380, POSC 320, or CHEM 345.

The minor requires that students finish with a minimum 2.0 GPA for their 25-30 program credits, and students must also earn at least a C- in each of the six courses that comprise their ENST program.

Ethnic Studies Program

College of the Sciences
Ellensburg
Farrell Hall, room 440

509-963-1305

Program Director
Nelson Pichardo, PhD, Sociology

Ethnic Studies Minor

Ethnic studies is a discipline that incorporates the social sciences and the humanities to explore the comparative approaches to the study of minority groups in the United States. The central mission of an ethnic studies program is to increase the understanding of racial and cultural diversity of American society and the dynamics of interethnic relationships. At the University the ETS program is interdisciplinary, offering courses from other disciplines with a core in ethnic studies. In addition to the minor program, it provides important services to teacher preparation and general education requirements.

Required Courses Credits: 15

- ETS 101 - Ethnic Awareness **Credits:** (5)
- ETS 354 - Minority Experiences **Credits:** (5)
- **OR** SOC 354 - Minority Experience **Credits:** (5)
- **OR** SOC 365 - Minority Groups **Credits:** (5)
- SOC 386 - Seminar on Racism **Credits:** (5)

Ethnic Studies Courses Credits: 3-6

Department-approved electives Credits: 9-15

Total Credits: 27-36

Family and Consumer Sciences Department

College of Education and Professional Studies
Ellensburg
Michaelsen Hall, room 100
Mail Stop 7465
509-963-2766
Fax 509-963-2787
www.cwu.edu/family-consumer
See website for how this program may be used for educational and career purposes.

Faculty and Staff
Chairs
Dorothy Chase, PhD
Robert Perkins, EdD

Professors
Kimberlee Bartel, PhD, business and marketing, career and technical education director
Dorothy Chase, PhD recreation and tourism
Robert Perkins, EdD, business and marketing, leadership, recreation and tourism

Associate Professors
Kenneth Cohen, PhD, recreation and tourism
Duane Dowd, PhD, CLFE, family studies
Andrea Eklund, MA, apparel, textiles and merchandising
John Hudelson, PhD, global wine studies
Barbara Masberg, PhD, recreation and tourism

Assistant Professors
Amy Claridge, PhD, family studies
Sarah Feeney, PhD, family studies

Lecturers
Vivian Baglien, PhD, family consumer sciences education
Heather Bell, PhD, recreation and tourism
Karen Bergh, PhD, family consumer sciences education
Christopher Brandmeir, GMBA, recreation and tourism
Richard DeShields, MS, family studies
David Douglas, MS, family studies
Sabrina, Enders, MS, family studies
Jodi Hoctor, BS, recreation and tourism
Carla Jellum, PhD, recreation and tourism
Donna Longwell, recreation and tourism
Katrina Marquardt, MS, family studies
Jodi Musser, MA, business and marketing, career and technical education
Miranda Porterfield, MBA, global wine studies
Peggy Roberts, MA, family studies
Eric Scott, MS, recreation and tourism

Lynn Whelan, MA, apparel, textiles and merchandising
Kenneth Wilkinson, MS, recreation and tourism

Emeritus Professors
Joan Amby, PhD, family studies
Willa Dene Powell, PhD, family and consumer sciences education
Carolyn Schactler, MS, apparel design
William Vance, EdD, recreation and tourism
Marla Wyatt, PhD, family and consumer sciences education

Staff
Sheri Hubbard, program coordinator
Alex Lange, secretary senior

Program Coordinators

Kimberlee Bartel, PhD, business and marketing, career and technical education director
Duane Dowd, PhD, family studies
John Hudelson, PhD, global wine studies
Andrea Eklund, MA apparel, textiles and merchandising
Barbara Masberg, PhD, recreation and tourism

Department Information
The Department of Family and Consumer Sciences' programs lead to baccalaureate degrees in apparel, textiles and merchandising, family and consumer sciences, career and technical education teaching, family studies, global wine studies, and recreation tourism, and events.

Students may complete a minor in any of the following areas: apparel textiles and merchandising as well as apparel design, family and consumer sciences, family and consumer sciences education, family studies, program development, recreation management, tourism management, wine trade and tourism, sustainable tourism, and event planning.

Admission Policy for Family and Consumer Sciences

- A completed Family and Consumer Sciences (FCS) major application form must be signed by a program advisor after an initial advising meeting. The advisor will submit it to the FCS chair for approval.
- Freshmen are encouraged to apply.
- Students seeking a major or minor should see specific requirements in the appropriate program section of this catalog.
- For information on teacher certification for marketing education or business education, contact Professor Kim Bartel or Professor Rob Perkins.

Global Wine Studies
This Interdisciplinary Program provides students with a broad understanding of the global wine industry. The program prepares graduates for careers in winery and vineyard management, wine merchandising, wholesale, retail, e-commerce, distribution, marketing, import/export, hospitality, entrepreneurship, consulting, and more.

In the major, students complete 50 major core credits to acquire a broad base of knowledge and skills related to wine, wine business issues, and the global wine industry. Students also complete a minor, 25 to 36 credits, in one of several complementary academic areas. Students will also gain valuable experience by participating in a required international field experience and an internship with a wine-related business, either in the U.S. or abroad.

Admission Requirements
Students must complete the pre-admission requirements prior to admission into the degree program. An overall minimum 2.5 GPA will be required for admission. Students must fill out an application that includes an essay of motivation and goals. Upon approval of the application, an in-person or telephone interview will be conducted between the advisor for the global wine studies major and the prospective student. Permission of the major advisor is required. Upon admittance to the program students must agree to sign a written statement regarding professional conduct and responsibility.

Student must be at least 21 years old before enrolling in courses that involve tasting wine (GWS 302 - Fundamentals of Viticulture and Enology, GWS 304 - Wine Marketing and Branding, GWS 406 - Professional Wine Analysis, GWS 408 - Advanced Sensory Analysis and GWS 410 - Wine Faults.)

Special Requirements
Students will be expected to spend significant amounts of time outside the classroom on projects, field trips, and assignments. Students must earn a cumulative GPA of 2.7 in the global wine studies core courses.

Financial Obligations
Because this is a self-supported program: no tuition waiver programs apply. Additional course fees and continuing education tuition apply. Tuition for GWS classes may be higher than regular CWU tuition.

Recreation and Tourism
The Recreation and Tourism Program (RT) prepares students for positions in one of the top three industries in Washington State and the world's number-one industry. Professional positions are numerous. The following list is a sampling of the types of professional positions currently held by RT graduates: city parks and recreation director,

recreation manager, front office and training manager, director of youth programs, guest services manager, and winery marketing manager, among others.

To be admitted to a major or minor in the RT program, students must meet the admission and exit requirements for majors and minors in the Department of Family and Consumer Sciences. To graduate, majors and minors must meet the department graduation requirements.

Special Requirements

- The elective area will include 14 credits of RT prefix courses. Elective courses must be pre-approved by an advisor prior to registration for course(s).
- Students are required to complete 6 credits of RT 292 Practicum and 12 credits RT 490 Cooperative Education/ Internship. An additional 4 credits of RT 292 or 8 credits of RT 490 may be applied to the elective area with prior advisor approval.
- Students should plan to complete RT 490 Cooperative Education during the summer term.

Family and Consumer Sciences Major, BA

The BA in family and consumer sciences comprises a general introduction to the broad areas of family and consumer sciences and, with an appropriate minor, can provide students with a well-rounded preparation for life or for further advanced study. This major requires a minor or double major. Students must have a cumulative GPA of at least 2.3 for full admission to this major and a 2.5 GPA for graduation.

(NOTE: Students seeking a BA degree must complete one year college/university study or two years high school study of a single world language.)

Required Courses

- ATM 351 - Sociocultural Aspects of Apparel **Credits:** (4)
- ATM 355 - Consumer Textiles **Credits:** (4)
- FCSC 371 - Consumer Awareness **Credits:** (3)
- FCSC 472 - Life Management **Credits:** (5)
- FS 232 - Child Development **Credits:** (3)
- FS 234 - Contemporary Families **Credits:** (4)
- FS 336 - Parent Education and Guidance **Credits:** (3)
- FS 337 - Human Sexuality **Credits:** (4)
- FCSG 205 - FCS Entry Assessment **Credits:** (1)
- FCSG 405 - FCS Exit Assessment **Credits:** (1)
- NUTR 101 - Introduction to Human Nutrition **Credits:** (5)
- NUTR 240 - Introduction to Foods **Credits:** (2)
- FCSH 367 - Family Housing **Credits:** (3)
- NUTR 240LAB - Introduction to Foods Laboratory **Credits:** (2)

Choose two of the following: Credits 6-7

- ATM 280 - Basic Sewing Techniques **Credits:** (3)
- FS 235 - Relationships and Personal Development **Credits:** (3)
- FCSH 166 - Applied Creativity **Credits:** (3)
- FCSG 320 - Program Management and Planning **Credits:** (4)

Total Credits: 50-51

Apparel, Textiles and Merchandising Major, BS

The Apparel, Textiles and Merchandising Program is designed to help you gain the knowledge you need to recognize industry trends, analyze market and consumer behavior, and evaluate retail needs in the diverse, fast-paced, and ever changing fashion industry. Students will build a well-rounded base knowledge about textile and apparel products, merchandising strategies, product development, production processes, trends, consumers and sustainability. Field experiences allow students to network with industry professionals and study abroad opportunities are highly encouraged. Students gain additional hands-on professional experience during summer internships. Quarterly meetings with the faculty advisor assures the student is academically on track to achieve their professional goals.

To be admitted to a major in the Apparel, Textiles and Merchandising Program, a student must have a cumulative GPA of 2.3 (or be a freshman or transfer). A minimum grade of C- must be earned in each course counted toward fulfilling major requirements.

Required Courses - Credits: 69

- ATM 251 - Style Principles: Body to Store **Credits:** (3)
- ATM 270 - Digital Presentation Techniques **Credits:** (4)
- ATM 280 - Basic Sewing Techniques **Credits:** (3)
- ATM 285 - Buying and Merchandising Math **Credits:** (4)

- ATM 289 - Northwest Field Experience in Apparel and Textiles **Credits:** (3)
- ATM 301 - Introduction to the Fashion Industry **Credits:** (4)
- ATM 351 - Sociocultural Aspects of Apparel **Credits:** (4)
- ATM 353 - Apparel Manufacturing **Credits:** (5)
- ATM 355 - Consumer Textiles **Credits:** (4)
- ATM 379 - ATM Internship Planning **Credits:** (1)
- ATM 381 - Fashion Show Production **Credits:** (2)
- ATM 389 - Fashion Trend Analysis **Credits:** (3)
- ATM 452 - History of Fashion **Credits:** (4)
- ATM 487 - Fashion Merchandising Exit Assessment **Credits:** (1)
- ATM 489 - Merchandise Buying and Planning **Credits:** (4)
- ATM 490 - Cooperative Education **Credits:** (1-12) Must be taken for 10 credits.
- FCSG 419 - Applied Research and Evaluation **Credits:** (3)
- IT 258 - Spreadsheet Applications **Credits:** (3)
- RMT 330 - Principles of Retailing **Credits:** (4)

Department-approved Electives - Credits 10

Total Credits: 79

Business and Marketing Education Major, BS

This bachelor of sciences teaching major satisfies the endorsement for business and marketing education teaching for career and technical education. It is designed for students who are seeking teaching careers in business and marketing education at the secondary grade levels (7-12). The coursework provides experiences in the business and marketing education content areas and instructional pedagogy including field experiences that are designed to prepare teacher certification and content endorsement. Students in the business and marketing education major must be admitted to the Teacher Certification Program and complete the Professional Education Program sequence coursework as part of the Teacher Certification Program.

Program Requirements and Pre-admission Requirements
Students wishing to obtain a teaching certificate in business and marketing education will:

- Complete the business and marketing career and technical education teaching major
- Successfully complete CTE 310 before being fully admitted to the major
- Have a university-level cumulative GPA of at least 2.3 for full admission to this major and a 3.0 minimum cumulative GPA in the major to exit the program and to graduate from CWU with teacher certification
- Earn a minimum grade of C in each course counted toward fulfilling major requirements
- Apply, be accepted into, and complete the Teacher Certification Program
- Student teach in a CTE -approved program
- Hold a valid first aid card with CPR
- Complete 2,000 hours of paid work experience in the last six years
- Provide documentation of occupational safety

Required to take the Professional Education Program for 50 credits.

Required Courses

- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- BME 346 - Basic Accounting for Business and Marketing Education **Credits:** (5)
- BME 450 - Curriculum Development for Business and Marketing Education **Credits:** (4)
- BME 451 - Methods and Materials for Teaching Information Technology **Credits:** (4)
- BME 452 - Methods and Materials for Teaching Basic Business and Marketing **Credits:** (4)
- BUS 241 - Legal Environment of Business **Credits:** (5)
- CS 101 - Computer Basics **Credits:** (4)
- **OR** IT 101 - Computer Applications **Credits:** (3)
- CTE 310 - Introduction to Career and Technical Education **Credits:** (4)
- CTE 460 - Business and Marketing Education Exit Assessment **Credits:** (4)
- ECON 101 - Economic Issues **Credits:** (5)
- FCSG 220 - Leadership in Human Development **Credits:** (4)
- FCSG 320 - Program Management and Planning **Credits:** (4)
- FCSG 379 - Professional Development and Internship Planning **Credits:** (3)
- FCSG 420 - Program Promotion and Advertising **Credits:** (5)
- IT 260 - Integrated Information Technology Application Projects **Credits:** (5)
- OCED 410 - Career and Technical Education School to Work Programs **Credits:** (4)

Total Credits: 68-69

Family and Consumer Sciences Career and Technical Education Teaching Major, BS

This bachelor of sciences teaching major satisfies the endorsement for family and consumer sciences teaching for career and technical education.

Special requirements:
Students wishing to obtain a teaching certificate in family and consumer sciences education will:

- Complete the family and consumer sciences career and technical education teaching major
- Successfully complete FCSG 205 before being fully admitted to the major
- Have a university-level cumulative GPA of at least 2.3 for full admission to this major and a 3.0 minimum cumulative GPA in the major to exit the program and to graduate from CWU with teacher certification
- Earn a grade of C in each course counted toward fulfilling major requirements
- Apply, be accepted into, and complete the Teacher Certification Program
- Student teach in a CTE-approved program
- Hold a valid first aid card with CPR
- Complete 2,000 hours of paid work experience in the last six years
- Provide documentation of occupational safety

Required Courses

- ATM 351 - Sociocultural Aspects of Apparel **Credits:** (4)
- ATM 355 - Consumer Textiles **Credits:** (4)
- FCSC 371 - Consumer Awareness **Credits:** (3)
- FCSC 472 - Life Management **Credits:** (5)
- FCSE 326 - Curriculum in Career and Technical Education for Family and Consumer Sciences. **Credits:** (3)
- FCSE 422 - Impact of Education Reform on FCS **Credits:** (2)
- FCSE 426 - Methods and Materials of Teaching Family and Consumer Sciences **Credits:** (3)
- FS 232 - Child Development **Credits:** (3)
- FS 234 - Contemporary Families **Credits:** (4)
- FS 336 - Parent Education and Guidance **Credits:** (3)
- FS 337 - Human Sexuality **Credits:** (4)
- FCSG 205 - FCS Entry Assessment **Credits:** (1)
- FCSG 320 - Program Management and Planning **Credits:** (4)
- FCSG 405 - FCS Exit Assessment **Credits:** (1)
- FCSH 367 - Family Housing **Credits:** (3)
- NUTR 101 - Introduction to Human Nutrition **Credits:** (5)
- OCED 410 - Career and Technical Education School to Work Programs **Credits:** (4)
- NUTR 240 - Introduction to Foods **Credits:** (2)
- NUTR 240LAB - Introduction to Foods Laboratory **Credits:** (2)

Choose two of the following: Credits 6-7

- ATM 280 - Basic Sewing Techniques **Credits:** (3)
- FS 235 - Relationships and Personal Development **Credits:** (3)
- FCSH 166 - Applied Creativity **Credits:** (3)
- PSY 447 - Psychology of Adolescence **Credits:** (4)

Total Credits: 66-67

Family Studies Major BS, Child Life Specialization

Family Studies Core

The bachelor of science family studies major is an interdisciplinary study of interpersonal and family relationships and their impact on child development. Family Studies majors are actively engaged in community involvement and practical application of knowledge.

Family Studies majors in both specializations must complete a practicum experience that includes 360 total hours (12 academic credits) of field related service within the community. Students are encouraged to apply for the major early in their academic careers to allow for proper planning and placement in the Family Studies Practicum.

Students wishing to declare a major in family studies must be incoming freshman or have a cumulative GPA of 2.7. Family Studies majors must maintain a cumulative GPA of 2.7 or higher to remain in the major, and must earn a "C" or higher in all courses used to satisfy the Family Studies major.

Family Studies Core Requirements

- FCSG 220 - Leadership in Human Development **Credits:** (4)
- FS 101 - Skills for Marriage and Intimate Relationships **Credits:** (4)
- FS 234 - Contemporary Families **Credits:** (4)
- FS 235 - Relationships and Personal Development **Credits:** (3)

- FS 320 - Theories of Family Dynamics **Credits:** (4)
- FS 336 - Parent Education and Guidance **Credits:** (3)
- FS 344 - Foundations of Marriage and Family Therapy **Credits:** (4)
- FS 419 - Research in Family Studies **Credits:** (4)
- FS 433 - Family Life Education **Credits:** (4)
- FS 434 - Diversity in Families **Credits:** (4)
- FS 492 - Family Studies Practicum **Credits:** (1-6) (Must be taken for a total of 12 credits.)

Total Core Requirements Credits: 50

Child Life Specialization

The child life specialization applies child development theory to the practice of helping children and families through traumatic events, specifically related to hospitalization. The curriculum meets the recommendations of the Child Life Council and includes two courses taught by Certified Child Life Specialists. Graduates are well prepared for career opportunities that involve work with children, or to pursue a child life practicum and child life graduate study required to become a certified child life specialist.

Required Courses - Credits: 31

- FS 232 - Child Development **Credits:** (3)
- FS 338 - Attachment Theory and Practice **Credits:** (4)
- FS 415 - Therapeutic Play **Credits:** (4)
- FS 416 - Child Life I: Child Life Scope of Practice **Credits:** (4)
- FS 417 - Childhood Diseases and Disorders **Credits:** (4)
- FS 418 - Child Life II: Impact of Child Hospitalization **Credits:** (4)
- FS 432 - Theories in Child Development **Credits:** (3)
- SOC 320 - Death and Dying **Credits:** (5)

Department-approved Electives - Credits: 7

- FS 310 - Family Issues in the 21st Century **Credits:** (4)
- FS 333 - Culture and Marriage **Credits:** (4)
- FS 334 - Family Problems and Mediation **Credits:** (4)
- FS 335 - Divorce and Remarriage **Credits:** (3)
- FS 337 - Human Sexuality **Credits:** (4)
- FS 403 - Family Communication **Credits:** (4)
- FS 435 - Family Gerontology **Credits:** (4)
- FS 439 - Families and Public Policy **Credits:** (4)
- FS 440 - Teaching for Family Studies **Credits:** (1-3)
- PHIL 308 - Medical Ethics **Credits:** (5)

Total Specialization Credits: 38

Total Credits: 88

Family Studies Major BS, Family Science Specialization

Family Studies Core

The bachelor of science family studies major is an interdisciplinary study of interpersonal and family relationships and their impact on child development. Family Studies majors are actively engaged in community involvement and practical application of knowledge.

Family Studies majors in both specializations must complete a practicum experience that includes 360 total hours (12 academic credits) of field related service within the community. Students are encouraged to apply for the major early in their academic careers to allow for proper planning and placement in the Family Studies Practicum.

Students wishing to declare a major in family studies must be incoming freshman or have a cumulative GPA of 2.7. Family Studies majors must maintain a cumulative GPA of 2.7 or higher to remain in the major, and must earn a "C" or higher in all courses used to satisfy the Family Studies major.

Family Studies Core Requirements

- FCSG 220 - Leadership in Human Development **Credits:** (4)
- FS 101 - Skills for Marriage and Intimate Relationships **Credits:** (4)
- FS 234 - Contemporary Families **Credits:** (4)
- FS 235 - Relationships and Personal Development **Credits:** (3)
- FS 320 - Theories of Family Dynamics **Credits:** (4)
- FS 336 - Parent Education and Guidance **Credits:** (3)
- FS 344 - Foundations of Marriage and Family Therapy **Credits:** (4)
- FS 419 - Research in Family Studies **Credits:** (4)
- FS 433 - Family Life Education **Credits:** (4)
- FS 434 - Diversity in Families **Credits:** (4)
- FS 492 - Family Studies Practicum **Credits:** (1-6) (Must be taken for a total of 12 credits.)

Total Core Requirements Credits: 50

Family Science Specialization

Students in the family science specialization are well prepared for career opportunities in family service agencies, parent education programs, and family counseling centers, other family life education settings, or advanced study in family relations. All family science specialization graduates are eligible to become Certified Family Life Educators by the National Council on Family Relations.

Required Courses - Credits: 22

- BME 346 - Basic Accounting for Business and Marketing Education **Credits:** (5)
- FCSC 371 - Consumer Awareness **Credits:** (3)
- FS 337 - Human Sexuality **Credits:** (4)
- FS 405 - Senior Seminar **Credits:** (2)
- FS 439 - Families and Public Policy **Credits:** (4)
- PSY 313 - Developmental Psychology **Credits:** (4)

Department-approved specialization electives - Credits: 10

Total Specialization Credits: 32

Total Credits: 82

Global Wine Studies, BS

This Interdisciplinary Program provides students with a broad understanding of the global wine industry. The program prepares graduates for careers in winery and vineyard management, wine merchandising, wholesale, retail, e-commerce, distribution, marketing, import/export, hospitality, entrepreneurship, consulting, and more.

In the major, students complete 52 major core credits to acquire a broad base of knowledge and skills related to wine, wine business issues, and the global wine industry. Students also complete a minor in one of several complementary academic areas. Students will also gain valuable experience by participating in a required international field experience and an internship with a wine-related business, either in the U.S. or abroad.

Admission Requirements
Students must complete the pre-admission requirements prior to admission into the degree program. An overall minimum 2.5 GPA will be required for admission. Students must fill out an application that includes an essay of motivation and goals. Upon approval of the application, an in-person or telephone interview will be conducted between the advisor for the global wine studies major and the prospective student. Permission of the major advisor is required. Upon admittance to the program students must agree to sign a written statement regarding professional conduct and responsibility.

Student must be at least 21 years old before enrolling in courses that involve tasting wine (GWS 302 - Fundamentals of Viticulture and Enology, GWS 304 - Wine Marketing and Branding, GWS 406 - Professional Wine Analysis, GWS 408 - Advanced Sensory Analysis and GWS 410 - Wine Faults.)

Special Requirements
Students will be expected to spend significant amounts of time outside the classroom on projects, field trips, and assignments. Students must earn a cumulative GPA of 2.7 in the global wine studies core courses.

Financial Obligations
Because this is a self-supported program: no tuition waiver programs apply. Additional course fees and continuing education tuition apply. Tuition for GWS classes may be higher than regular CWU tuition.

Pre-admission Requirements Credits: 15

- CHEM 111 - Introduction to Chemistry **Credits:** (4)
- CHEM 111LAB - Introductory Chemistry Laboratory **Credits:** (1)
- GEOG 101 - World Regional Geography **Credits:** (5)

Choose one of the following courses: Credits 5

- HUM 101 - Exploring Cultures in the Ancient World **Credits:** (5)
- HUM 102 - Exploring Cultures From 16th through 19th Centuries **Credits:** (5)
- HUM 103 - Exploring Cultures in Modern and Contemporary Societies **Credits:** (5)

Global Wine Studies Core Courses Credits: 52

- ACCT 301 - Financial Accounting Analysis **Credits:** (5)
- GWS 302 - Fundamentals of Viticulture and Enology **Credits:** (4)
- GWS 303 - Major Wine Regions of the World **Credits:** (4)
- GWS 304 - Wine Marketing and Branding **Credits:** (4)

- GWS 402 - Issues in Viticulture and Enology **Credits:** (4)
- GWS 403 - The Global Wine Industry **Credits:** (4)
- GWS 404 - The International Wine Trade **Credits:** (5)
- GWS 406 - Professional Wine Analysis **Credits:** (3)
- GWS 408 - Advanced Sensory Analysis **Credits:** (4)
- GWS 410 - Wine Faults **Credits:** (3)
- GWS 412 - Advanced Wine Regions **Credits:** (3)
- GWS 490 - Cooperative Education **Credits:** (1-12) GWS 490 must be taken for 6 credits.
- INTL 410 - Agriculture **Credits:** (1-12) INTL 410 must be taken for 3 credits.

Total Credits: 67

Select a minor through advisement with GWS faculty.

Recreation and Tourism BS, Event Planning Specialization

Recreation and Tourism Core

Program Director
Barbara Masberg, PhD

Faculty
Heather Bell, PhD
Kenneth Cohen, PhD
Carla Jellum, PhD
Robert Perkins, EdD

The Recreation and Tourism Program (RT) prepares students for positions in one of the top three industries in Washington State and the world's number-one industry. Professional positions are numerous. The following list is a sampling of the types of professional positions currently held by RT graduates: city parks and recreation director, recreation manager, front office and training manager, director of youth programs, guest services manager, and winery marketing manager, general manager, and event and meeting planner, marketer, among others.

Requirements
To be admitted to a major or minor in Recreation Tourism Events, a student must have a cumulative GPA of 2.3 (or be a freshman or transfer).

A minimum grade of C- must be earned in each course counted toward fulfilling major and minor requirements.

Students are required to complete 6 credits of RT 292 Practicum and 12 credits RT 490 Cooperative Education/ Internship. An additional 4 credits of RT 292 or 8 credits of RT 490 may be applied to the elective area with prior advisor approval.

Students should plan to complete RT 490 Cooperative Education during the summer term.

Elective courses must be pre-approved by an advisor prior to registration for course(s). The elective UNIV 304 International Sustainable Development (5) is an on-line course tied to an international travel experience in which the student volunteers through GIVE in community projects in Nicaragua, Tanzania, or Thailand. See UNIV 304 in course lists for full description.

Recreation and Tourism Core Requirements

- FCSG 220 - Leadership in Human Development **Credits:** (4)
- FCSG 230 - Program and Event Budgeting **Credits:** (2)
- FCSG 320 - Program Management and Planning **Credits:** (4)
- FCSG 379 - Professional Development and Internship Planning **Credits:** (3)
- FCSG 419 - Applied Research and Evaluation **Credits:** (3)
- FCSG 420 - Program Promotion and Advertising **Credits:** (5)
- HRM 381 - Management of Human Resources **Credits:** (5)
- **OR** RT 380 - Supervision in the Hospitality Industry **Credits:** (5)
- IT 260 - Integrated Information Technology Application Projects **Credits:** (5)
- RT 201 - Introduction to Recreation and Tourism **Credits:** (3)
- RT 292 - Practicum **Credits:** (1-3) (6 credits required taken as 1-3 credit classes)
- RT 309 - Facility Planning and Sustainable Design **Credits:** (4)
- RT 330 - Sustainable Resources for Recreation and Tourism **Credits:** (3)
- RT 484 - Legal Liability and Risk Management **Credits:** (4)
- RT 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 12 credits)

Total Core Credits: 63

Event Planning Specialization

The event planning specialization prepares students for positions in special events coordination and operation, lodging sales and marketing, convention centers, destination marketing organizations, tourism planning, recreation and sports centers, and many others.

Required Courses

- ACCT 301 - Financial Accounting Analysis **Credits:** (5)
- **OR** BSED 146 - Basic Accounting **Credits:** (5)
- RT 373D - Convention and Meeting Management **Credits:** (5)
- RT 374 - Festivals and Events **Credits:** (3)
- RT 405 - Hospitality Catering **Credits:** (3)
- RT 452 - Regional Wine Tourism **Credits:** (4)
- **OR** GWS 452 - Regional Wine Tourism **Credits:** (4)
- **OR** GWS 303 - Major Wine Regions of the World **Credits:** (4)
- RT 485 - Events Administration **Credits:** (4)

Department-approved Electives - Credits: (10)

Choose from the following courses:

- ATM 381 - Fashion Show Production **Credits:** (2)
- COM 312 - Introduction to Non-Profit Leadership **Credits:** (4)
- COM 345 - Business and Professional Speaking **Credits:** (4)
- NUTR 240 - Introduction to Foods **Credits:** (2)
- NUTR 240LAB - Introduction to Foods Laboratory **Credits:** (2)
- RT 222 - Recreation Programming and Activities **Credits:** (3)
- RT 272 - Lodging Operations I **Credits:** (3)
- RT 371 - Tourism Essentials **Credits:** (3)
- RT 373E - Resort Management **Credits:** (5)
- RT 379 - Cruise Line Industry **Credits:** (3)
- RT 381 - Recreational Sports Management **Credits:** (3)
- RT 431 - Recreation Administration of Retreats and Camps **Credits:** (3)
- RT 452 - Regional Wine Tourism **Credits:** (4) (if not taken in required courses)
- **OR** GWS 452 - Regional Wine Tourism **Credits:** (4)
- RT 498 - Special Topics **Credits:** (1-6)
- TH 360 - Stage Management **Credits:** (3)
- UNIV 304 - International Sustainable Development **Credits:** (5)

Total Specialization Credits: 34

Total Credits: 97

Recreation and Tourism BS, Recreation Management Specialization

Recreation and Tourism Core

Program Director
Barbara Masberg, PhD

Faculty
Heather Bell, PhD
Kenneth Cohen, PhD
Carla Jellum, PhD
Robert Perkins, EdD

The Recreation and Tourism Program (RT) prepares students for positions in one of the top three industries in Washington State and the world's number-one industry. Professional positions are numerous. The following list is a sampling of the types of professional positions currently held by RT graduates: city parks and recreation director, recreation manager, front office and training manager, director of youth programs, guest services manager, and winery marketing manager, general manager, and event and meeting planner, marketer, among others.

Requirements
To be admitted to a major or minor in Recreation Tourism Events, a student must have a cumulative GPA of 2.3 (or be a freshman or transfer).

A minimum grade of C- must be earned in each course counted toward fulfilling major and minor requirements.

Students are required to complete 6 credits of RT 292 Practicum and 12 credits RT 490 Cooperative Education/ Internship. An additional 4 credits of RT 292 or 8 credits of RT 490 may be applied to the elective area with prior advisor approval.

Students should plan to complete RT 490 Cooperative Education during the summer term.

Elective courses must be pre-approved by an advisor prior to registration for course(s). The elective UNIV 304 International Sustainable Development (5) is an on-line

course tied to an international travel experience in which the student volunteers through GIVE in community projects in Nicaragua, Tanzania, or Thailand. See UNIV 304 in course lists for full description.

Recreation and Tourism Core Requirements

- FCSG 220 - Leadership in Human Development **Credits:** (4)
- FCSG 230 - Program and Event Budgeting **Credits:** (2)
- FCSG 320 - Program Management and Planning **Credits:** (4)
- FCSG 379 - Professional Development and Internship Planning **Credits:** (3)
- FCSG 419 - Applied Research and Evaluation **Credits:** (3)
- FCSG 420 - Program Promotion and Advertising **Credits:** (5)
- HRM 381 - Management of Human Resources **Credits:** (5)
- **OR** RT 380 - Supervision in the Hospitality Industry **Credits:** (5)
- IT 260 - Integrated Information Technology Application Projects **Credits:** (5)
- RT 201 - Introduction to Recreation and Tourism **Credits:** (3)
- RT 292 - Practicum **Credits:** (1-3) (6 credits required taken as 1-3 credit classes)
- RT 309 - Facility Planning and Sustainable Design **Credits:** (4)
- RT 330 - Sustainable Resources for Recreation and Tourism **Credits:** (3)
- RT 484 - Legal Liability and Risk Management **Credits:** (4)
- RT 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 12 credits)

Total Core Credits: 63

Recreation Management Specialization

The recreation management specialization prepares students for entry-level supervisory and managerial positions with government parks and recreation departments, YMCAs and Boys and Girls Clubs, armed forces recreation, university recreation and intramural sports, camping and outdoor recreation.

Required Courses

- Social Science Course (Approved by Advisor) **Credits:** (3)
- RT 222 - Recreation Programming and Activities **Credits:** (3)
- RT 382 - Community Recreation **Credits:** (3)
- RT 488 - Recreation Management **Credits:** (4)

Department-approved Electives - Credits: (21)

Total Specialization Credits: 34

Total Credits: 97

Recreation and Tourism BS, Tourism Management Specialization

Recreation and Tourism Core

Program Director
Barbara Masberg, PhD

Faculty
Heather Bell, PhD
Kenneth Cohen, PhD
Carla Jellum, PhD
Robert Perkins, EdD

The Recreation and Tourism Program (RT) prepares students for positions in one of the top three industries in Washington State and the world's number-one industry. Professional positions are numerous. The following list is a sampling of the types of professional positions currently held by RT graduates: city parks and recreation director, recreation manager, front office and training manager, director of youth programs, guest services manager, and winery marketing manager, general manager, and event and meeting planner, marketer, among others.

Requirements
To be admitted to a major or minor in Recreation Tourism Events, a student must have a cumulative GPA of 2.3 (or be a freshman or transfer).

A minimum grade of C- must be earned in each course counted toward fulfilling major and minor requirements.

Students are required to complete 6 credits of RT 292 Practicum and 12 credits RT 490 Cooperative Education/ Internship. An additional 4 credits of RT 292 or 8 credits of RT 490 may be applied to the elective area with prior advisor approval.

Students should plan to complete RT 490 Cooperative Education during the summer term.

Elective courses must be pre-approved by an advisor

prior to registration for course(s). The elective UNIV 304 International Sustainable Development (5) is an on-line course tied to an international travel experience in which the student volunteers through GIVE in community projects in Nicaragua, Tanzania, or Thailand. See UNIV 304 in course lists for full description.

- FCSG 220 - Leadership in Human Development **Credits:** (4)
- FCSG 230 - Program and Event Budgeting **Credits:** (2)
- FCSG 320 - Program Management and Planning **Credits:** (4)
- FCSG 379 - Professional Development and Internship Planning **Credits:** (3)
- FCSG 419 - Applied Research and Evaluation **Credits:** (3)
- FCSG 420 - Program Promotion and Advertising **Credits:** (5)
- HRM 381 - Management of Human Resources **Credits:** (5)
- **OR** RT 380 - Supervision in the Hospitality Industry **Credits:** (5)
- IT 260 - Integrated Information Technology Application Projects **Credits:** (5)
- RT 201 - Introduction to Recreation and Tourism **Credits:** (3)
- RT 292 - Practicum **Credits:** (1-3) (6 credits required taken as 1-3 credit classes)
- RT 309 - Facility Planning and Sustainable Design **Credits:** (4)
- RT 330 - Sustainable Resources for Recreation and Tourism **Credits:** (3)
- RT 484 - Legal Liability and Risk Management **Credits:** (4)
- RT 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 12 credits)

Total Core Credits: 63

Tourism Management Specialization

The student with a specialization in tourism management may choose a career in travel- and tourism-related industries, including hotels, resorts, convention centers, cruise lines, airlines, visitor centers, casinos, tour companies, meeting and event planning, and others.

Required Courses

- ACCT 301 - Financial Accounting Analysis **Credits:** (5)
- **OR** BSED 146 - Basic Accounting **Credits:** (5)
- RT 272 - Lodging Operations I **Credits:** (3)
- RT 371 - Tourism Essentials **Credits:** (3)
- RT 480 - Tourism Administration **Credits:** (4)

Department-approved Electives - Credits: (19)

Total Specialization Credits: 34

Total Credits: 97

Apparel Design Minor

A minor in apparel design is administered jointly by the Apparel, Textiles and Merchandising Program and theatre arts department. It is designed to enable students with career interests in this field to gain experience in the competency areas expected of apparel designers. This minor allows the student to learn to apply the basic principles of design and creativity in developing apparel. Students will study the application of artistic and creative design elements, selection, and use of fabrics and textiles, and the techniques for transforming design concepts into garments in order to create a final sale-able product for a target market.

To be admitted to a minor in Apparel Design, a student must have a cumulative GPA of 2.3 (or be a freshman or transfer). A minimum grade of C- must be earned in each course counted toward fulfilling major and minor requirements.

Required Courses

- ATM 280 - Basic Sewing Techniques **Credits:** (3)
- **OR** TH 261 - Costume Technology **Credits:** (3)
- ATM 301 - Introduction to the Fashion Industry **Credits:** (4)
- ATM 355 - Consumer Textiles **Credits:** (4)
- ATM 388 - Advanced Fashion Design **Credits:** (3)
- **OR** TH 361 - Stage Costuming **Credits:** (3)
- ATM 488 - Fashion Line Development **Credits:** (3)
- TH 140 - Introduction to Theatre Design **Credits:** (3)
- TH 461 - Costume Design **Credits:** (4)
- TH 465 - Costume and Fashion Drawing **Credits:** (3)

Total Credits: 30

Apparel, Textiles and Merchandising Minor

The minor in apparel, textiles and merchandising is designed for those students wanting some expertise in the apparel industry to strengthen their majors in business, marketing, communication, advertising, graphic design, theatre arts, event planning, accounting, retail management, etc. Students are exposed to various aspects of merchandising, trend analysis, textiles, buying, sustainability, and fashion event planning. Completing the minor will contribute to future career competitiveness and broaden opportunities.

Requirements
to be admitted to a minor in Apparel, Textiles and Merchandising, a student must have a cumulative GPA of 2.3 (or be a freshman or transfer). A minimum grade of C- must be earned in each course counted toward fulfilling major and minor requirements.

Required Courses

- ATM 280 - Basic Sewing Techniques **Credits:** (3)
- ATM 301 - Introduction to the Fashion Industry **Credits:** (4)
- ATM 351 - Sociocultural Aspects of Apparel **Credits:** (4)
- ATM 353 - Apparel Manufacturing **Credits:** (5)
- ATM 355 - Consumer Textiles **Credits:** (4)
- ATM 381 - Fashion Show Production **Credits:** (2)
- ATM 389 - Fashion Trend Analysis **Credits:** (3)
- ATM 489 - Merchandise Buying and Planning **Credits:** (4)
- RMT 330 - Principles of Retailing **Credits:** (4)

Total Credits: 33

Event Planning Minor

This minor will give the student a solid understanding of special event programming and management. It will also provide experiential learning opportunities through event production. Students in various majors including global wine studies, business, the arts, communication and others may find this minor a beneficial supplement.

Requirements
To be admitted to a major or minor in Recreation Tourism Events, a student must have a cumulative GPA of 2.3 (or be a freshman or transfer). A minimum grade of C- must be earned course counted toward fulfilling major and minor requirements.

Required Courses

- FCSG 230 - Program and Event Budgeting **Credits:** (2)
- RT 292 - Practicum **Credits:** (1-3)
- RT 373D - Convention and Meeting Management **Credits:** (5)
- RT 374 - Festivals and Events **Credits:** (3)
- RT 405 - Hospitality Catering **Credits:** (3)
- RT 485 - Events Administration **Credits:** (4)

Department-approved electives Credits: 8-10

- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- COM 312 - Introduction to Non-Profit Leadership **Credits:** (4)
- COM 345 - Business and Professional Speaking **Credits:** (4)
- FCSG 320 - Program Management and Planning **Credits:** (4)
- GWS 452 - Regional Wine Tourism **Credits:** (4)
- MKT 360 - Principles of Marketing **Credits:** (5)
- RT 222 - Recreation Programming and Activities **Credits:** (3)
- RT 272 - Lodging Operations I **Credits:** (3)
- RT 371 - Tourism Essentials **Credits:** (3)
- RT 373E - Resort Management **Credits:** (5)
- RT 381 - Recreational Sports Management **Credits:** (3)
- RT 431 - Recreation Administration of Retreats and Camps **Credits:** (3)
- RT 452 - Regional Wine Tourism **Credits:** (4)
- UNIV 304 - International Sustainable Development **Credits:** (5)

Total Credits: 26-28

Family and Consumer Sciences Education Minor

This minor does not meet endorsement requirements to teach family and consumer sciences.

Required Courses

- ATM 351 - Sociocultural Aspects of Apparel **Credits:** (4)
- FCSC 371 - Consumer Awareness **Credits:** (3)
- FCSE 426 - Methods and Materials of Teaching Family and Consumer Sciences **Credits:** (3)
- FS 232 - Child Development **Credits:** (3)
- FS 234 - Contemporary Families **Credits:** (4)

- FS 336 - Parent Education and Guidance **Credits:** (3)
- NUTR 101 - Introduction to Human Nutrition **Credits:** (5)

Total Credits: 25

Family and Consumer Sciences Minor

In consultation with a faculty advisor, students select a minimum of 20 credits of coursework as appropriate to individual interests and professional goals. The planned course of study must have the signature of both the student and the faculty advisor before submission to the department chair for approval.

Family Studies Minor

Required Courses

- FS 101 - Skills for Marriage and Intimate Relationships **Credits:** (4)
- FS 235 - Relationships and Personal Development **Credits:** (3)

FS Elective Courses: Credits 18

- Any courses with a FS prefix.

Total Credits: 25

Physical Activity and Recreation Programming Minor (FCS)

Physical Activity and Recreation Programming Minor Core

Program Directors
Heidi Henschel Pellett, EdD, physical education and school health
Barbara Masberg, PhD, recreation and tourism

Program Advisors
Debra D'Acquisto, MA, physical activity
Robert Perkins, EdD, recreation and tourism

This interdisciplinary physical activity and recreation programming minor is designed for students who want to instruct and direct activities in various settings, such as, parks and recreation, nonprofit organizations, cruise lines, resorts, and other active lifestyle organizations.

Admission Requirements
Applications are accepted throughout the academic year. To be admitted to the minor, all students must have a cumulative grade point average of a 2.75. For the application procedure, contact a program director in Physical Education and School Health or Recreation and Tourism to complete a specific application form. All courses in the minor require a grade of a C or higher.

Required Courses

- PESH 341 - Characteristics of Effective Physical Education Teaching **Credits:** (3)
- PESH 343 - Pedagogical Application of Teaching Styles and Systematic Reflection **Credits:** (3)
- PESH 356 - Teaching Lifelong Physical Activity Pursuits **Credits:** (3)
- PESH 456 - Facilitating and Leading Adventure Activities in the Schools **Credits:** (2)
- RT 484 - Legal Liability and Risk Management **Credits:** (4)

Select from one of the following Credits: (3)

- RT 222 - Recreation Programming and Activities **Credits:** (3)
- **OR** Choose three (3) Physical Activity Courses from the following categories:
  PEID (1), PEF (1), PEAQ (1) PETS (1), PED (1)

Select from one of the following Credits: (3-4)

- FCSG 220 - Leadership in Human Development **Credits:** (4)
- PESH 330 - Positive Youth Development in Physical Activity **Credits:** (3)

Select from one of the following Credits: (2-4)

- RT 293 - Outdoor Leadership Training **Credits:** (2)
- RT 300 - Challenge Course Leadership **Credits:** (4)
- RT 360 - Outdoor Survival **Credits:** (3)
- RT 431 - Recreation Administration of Retreats and Camps **Credits:** (3)

Select from one the following Credits: (3-5)

- RT 381 - Recreational Sports Management **Credits:** (3)
- RT 382 - Community Recreation **Credits:** (3)
- RT 487 - Outdoor Recreation Issues **Credits:** (3)

Choose certifications totaling Credits: (3)

- EMS 245 - First Aid **Credits:** (3)
- PE 115 - Beginning Climbing **Credits:** (1)
- PE 116 - Intermediate Climbing **Credits:** (1)
- PE 220 - Climbing Wall Instructor **Credits:** (2)
- PEAQ 221 - Lifeguard Training **Credits:** (3)
- PEAQ 320 - Water Safety Instructor **Credits:** (3)

Total Credits: 29-34

Program Development Minor

Students take a series of courses addressing the strategies and techniques of planning and managing a program for events, training, education, seminars, entertainment, or meetings.

Required Courses

- FCSG 220 - Leadership in Human Development **Credits:** (4)
- FCSG 230 - Program and Event Budgeting **Credits:** (2)
- FCSG 320 - Program Management and Planning **Credits:** (4)
- FCSG 379 - Professional Development and Internship Planning **Credits:** (3)
- FCSG 419 - Applied Research and Evaluation **Credits:** (3)
- FCSG 420 - Program Promotion and Advertising **Credits:** (5)

Choose one course from the following: Credits: 2-3

• EDCS 509 - Civic Engagement (3)

- UNIV 309 - Civic Engagement **Credits:** (2)
- FCSG 490 - Cooperative Education **Credits:** (1-12) Credits: 2

Total Credits: 23-24

Recreation and Tourism Management Minor

Students who have a major in another area may desire to diversify their abilities by choosing to complete a minor program in Recreation and Tourism. This minor complements numerous major programs and expands career opportunities.

Requirements
To be admitted to a major or minor in Recreation Tourism Events, a student must have a cumulative GPA of 2.3 (or be a freshman or transfer). A minimum grade of C- must be earned in each course counted toward fulfilling major and minor requirements.

Core Courses

- FCSG 230 - Program and Event Budgeting **Credits:** (2)
- RT 201 - Introduction to Recreation and Tourism **Credits:** (3)
- RT 484 - Legal Liability and Risk Management **Credits:** (4)
- RT 292 - Practicum **Credits:** (1-3)
- **OR** RT 490 - Cooperative Education **Credits:** (1-12) (Either one must be taken for 3 credits)

Total Core Credits: 12

Capstone

- RT 480 - Tourism Administration **Credits:** (4)
- **OR** RT 488 - Recreation Management **Credits:** (4)

Total Capstone Credits: 4

Choose 11-12 credits either from Recreation Emphasis OR Tourism Emphasis with advisement

Recreation Emphasis

- FCSG 220 - Leadership in Human Development **Credits:** (4)
- RT 222 - Recreation Programming and Activities **Credits:** (3)
- RT 300 - Challenge Course Leadership **Credits:** (4)
- RT 309 - Facility Planning and Sustainable Design **Credits:** (4)
- RT 330 - Sustainable Resources for Recreation and Tourism **Credits:** (3)
- RT 333 - Outdoor Adventures in Public Lands **Credits:** (4)
- RT 360 - Outdoor Survival **Credits:** (3)
- RT 373E - Resort Management **Credits:** (5)
- RT 374 - Festivals and Events **Credits:** (3)
- RT 381 - Recreational Sports Management **Credits:** (3)
- RT 382 - Community Recreation **Credits:** (3)
- RT 487 - Outdoor Recreation Issues **Credits:** (3)
- UNIV 304 - International Sustainable Development **Credits:** (5)

Tourism Emphasis

- RT 272 - Lodging Operations I **Credits:** (3)
- RT 337 - Tour and Interpretive Program Development **Credits:** (3)
- RT 371 - Tourism Essentials **Credits:** (3)
- RT 373D - Convention and Meeting Management **Credits:** (5)
- RT 373E - Resort Management **Credits:** (5)
- RT 374 - Festivals and Events **Credits:** (3)
- RT 379 - Cruise Line Industry **Credits:** (3)
- RT 452 - Regional Wine Tourism **Credits:** (4)
- **OR** GWS 452 - Regional Wine Tourism **Credits:** (4)
- RT 473 - Air Travel and Tourism **Credits:** (3)
- UNIV 304 - International Sustainable Development **Credits:** (5)

Total Credits: 27-28

Sustainable Tourism Minor

The sustainable tourism minor prepares students for careers related to the impacts and opportunities associated with the economic, cultural, and environmental dimensions of tourism.

Required Courses

- ENST 201 - Earth as an Ecosystem **Credits:** (5)
- **OR** ENST 202 - Ecosystems, Resources, Population, and Culture **Credits:** (5)
- ENST 303 - Environmental Management **Credits:** (5)
- RT 355 - Sustainable Tourism: Contemporary Issues **Credits:** (2)

Choose two from the following: Credits: 6-7

- RT 309 - Facility Planning and Sustainable Design **Credits:** (4)
- RT 330 - Sustainable Resources for Recreation and Tourism **Credits:** (3)
- RT 471 - Tourism Planning and Sustainable Development **Credits:** (3)

Choose two from the following: Credits: 7-10

- ANTH 358 - Culture and Politics in a Global Economy **Credits:** (4)
  OR other 300-level ANTH courses with approval.
- ECON 201 - Principles of Economics Micro **Credits:** (5)
- GEOG 203 - Introduction to Maps and Cartography **Credits:** (4)
- GEOG 308 - Cultural Geography **Credits:** (5)
- GWS 452 - Regional Wine Tourism **Credits:** (4)
- **OR** RT 452 - Regional Wine Tourism **Credits:** (4)
- RT 371 - Tourism Essentials **Credits:** (3)
- RT 398 - Special Topics **Credits:** (1-6)
- SOC 380 - Social Ecology **Credits:** (5)

Total Credits: 25-29

Wine Trade and Tourism Minor

This cross-disciplinary program prepares individuals for employment in many areas of the wine industry, including tourism, hospitality services, retailing, wine sales, marketing, and tasting room and event management.

Admission Requirements
Admission to the minor requires admission to the Wine Trade Professional Certificate Program. Students must be 21 years of age or older and must apply for acceptance into the program. Permission of the GWS certificate advisor is required.

Financial Obligations
Because the Global Wine Study (GWS) courses are in a self-supported program: no tuition waiver programs apply for GWS courses. Additional course fees and continuing education tuition apply. Tuition for GWS classes may be higher than regular CWU tuition. Tuition for the FCSG and RT courses will be at the regular CWU tuition rate and waivers can be applied to the FCSG and RT courses.

Required Courses

GWS 302 - Fundamentals of Viticulture and Enology **Credits:** (4)
GWS 303 - Major Wine Regions of the World **Credits:** (4)
GWS 304 - Wine Marketing and Branding **Credits:** (4)
GWS 406 - Professional Wine Analysis **Credits:** (3)
RT 371 - Tourism Essentials **Credits:** (3)
RT 452 - Regional Wine Tourism **Credits:** (4)

Choose an additional 7 credits from the following courses with advisement:

FCSG 230 - Program and Event Budgeting **Credits:** (2)
FCSG 320 - Program Management and Planning **Credits:** (4)
RT 330 - Sustainable Resources for Recreation and Tourism **Credits:** (3)

RT 374 - Festivals and Events **Credits:** (3)
RT 386 - International Travel II **Credits:** (3)
RT 405 - Hospitality Catering **Credits:** (3)
RT 471 - Tourism Planning and Sustainable Development **Credits:** (3)
RT 473 - Air Travel and Tourism **Credits:** (3)
RT 480 - Tourism Administration **Credits:** (4)
RT 484 - Legal Liability and Risk Management **Credits:** (4)
RT 490 - Cooperative Education **Credits:** (1-12) Credits: (3-4)
Total Credits: 29

Professional Sommelier Certificate

This certificate program focuses on learning the techniques involved in becoming a Sommelier. A Sommelier works in the dining aspects of the beverage industry including pairing food with wine, beer, spirits and other beverages along with managing the beverage component of a dining establishment. This certificate covers beverage and food pairing, wine service techniques and beverage management, cost and pricing structures, developing beverage lists, and includes a professional tasting component to cover wine, beer, spirits and other beverages. Graduates are prepared for food and beverage related careers in the dining and hospitality industry.

Students will be expected to spend significant amounts of time outside the classroom working on projects, field trips and assignments.

Admission Requirements
Students must complete the pre-admission requirements prior to admission into the Certificate.
Applicants must:

1. Be at least 21 years of age prior to the first day of class.
2. Have a high proficiency with written and oral English language.
3. Fill out and submit the certificate program application, including a written essay of personal motivation and goals.
4. Sign and submit the written statement regarding personal and professional conduct and responsibility with regard to the use of alcohol.
5. Upon approval of application, an in-person or telephone interview will be conducted between the program advisor and the prospective student. Permission of the advisor is required for admission.
6. Completed or currently enrolled in GWS 303, Major Wine Regions of the World.

Financial Obligations
because this is a self-supported program, no tuition waiver programs apply. Tuition for GWS classes may be higher than regular CWU tuition.

Required Courses

- GWS 303 - Major Wine Regions of the World **Credits:** (4)
- GWS 405 - Beverage and Food Pairing for the Sommelier **Credits:** (4)
- GWS 407 - Beverage Management and Service for the Sommelier **Credits:** (4)
- GWS 409 - Applied Professional Tasting Analysis **Credits:** (4)

Total Credits: 16

Wine Trade Professional Certificate

This certificate program focuses on the business and trade aspects of the wine industry. Topics covered include the business of wine, world wine regions, trade structures, wine marketing, wine merchandising, viticulture, winemaking, wine styles, and professional evaluation techniques. Graduates are prepared for wine-related careers in sales and merchandising, distribution, marketing, import/export, consulting, hospitality, and more.

This certificate program is a 10-week, intensive program and all four courses must be taken. Students will be expected to spend significant amounts of time outside the classroom working on projects, field trips, and assignments.

Pre-admission Requirements
Students must complete the pre-admission requirements prior to admission into the certificate program. Applicants must:

Be at least 21 years of age prior to the first day of class
Have a high proficiency with written and oral English language
Have successfully completed at least 45 quarter credits (or 30 semester credits) of courses from an accredited college or university, including at least two college-level English composition courses
Have an overall minimum college GPA of 2.5 (on a 4.0 scale)

Fill out and submit the certificate program application, including a written essay of personal motivation and goals
Sign and submit the written statement regarding personal and professional conduct and responsibility with regard to the use of alcohol
Submit a CWU CAPS report and/or all previous college/university transcripts. International students must additionally provide a TOEFL iBT score of 71 or higher, or successfully complete Level 5 of the CWU UESL (University English as a Second Language) program. The completed application will be reviewed by the program advisor. Upon approval of the application, an in-person or telephone interview will be conducted between the program advisor and the prospective student. Permission of the advisor is required for admission.

Special Requirements
Students will be expected to spend significant amounts of time outside the classroom working on projects and assignments. Students must obtain a grade of B- or above in all four courses to receive the certificate.

Financial Obligations
Because this is a self-supported program: no tuition waiver programs apply. Additional course fees and continuing tuition apply. Tuition for GWS classes may be higher than regular CWU tuition.

Required Courses

GWS 302 - Fundamentals of Viticulture and Enology **Credits:** (4)
GWS 303 - Major Wine Regions of the World **Credits:** (4)
GWS 304 - Wine Marketing and Branding **Credits:** (4)
GWS 406 - Professional Wine Analysis **Credits:** (3)
Total Credits: 15

Film and Video Studies Program

College of Arts and Humanities
Ellensburg
Bouillon Hall, room 224

509-963-1067
www.cwu.edu/film-video
See website for how this program may be used for educational and career purposes.

Faculty and Staff

Program Director
Michael R. Ogden, PhD, communication

Professors
Liahna Armstrong, PhD, English
Toni Culjak, PhD, English
Jeffrey Dippmann, PhD, philosophy and religious studies
Robert Fordan, MA, communication
Stella Moreno, PhD, world languages
Michael R. Ogden, PhD, communication
Steven Olson, PhD, English
Michael J. Smith, MFA, theatre arts

Associate Professors
Christina Barrigan, MFA, theatre arts
George W. Bellah, MFA, theatre arts
Matt Manweller, PhD, political science
Lene Pederson, PhD, anthropology
Christopher Schedler, PhD, English

Assistant Professor
Maria Sanders, MFA, communication

Lecturers
Melissa Johnson, English, women's studies
Helen Harrison, communication
Jason Tucholke, theatre arts
Jon Ward, communication

Program Information
The Film and Video Studies Program is an innovative, interdisciplinary, undergraduate program leading to a BA in film and video studies. Students complete a sequence of core courses and choose a specialization in cinema studies, production or screenwriting. Minors are available in cinema studies and screenwriting.

Program Standards
A film and video studies specialization or minor can be selected by students using the normal major or minor declaration process and with assistance from a faculty advisor. Any student who has taken COM 201 and FVS 250 and passed with a combined B average or better and has a minimum CWU grade point average of 2.4 or higher may be admitted to this program. Students must maintain a 2.4 GPA or higher with a minimum grade of C- in all courses counted toward fulfilling the film and video studies major or minor requirements.

Majors, Specializations and Minors
The Film and Video Studies Program provides students the opportunity to pursue a course of study in either the critical study of film, the production and technical aspects of the moving image or writing for the screen. The film and video studies program employs a scholarly, creative,

and professional approach to the study of both film and television and seeks to help each student discover his or her talent as an independent critic, artist, and communicator. The program provides an education in the history and theory of film, television, and digital media art forms and basic learning experiences in production within the context of a liberal arts education.

The film and video studies specializations require a sequence of core courses. Students are strongly encouraged to complete the core (except for FVS 489) prior to the beginning of their junior year. After completing the core (23 credits excepting FVS 489), students will be required to choose one of three specialization focusing on either cinema studies which examines the history, theory, criticism and aesthetics of both film and television (50 credits), production (50 credits), which exposes students to the fundamentals of the production processes in film and video, or screenwriting (50 credits), allowing students to develop mastery in a variety of narrative screenplay and teleplay writing disciplines. Students may choose to pursue a double specialization in cinema studies and either production or screenwriting, or a double specialization in production and screenwriting: however, they may count only the core requirements toward satisfying the requirements of both specializations. Minors are also offered in cinema studies and screenwriting.

The program encourages students to look at moving images from the vantage point of other disciplines. To this end, the film and video studies program includes courses from a number of other departments and programs on campus, including anthropology, communication, English, world languages, philosophy, political science, religious studies, sociology, and theatre arts.

Bachelor of Arts
(NOTE: Students seeking a BA degree must complete one year college/university study or two years high school study of a single world language.)

Film and Video Studies BA, Cinema Studies Specialization

The cinema studies specialization explores the history, theory, and criticism of film and television with attention to new forms of interactive media that have broadened the screen domain. Students examine cinema's role as a unique and compelling modern art form and as an exploration of evolving cultural practices and social and political values in a global society. The body of film and television texts-over 100 years of imaginative artifacts from Hollywood and the independent and international film communities-is probed to discover how such texts create and convey meaning; how they both reflect and invent the culture in which they exist and how they dialogue with each other. Students will learn to interrogate cinema, television and interactive media from an informed understanding of their history and cultural functions, as well as to develop a familiarity of how new technologies both reinforce and challenge traditional renderings of the moving image.

To complete the learning experience, all students pursuing the cinema studies specialization are expected to compile a portfolio. FVS 489 "Senior Colloquium" is designed to facilitate this goal. Those students wishing to continue on to graduate school may also want to complete an independent writing project. FVS 496 "Individual Study" is designed to fill this role.

Students must maintain a 2.4 GPA or higher with a minimum grade of C- in all courses counted toward fulfilling the film and video studies major or minor requirements.

Film and Video Studies Core Requirements

- COM 201 - Introduction to Mass Communication **Credits:** (5)
- COM 321 - Visual Storytelling **Credits:** (4)
- COM 330 - Media Aesthetics **Credits:** (5)
- ENG 344 - Film Theory and Criticism **Credits:** (5)
- FVS 250 - Introduction to Film and Video Studies **Credits:** (5)
- FVS 489 - Senior Colloquium **Credits:** (2)

Total Core Credits: 26

Required Courses

- COM 353 - History of Narrative Film **Credits:** (4)
- **OR** ENG 353 - History of Narrative Film **Credits:** (4)

- COM 354 - History of Television **Credits:** (4)
- **OR** ENG 354 - History of Television **Credits:** (4)

- ENG 360 - World Cinema **Credits:** (5)
- ENG 461 - Studies in Film and Culture **Credits:** (5)
- ENG 462 - Studies in Film and/or Television Genres **Credits:** (5)
- ENG 463 - Studies in the Film Auteur **Credits:** (5)

Total Required Courses Credits: 28

International Cinema

Select two (2) from the following:

- AST 465 - Indian Cinema **Credits:** (4)
- CHIN 461 - Chinese Cinema **Credits:** (4)
- FR 460 - French Cinema **Credits:** (4)
- GERM 464 - German Cinema **Credits:** (4)
- JAPN 462 - Japanese Cinema **Credits:** (4)
- RUSS 462 - Russian Cinema **Credits:** (4)
- SPAN 446 - Hispanic Cinema **Credits:** (4)

Total International Cinema Credits: 8

Electives

Course credits taken above not used to satisfy a requirement may be used as elective credits. Students may repeat the following variable topic courses with different topics: ENG 461, ENG 462 and ENG 463.

- COM 267 - Screenwriting Fundamentals **Credits:** (4)
- **OR** ENG 267 - Screenwriting Fundamentals **Credits:** (4)

- COM 306 - Introduction to Transmedia **Credits:** (4)

- COM 355 - History of Documentary **Credits:** (4)
- **OR** ENG 355 - History of Documentary **Credits:** (4)

- COM 357 - Scriptwriting for Serial Media **Credits:** (4)
- **OR** ENG 357 - Scriptwriting for Serial Media **Credits:** (4)

- COM 369 - Mass Media and Society **Credits:** (4)
- COM 456 - History and Practice of Convergent Gaming **Credits:** (4)
- COM 469 - Media and Cultural Studies **Credits:** (4)
- FVS 490 - Cooperative Education **Credits:** (1-12)
- FVS 491 - Workshop **Credits:** (1-6)
- FVS 492 - Practicum **Credits:** (2)
- FVS 496 - Individual Study **Credits:** (1-6)
- FVS 498 - Special Topics **Credits:** (1-6)
- FVS 499 - Seminar **Credits:** (1-6)
- PHIL 309 - Ethics through Film **Credits:** (5)
- POSC 441 - Politics and Film **Credits:** (5)
- RELS 402 - Religion and Film **Credits:** (5)
- TH 166 - Theory of Play Production **Credits:** (3)

Total Elective Credits: 13

Total Credits: 75

Film and Video Studies BA, Production Specialization

The production specialization is designed to build specific skills in media production from a strong foundation of general knowledge in film and television. Students can choose from a wide range of courses that offer both introductory as well as more advanced study in all aspects of mediated storytelling, from writing and producing to directing, cinematography, and editing. The production specialization emphasizes exploration of the student's personal creative voice through hands-on productions. This process allows students to develop skills in all areas of the craft, exploring both the creative and technical aspects of film/video production.

All students in the production specialization begin by making short programs, then progress to more complex productions while learning the collaborative nature of film/video production through crew experiences. Students are encouraged to experiment with traditional narrative structures, documentary, multi-camera television production, and/or new media as the curriculum allows and their interests dictate. Student projects can range from traditional films to the most intensely personal experimental works.

To complete the learning experience and help students prepare for the job market, all students pursuing the production specialization are strongly encouraged to take advantage of internship opportunities and are required to compile a portfolio. FVS 489 - Senior Colloquium and FVS 490 - Cooperative Education are designed to facilitate these goals. Those students wishing to continue on to graduate film school may also want to complete an independent film or video production project. FVS 492 - Practicum is designed to fill this role.

Students must maintain a 2.4 GPA or higher with a minimum grade of C- in all courses counted toward fulfilling the film and video studies major or minor requirements.

Film and Video Studies Core Requirements

- COM 201 - Introduction to Mass Communication **Credits:** (5)
- COM 321 - Visual Storytelling **Credits:** (4)
- COM 330 - Media Aesthetics **Credits:** (5)
- ENG 344 - Film Theory and Criticism **Credits:** (5)
- FVS 250 - Introduction to Film and Video Studies **Credits:** (5)

- FVS 489 - Senior Colloquium **Credits:** (2)

Total Core Credits: 26

Required Courses

- COM 267 - Screenwriting Fundamentals **Credits:** (4)
- **OR** ENG 267 - Screenwriting Fundamentals **Credits:** (4)

- COM 322 - Introduction to Studio Production **Credits:** (4)
- COM 322LAB - Introduction to Studio Production Lab **Credits:** (1)
- COM 341 - Introduction to Field Production **Credits:** (4)
- COM 341LAB - Introduction to Field Production Lab **Credits:** (1)
- COM 346 - Production Management for Film and Video **Credits:** (4)

Select one from the following:

- COM 328 - Scriptwriting for Interactive Entertainment **Credits:** (4)
- COM 337 - Documentary Scriptwriting **Credits:** (4)
- COM 357 - Scriptwriting for Serial Media **Credits:** (4)
- **OR** ENG 357 - Scriptwriting for Serial Media **Credits:** (4)
- COM 447 - Narrative Screenwriting I **Credits:** (4)

Select one from the following:

- COM 430 - Digital Cinematography **Credits:** (4)
- COM 431 - Editing for Television and Film **Credits:** (4)
- COM 432 - Directing TV and Film **Credits:** (4)

Select one from the following:

- COM 422 - Advanced Multi-camera Production **Credits:** (4)
- COM 440 - Corporate Media Production **Credits:** (4)
- COM 441 - Documentary Production **Credits:** (4)

Select one from the following:

- COM 353 - History of Narrative Film **Credits:** (4)
- **OR** ENG 353 - History of Narrative Film **Credits:** (4)
- COM 354 - History of Television **Credits:** (4)
- **OR** ENG 354 - History of Television **Credits:** (4)
- COM 355 - History of Documentary **Credits:** (4)
- **OR** ENG 355 - History of Documentary **Credits:** (4)

Select six credits from the following:

- COM 452 - Applied Video Production **Credits:** (1-2)
- FVS 490 - Cooperative Education **Credits:** (1-12)
- FVS 492 - Practicum **Credits:** (2)

Total Required Course Credits: 40

Electives

Course credits taken above not used to satisfy a requirement may be used as elective credits. Students may repeat the following variable topic courses with different topics: ENG 461, ENG 462, ENG 463, and FVS 215.

- ANTH 351 - Visual Anthropology **Credits:** (4)
- **OR** COM 351 - Visual Anthropology **Credits:** (4)
- COM 306 - Introduction to Transmedia **Credits:** (4)
- COM 369 - Mass Media and Society **Credits:** (4)
- COM 382 - History of American Journalism **Credits:** (4)
- COM 456 - History and Practice of Convergent Gaming **Credits:** (4)
- COM 457 - Narrative Screenwriting II **Credits:** (5)
- COM 460 - Communication Law **Credits:** (4)
- COM 469 - Media and Cultural Studies **Credits:** (4)
- ENG 461 - Studies in Film and Culture **Credits:** (5)
- ENG 462 - Studies in Film and/or Television Genres **Credits:** (5)
- ENG 463 - Studies in the Film Auteur **Credits:** (5)
- FVS 491 - Workshop **Credits:** (1-6)
- FVS 496 - Individual Study **Credits:** (1-6)
- FVS 498 - Special Topics **Credits:** (1-6)
- FVS 499 - Seminar **Credits:** (1-6)
- PHIL 309 - Ethics through Film **Credits:** (5)
- TH 144 - Foundations of Acting **Credits:** (3)
- TH 166 - Theory of Play Production **Credits:** (3)
- TH 268 - Lighting Technology **Credits:** (3)
- TH 329 - Directing I **Credits:** (3)
- TH 330 - Introduction to Playwriting **Credits:** (4)
- TH 356 - Stage Sound **Credits:** (3)
- TH 368 - Stage Lighting **Credits:** (3)

Total Elective Credits: 9

Total Credits: 75

Film and Video Studies BA, Screenwriting Specialization

Students who elect to pursue the screenwriting specialization will learn the key elements of creating scripts for film, serial media (TV, Webisodes, and Mobisodes) and video games. Starting with the fundamentals, students will focus on story structure, plot, scene development, characterization and dialogue. As students advance through the required and elective courses, they will begin to hone their voice through a series of writing assignments designed to guide students toward mastering the basics of narrative storytelling in an environment designed to simulate the world of the professional screenwriter.

To complete the learning experience and help students prepare for the job market, all students pursuing the screenwriting specialization are expected to compile a portfolio. COM 327 Scriptwriter in Development and Production and FVS 489 Senior Colloquium are designed to facilitate this goal.

Those students wishing to continue on to graduate film school may also want to complete an independent scriptwriting project. FVS 492 Practicum and FVS 496 Individual Study are designed to fill this role.

Students must maintain a 2.4 GPA or higher with a minimum grade of C- in all courses counted toward fulfilling the film and video studies major or minor requirements.

Film and Video Studies Core Requirements

- COM 201 - Introduction to Mass Communication **Credits:** (5)
- COM 321 - Visual Storytelling **Credits:** (4)
- COM 330 - Media Aesthetics **Credits:** (5)
- ENG 344 - Film Theory and Criticism **Credits:** (5)
- FVS 250 - Introduction to Film and Video Studies **Credits:** (5)
- FVS 489 - Senior Colloquium **Credits:** (2)

Total Core Credits: 26

Required Courses

- COM 267 - Screenwriting Fundamentals **Credits:** (4)
- **OR** ENG 267 - Screenwriting Fundamentals **Credits:** (4)
- COM 327 - Scriptwriter in Development and Production **Credits:** (4)
- COM 357 - Scriptwriting for Serial Media **Credits:** (4)
- **OR** ENG 357 - Scriptwriting for Serial Media **Credits:** (4)
- COM 447 - Narrative Screenwriting I **Credits:** (4)
- COM 457 - Narrative Screenwriting II **Credits:** (5)
- COM 467 - Narrative Screenwriting III **Credits:** (5)

Select one of the following: Credits: 4

- COM 328 - Scriptwriting for Interactive Entertainment **Credits:** (4)
- COM 337 - Documentary Scriptwriting **Credits:** (4)
- COM 356 - Writing for Screen Genre **Credits:** (4)

Select one of the following: Credits: 4

- COM 353 - History of Narrative Film **Credits:** (4)
- **OR** ENG 353 - History of Narrative Film **Credits:** (4)
- COM 354 - History of Television **Credits:** (4)
- **OR** ENG 354 - History of Television **Credits:** (4)
- COM 355 - History of Documentary **Credits:** (4)
- **OR** ENG 355 - History of Documentary **Credits:** (4)

Total Required Courses Credits: 34

Electives

Course credits taken above not used to satisfy a requirement may be used as elective credits. Students may repeat the following variable topic courses with different topics: ENG 461, ENG 462, and ENG 463.

- COM 208 - Introduction to Public Relations Writing **Credits:** (4)
- COM 306 – Introduction to Transmedia **Credits:** (4)
- COM 309 – Writing Broadcast Advertising **Credits:** (4)
- COM 350 - Persuasion and Culture **Credits:** (4)
- COM 369 - Mass Media and Society **Credits:** (4)
- COM 456 - History and Practice of Convergent Gaming **Credits:** (4)

- ENG 263 - Introduction to Creative Writing **Credits:** (5)
- ENG 304 - English Linguistics **Credits:** (5)
- ENG 320 - English Grammar **Credits:** (5)
- ENG 360 - World Cinema **Credits:** (5)
- ENG 364 - Fiction Writing **Credits:** (5)
- ENG 366 - Creative Nonfiction Writing **Credits:** (5)
- ENG 461 - Studies in Film and Culture **Credits:** (5)
- ENG 462 - Studies in Film and/or Television Genres **Credits:** (5)
- ENG 463 - Studies in the Film Auteur **Credits:** (5)
- ENG 464 - Advanced Fiction Writing **Credits:** (5)
- ENG 466 - Advanced Creative Nonfiction Writing **Credits:** (5)
- FVS 491 - Workshop **Credits:** (1-6)
- FVS 492 - Practicum **Credits:** (2)
- FVS 496 - Individual Study **Credits:** (1-6)
- FVS 498 - Special Topics **Credits:** (1-6)
- FVS 499 - Seminar **Credits:** (1-6)
- TH 107 - Introduction to Theatre **Credits:** (4)
- TH 144 - Foundations of Acting **Credits:** (3)
- TH 166 - Theory of Play Production **Credits:** (3)
- TH 313 - Writing for Children's Theatre **Credits:** (3)
- TH 330 - Introduction to Playwriting **Credits:** (4)

Total Elective Credits: 15

Total Credits: 75

Cinema Studies Minor

Students wishing to explore the history, theory, and criticism of film and television in addition to their major course of study, are encouraged to minor in cinema studies. In this minor students examine the role of cinema, television and interactive media as a unique twentieth-century art form and as cultural practices of enduring social significance.

Because the bulk of the courses comprising cinema studies minor are derived from the film and video studies core, FVS majors are prohibited from pursuing this minor.

Students must maintain a 2.4 GPA or higher with a minimum grade of C- in all courses counted toward fulfilling the film and video studies major or minor requirements.

Required Courses

- COM 201 - Introduction to Mass Communication **Credits:** (5)
- COM 321 - Visual Storytelling **Credits:** (4)
- COM 330 - Media Aesthetics **Credits:** (5)
- ENG 344 - Film Theory and Criticism **Credits:** (5)
- FVS 250 - Introduction to Film and Video Studies **Credits:** (5)

Select one of the following - Credits: 4

- COM 353 - History of Narrative Film **Credits:** (4)
- **OR** ENG 353 - History of Narrative Film **Credits:** (4)
- COM 354 - History of Television **Credits:** (4)
- **OR** ENG 354 - History of Television **Credits:** (4)
- COM 355 - History of Documentary **Credits:** (4)
- **OR** ENG 355 - History of Documentary **Credits:** (4)

Select one of the following - Credits: 5

- ENG 461 - Studies in Film and Culture **Credits:** (5)
- ENG 462 - Studies in Film and/or Television Genres **Credits:** (5)
- ENG 463 - Studies in the Film Auteur **Credits:** (5)

Total Credits: 33

Screenwriting Minor

The screenwriting minor offers students a solid foundation in traditional screenplay format, conventional cinematic storytelling, theoretical approaches to screenwriting, adaptation of other media to the screen and screenwriting for non-traditional story structures.

Film and video studies majors specializing in production or critical studies who wish to add the screenwriting minor may not use these courses to satisfy elective requirements in their specializations.

Required Courses

- COM 267 - Screenwriting Fundamentals **Credits:** (4)
- **OR** ENG 267 - Screenwriting Fundamentals **Credits:** (4)
- COM 447 - Narrative Screenwriting I **Credits:** (4)
- COM 457 - Narrative Screenwriting II **Credits:** (5)
- COM 467 - Narrative Screenwriting III **Credits:** (5)
- ENG 344 - Film Theory and Criticism **Credits:** (5)

Select one of the following: Credits: (4)

- COM 327 - Scriptwriter in Development and Production **Credits:** (4)
- COM 328 - Scriptwriting for Interactive Entertainment **Credits:** (4)
- COM 337 - Documentary Scriptwriting **Credits:** (4)
- COM 356 - Writing for Screen Genre **Credits:** (4)
- COM 357 - Scriptwriting for Serial Media **Credits:** (4)
- **OR** ENG 357 - Scriptwriting for Serial Media **Credits:** (4)

Total Credits: 32

Finance and Supply Chain Management Department

College of Business
Ellensburg (E)
Shaw-Smyser Hall, room 413
CWU-Des Moines (D)
CWU-Lynnwood (L)
Mail Stop 7485
509-963-2032
Fax: 509-963-2875
www.cwu.edu/finance-supply
See website for how this program may be used for educational and career purposes.

Faculty and Staff
Chair
Carlo D. Smith, PhD (D)

Professors
Ozden Bayazit, PhD, supply chain management (L)

Associate Professors
Seong-Jong Joo, PhD, supply chain management (D)
Ke Ke, PhD, supply chain management (D)
Yong Joo Lee, PhD, supply chain management (E)
Kun Liao, PhD, supply chain management (L)
Carlo Smith, PhD, supply chain management (D)
Thomas Tenerelli, PhD, finance (E)
Fang Wang, PhD, finance (L)
Michael Young, PhD, finance (E)

Assistant Professor
Deepak Iyengar, PhD, supply chain management (E)
Bo Han, MS, finance (D)

Staff
Shirley Hood, secretary senior

Bachelor of Science in Business Administration Program
The Department of Finance and SCM and the Department of Management jointly support the Bachelor of Science in business administration-general business specialization and business minor. The department offers coursework leading to the Bachelor of Science in business administration (BSBA) degree. In addition to the university general education requirements, the BSBA major is comprised of three principal components:

- Pre-admission courses that provide foundation knowledge and skills needed for further study in business
- Business core courses that build on the pre-admission group and focus on decision making in the main functional areas of business
- Specialization courses that allow for advanced study in one of the functional areas.

Students matriculating in Ellensburg select a 25-credit specialization within the BSBA program in one of six areas: finance, general business, human resource management, leadership and management, marketing management, or supply chain management. Students matriculating at a university center choose from general business, human resource management, leadership and management, marketing management or supply chain management.

Program Goals for BSBA
The departments have identified overall educational outcomes related to knowledge, values, and skills for all BSBA graduates. Following are the outcomes for the Bachelor of Science in business administration (BSBA) programs:

1. Knowledge-based educational outcomes. Upon completion of the BSBA program, students should:

- Have a working knowledge of business administration that will aid them in private, government, or non-profit careers and/or prepare them for additional study

2. Values-based educational outcomes. Upon completion of the BSBA program, students should:

- Comprehend ethical issues and be able to apply an ethical decision-making framework to business decisions

3. Skills-based educational outcomes. Upon completion of the BSBA program, students should:

- Function effectively when in teams both as a leader and as a member
- Demonstrate effective oral communication skills

- Demonstrate effective written communication skills
- Apply quantitative and qualitative critical thinking skills to develop, access, and use information to analyze business problems and propose feasible solutions

Admission Requirements

Admission requirements to major programs within the College of Business are identical regardless of the location of the program. Students must first be accepted by the university and, if applicable, the university center which they plan to attend. Then, students must formally apply to the College of Business and be admitted to a College of Business Program prior to enrolling in 300- and 400-level courses within the college.

Students must attend a College of Business major orientation to be fully admitted to our majors. Applications are only accepted at new student orientations. The application form must be completed and returned to the appropriate office along with copies of current transcripts.

If a student has met the requirements of admission but has struggled to do so, the College of Business reserves the right to offer conditional admission status for up to 2 quarters and/or 30 credits in order for the student to demonstrate she/he will be successful. Final admission to the College of Business under these circumstances is not guaranteed.

Students must have the below requirements to be admitted to a College of Business major. Students seeking entry to the College without these requirements will be granted pre-major standing.

- Completion of 30 credits (If a student is a transfer student, credits must be transferable)
- The applicant must be in good academic standing
- 2.25 Collegiate GPA
- Completion of ENG 101 and ENG 102 with a C- or higher, or equivalent
- Attend a College of Business Orientation

International students whose native language is not English must meet one of the following English proficiency requirements:

- A score of 71 or above on the Internet-based TOEFL or 525 or above on the paper-based TOEFL (195 for computer based, 71 for internet based), OR
- A score of 6.0 or above on the International English Language Testing System (IELTS) exam, OR
- A 3.0 (B grade) or above in each two college-level English composition courses from an accredited United States college or university. Contact the Office of Admissions to find out what courses are acceptable.

Students who have met all of the above requirements will be admitted unless the number of applicants exceeds available space. In that case, acceptance will be competitive, based on a selection index.

Previous or Transfer Coursework Policy

Business courses taken to fulfill the requirements for an undergraduate or graduate degree from the CWU College of Business must have been taken within the last 10 years at the time of graduation. Exceptions may be made, but must be approved prior to acceptance into the College of Business by the department chair and dean or designee.

Students wishing to have credits from non-United States institutions considered for transfer into the College of Business for any major or minor must have their transcripts evaluated through outside credential evaluators who are members of the National Association of Credential Evaluation Services (NACES), such as the Foundation for International Services (FIS), the World Education Service (WES), or Educational Perspectives. Students who intend to pursue the CPA may instead decide to use the NABSA (National Association of State Boards of Accountancy) international evaluation services since it is a requirement of the CPA. Credits for current students participating in a CWU study abroad program will be evaluated by the Office of the Registrar.

Equivalent lower-division (100-200 level) courses may be transferred toward meeting the foundation course requirements for any BS degree in the college. Upper-division (300-400 level) courses may be transferred toward meeting the major requirements only with the approval of the department chair and the college dean (or designee).

Academic Jeopardy Policy

The College of Business is committed to the success of its students. If a student that has been admitted to the College of Business is deemed to be in academic jeopardy, the College of Business may place restrictions on the student. A student is considered in academic jeopardy for the following reasons:

- On academic warning or probation
- Frequently withdraws from class
- Repeating coursework to be successful
- Has less that a 2.5 (2.499 and below) in any of the required GPAs for graduation.
    - CWU GPA
    - Collegiate GPA (CWU and all transfer coursework combined)
    - Major GPA

- Upper-division coursework in the major GPA
- Accounting majors: upper-division Accounting coursework GPA

The College of Business may do the following in response to an Academic Jeopardy situation:

- Limit College of Business coursework in future quarters
- Require academic advising with both faculty and/or professional advisors
- Require academic success plans
- Double majors or double specialization students may be limited to one major plan in the College of Business

If a student is unable to improve academically while receiving intensive advising and support or does not actively participate in required advising, the student may be subjected to the College of Business Separation Policy.

Repeat Policy
Business administration courses may be repeated only once.

BSBA, Finance Specialization

Advisors:
Bo Han, MS
Thomas Tenerilli, PhD
Fang Wang, PhD
Michael Young, PhD

Finance builds on the business core and focuses on decision making in three interrelated areas: managerial finance, investments, and financial markets and institutions. The business core and finance specialization courses provide academic preparation for a wide variety of entry-level positions in managerial finance and the financial services industry.

College of Business Admission Requirements

Admission Requirements
Admission requirements to major programs within the College of Business are identical regardless of the location of the program. Students must first be accepted by the university and, if applicable, the university center which they plan to attend. Then, students must formally apply to the College of Business and be admitted to a College of Business Program prior to enrolling in 300- and 400-level courses within the college.

Students must attend a College of Business major orientation to be fully admitted to our majors. Applications are only accepted at new student orientations. The application form must be completed and returned to the appropriate office along with copies of current transcripts.

If a student has met the requirements of admission but has struggled to do so, the College of Business reserves the right to offer conditional admission status for up to 2 quarters and/or 30 credits in order for the student to demonstrate she/he will be successful. Final admission to the College of Business under these circumstances is not guaranteed.

Students must have the below requirements to be admitted to a College of Business major. Students seeking entry to the College without these requirements will be granted pre-major standing.

- Completion of 30 credits (If a student is a transfer student, credits must be transferable)
- The applicant must be in good academic standing
- 2.25 Collegiate GPA
- Completion of ENG 101 and ENG 102 with a C- or higher, or equivalent
- Attend a College of Business Orientation

International students whose native language is not English must meet one of the following English proficiency requirements:

- A score of 71 or above on the Internet-based TOEFL or 525 or above on the paper-based TOEFL (195 for computer based, 71 for internet based), OR
- A score of 6.0 or above on the International English Language Testing System (IELTS) exam, OR
- A 3.0 (B grade) or above in each two college-level English composition courses from an accredited United States college or university. Contact the Office of Admissions to find out what courses are acceptable.

Students who have met all of the above requirements will be admitted unless the number of applicants exceeds available space. In that case, acceptance will be competitive, based on a selection index.

Previous or Transfer Coursework Policy
Business courses taken to fulfill the requirements for an undergraduate or graduate degree from the CWU College of Business must have been taken within the last 10 years at the time of graduation. Exceptions may be made, but must be approved prior to acceptance into the College of Business by the department chair and dean or designee.

Students wishing to have credits from non-United States institutions considered for transfer into the College of

Business for any major or minor must have their transcripts evaluated through outside credential evaluators who are members of the National Association of Credential Evaluation Services (NACES), such as the Foundation for International Services (FIS), the World Education Service (WES), or Educational Perspectives. Students who intend to pursue the CPA may instead decide to use the NABSA (National Association of State Boards of Accountancy) international evaluation services since it is a requirement of the CPA. Credits for current students participating in a CWU study abroad program will be evaluated by the Office of the Registrar.

Equivalent lower-division (100-200 level) courses may be transferred toward meeting the foundation course requirements for any BS degree in the college. Upper-division (300-400 level) courses may be transferred toward meeting the major requirements only with the approval of the department chair and the college dean (or designee).

Academic Jeopardy Policy
The College of Business is committed to the success of its students. If a student that has been admitted to the College of Business is deemed to be in academic jeopardy, the College of Business may place restrictions on the student. A student is considered in academic jeopardy for the following reasons:

- On academic warning or probation
- Frequently withdraws from class
- Repeating coursework to be successful
- Has less that a 2.5 (2.499 and below) in any of the required GPAs for graduation.
    - CWU GPA
    - Collegiate GPA (CWU and all transfer coursework combined)
    - Major GPA
    - Upper-division coursework in the major GPA
    - Accounting majors: upper-division Accounting coursework GPA

The College of Business may do the following in response to an Academic Jeopardy situation:

- Limit College of Business coursework in future quarters
- Require academic advising with both faculty and/or professional advisors
- Require academic success plans
- Double majors or double specialization students may be limited to one major plan in the College of Business

If a student is unable to improve academically while receiving intensive advising and support or does not actively participate in required advising, the student may be subjected to the College of Business Separation Policy.

Separation Policy
If a student that has been admitted to the College of Business is placed on academic probation, suspension, received multiple academic warnings, has repeat academic course withdrawals, or whose academic performance is below the necessary grade point averages required to graduate, then the student's admission into the College of Business may be rescinded. Once rescinded, the student will be denied readmission to the College of Business for one year following which a written petition for readmission must be presented at least 30 days prior to the start of the quarter in which readmission is desired. The decision to readmit will be based on meeting current admission standards, analysis of the entire academic record, as well as any other sources of information deemed appropriate. Readmission is not guaranteed.

Service to Other Majors
Students majoring in programs outside CB who are required to take courses in this college for either their major or minor will be eligible to enroll on a space-available basis. These students will be given priority over other non-college majors wishing to enroll in courses. All students must have taken prerequisites for courses prior to enrollment.

Repeat Policy
Business administration courses may be repeated only once.

Additional BSBA Graduation Requirements
The following special rules apply to students seeking the BSBA major:

- Students must earn a minimum cumulative GPA of 2.25 in the 99-to 100- credit in-the-major coursework to be eligible for a degree. In addition, the Department requires a minimum GPA of 2.25 in the 59- to 60-credit upper-division component of the in-the-major total.
- Transfer students must complete at least 40 College of Business credits at CWU to be eligible for the BSBA degree including MGT 489. Additionally, students seeking a human resource management specialization must complete HRM 486 at CWU and students seeking a marketing specialization must complete MKT 470 at CWU.
- The BSBA program requires a single specialization of at least 25 credits. Occasionally a student requests a second specialization. To be eligible for a second specialization, a minimum of 20 unique credits must be completed. Unique in this sense means the credits have not been used as part of any other BSBA specialization.

College of Business Curriculum
The College of Business Curriculum is divided into 4 tiers:

foundation courses, core courses, major/specialization courses, and capstone. Students completing foundation courses may enroll in core courses so long as course pre-requisites are met. All foundation courses must be complete with a minimum grade of C- and a collegiate GPA of 2.25 or higher prior to a student enrolling in major courses. Students completing foundations courses may enroll in major courses so long as course pre-requisites are met. In order to enroll in the capstone course, students must complete all core courses with a minimum grade of C- and have a collegiate GPA of 2.25 or higher. Core, major/specialization, and capstone courses all require admission to a College of Business major.

Business Foundation Courses

- ACCT 251 - Financial Accounting **Credits:** (5)
- ACCT 252 - Managerial Accounting **Credits:** (5)
- BUS 221 - Introductory Business Statistics **Credits:** (5)
- BUS 241 - Legal Environment of Business **Credits:** (5)
- ECON 201 - Principles of Economics Micro **Credits:** (5)
- ECON 130 - Foundations for Business Analytics **Credits:** (5)
- **OR** MATH 130 - Finite Mathematics **Credits:** (5)

Select one of the following: 5 credits

- MATH 153 - Pre-Calculus Mathematics I **Credits:** (5)
- MATH 154 - Pre-Calculus Mathematics II **Credits:** (5)
- MATH 170 - Intuitive Calculus **Credits:** (5)
- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)

Foundation Total Credits: 35

Business Core Courses

- BUS 301 - Contemporary Issues in Management **Credits:** (3)
- **OR** MGT 200 - Essential Skills for Business Professionals **Credits:** (5)
- ECON 202 - Principles of Economics Macro **Credits:** (5)
- FIN 370 - Introductory Financial Management **Credits:** (5)
- MGT 382 - Principles of Management **Credits:** (5)
- MIS 386 - Management Information Systems **Credits:** (5)
- MKT 362 - Essential Marketing Concepts **Credits:** (5)
- SCM 310 - Supply Chain Management **Credits:** (5)

Select one of the following: 4-5 credits

- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- COM 345 - Business and Professional Speaking **Credits:** (4)
- ENG 310 - Technical Writing **Credits:** (4)

Business Core Total Credits: 37-40

Finance Specialization Courses

Required Courses

- ECON 330 - Money and Banking **Credits:** (5)
- FIN 470 - Intermediate Financial Management **Credits:** (5)
- FIN 475 - Investments **Credits:** (5)

Select a minimum of 10 credits from the following:

(With no more than 5 credits from ECON classes)

- BUS 490 - Cooperative Education **Credits:** (1-12) or one other course approved in advance by a financial advisor **Credits:** (5)
- ECON 310 - International Economics **Credits:** (5)
- ECON 332 - Public Finance **Credits:** (5)
- ECON 352 - Managerial Economics **Credits:** (5)
- FIN 466 - Working Capital Management **Credits:** (5)
- FIN 474 - Personal Financial Planning **Credits:** (5)
- FIN 477 - International Finance **Credits:** (5)
- FIN 478 - Management of Financial Institutions **Credits:** (5)
- FIN 479 - Derivative Securities and Risk Management **Credits:** (5)

Total Specialization Credits: 25

College of Business Capstone

- MGT 489 - Strategic Management **Credits:** (5)

Capstone Total Credits: 5

Total Credits: 102-105

BSBA, Supply Chain Management Specialization

Advisors:
Ozden Bayazit, PhD
Deepak Iyengar, PhD
Seong-Jong Joo, PhD
Ke Ke, PhD
Yong Joo, Lee, PhD
Kun Liao, PhD
Carlo Smith, PhD

Supply Chain Management (SCM) builds on the business core and prepares students for careers as analysts, decision makers and managers in any and all segments of the organization's supply, production and distribution chain. Students who complete this program will have a fundamental understanding of the systematic, integrated nature of the creation and delivery of goods and services, and the manner in which the supply, production and distribution chain includes or involves other internal and external entities. Students will be able to solve problems and make decisions in this environment by using concepts from accounting, economics and other business administration areas, computing and analytical skills, and appropriate quantitative and qualitative models.

College of Business Admission Requirements

Admission Requirements
Admission requirements to major programs within the College of Business are identical regardless of the location of the program. Students must first be accepted by the university and, if applicable, the university center which they plan to attend. Then, students must formally apply to the College of Business and be admitted to a College of Business Program prior to enrolling in 300- and 400-level courses within the college.

Students must attend a College of Business major orientation to be fully admitted to our majors. Applications are only accepted at new student orientations. The application form must be completed and returned to the appropriate office along with copies of current transcripts.

If a student has met the requirements of admission but has struggled to do so, the College of Business reserves the right to offer conditional admission status for up to 2 quarters and/or 30 credits in order for the student to demonstrate she/he will be successful. Final admission to the College of Business under these circumstances is not guaranteed.

Students must have the below requirements to be admitted to a College of Business major. Students seeking entry to the College without these requirements will be granted pre-major standing.

- Completion of 30 credits (If a student is a transfer student, credits must be transferable)
- The applicant must be in good academic standing
- 2.25 Collegiate GPA
- Completion of ENG 101 and ENG 102 with a C- or higher, or equivalent
- Attend a College of Business Orientation

International students whose native language is not English must meet one of the following English proficiency requirements:

- A score of 71 or above on the Internet-based TOEFL or 525 or above on the paper-based TOEFL (195 for computer based, 71 for internet based), OR
- A score of 6.0 or above on the International English Language Testing System (IELTS) exam, OR
- A 3.0 (B grade) or above in each two college-level English composition courses from an accredited United States college or university. Contact the Office of Admissions to find out what courses are acceptable.

Students who have met all of the above requirements will be admitted unless the number of applicants exceeds available space. In that case, acceptance will be competitive, based on a selection index.

Previous or Transfer Coursework Policy
Business courses taken to fulfill the requirements for an undergraduate or graduate degree from the CWU College of Business must have been taken within the last 10 years at the time of graduation. Exceptions may be made, but must be approved prior to acceptance into the College of Business by the department chair and dean or designee.

Students wishing to have credits from non-United States institutions considered for transfer into the College of Business for any major or minor must have their transcripts evaluated through outside credential evaluators who are members of the National Association of Credential Evaluation Services (NACES), such as the Foundation for International Services (FIS), the World Education Service (WES), or Educational Perspectives. Students who intend to pursue the CPA may instead decide to use the NABSA (National Association of State Boards of Accountancy) international evaluation services since it is a requirement of the CPA. Credits for current students participating in a CWU study abroad program will be evaluated by the Office of the Registrar.

Equivalent lower-division (100-200 level) courses may be transferred toward meeting the foundation course requirements for any BS degree in the college. Upper-division (300-400 level) courses may be transferred toward meeting the major requirements only with the approval of the department chair and the college dean (or designee).

Academic Jeopardy Policy
The College of Business is committed to the success of its students. If a student that has been admitted to the College of Business is deemed to be in academic jeopardy, the College of Business may place restrictions on the student. A student is considered in academic jeopardy for the following reasons:

- On academic warning or probation
- Frequently withdraws from class
- Repeating coursework to be successful
- Has less that a 2.5 (2.499 and below) in any of the required GPAs for graduation.
    - CWU GPA
    - Collegiate GPA (CWU and all transfer coursework combined)
    - Major GPA
    - Upper-division coursework in the major GPA
    - Accounting majors: upper-division Accounting coursework GPA

The College of Business may do the following in response to an Academic Jeopardy situation:

- Limit College of Business coursework in future quarters
- Require academic advising with both faculty and/or professional advisors
- Require academic success plans
- Double majors or double specialization students may be limited to one major plan in the College of Business

If a student is unable to improve academically while receiving intensive advising and support or does not actively participate in required advising, the student may be subjected to the College of Business Separation Policy.

Separation Policy
If a student that has been admitted to the College of Business is placed on academic probation, suspension, received multiple academic warnings, has repeat academic course withdrawals, or whose academic performance is below the necessary grade point averages required to graduate, then the student's admission into the College of Business may be rescinded. Once rescinded, the student will be denied readmission to the College of Business for one year following which a written petition for readmission must be presented at least 30 days prior to the start of the quarter in which readmission is desired. The decision to readmit will be based on meeting current admission standards, analysis of the entire academic record, as well as any other sources of information deemed appropriate. Readmission is not guaranteed.

Service to Other Majors
Students majoring in programs outside CB who are required to take courses in this college for either their major or minor will be eligible to enroll on a space-available basis. These students will be given priority over other non-college majors wishing to enroll in courses. All students must have taken prerequisites for courses prior to enrollment.

Repeat Policy
Business administration courses may be repeated only once.

Additional BSBA Graduation Requirements
The following special rules apply to students seeking the BSBA major:

- Students must earn a minimum cumulative GPA of 2.25 in the 99-to 100- credit in-the-major coursework to be eligible for a degree. In addition, the Department requires a minimum GPA of 2.25 in the 59- to 60-credit upper-division component of the in-the-major total.
- Transfer students must complete at least 40 College of Business credits at CWU to be eligible for the BSBA degree including MGT 489. Additionally, students seeking a human resource management specialization must complete HRM 486 at CWU and students seeking a marketing specialization must complete MKT 470 at CWU.
- The BSBA program requires a single specialization of at least 25 credits. Occasionally a student requests a second specialization. To be eligible for a second specialization, a minimum of 20 unique credits must be completed. Unique in this sense means the credits have not been used as part of any other BSBA specialization.

College of Business Curriculum
The College of Business Curriculum is divided into 4 tiers: foundation courses, core courses, major/specialization courses, and capstone. Students completing foundation courses may enroll in core courses so long as course pre-requisites are met. All foundation courses must be complete with a minimum grade of C- and a collegiate GPA of 2.25 or higher prior to a student enrolling in major courses. Students completing foundations courses may enroll in major courses so long as course pre-requisites are met. In order to enroll in the capstone course, students must complete all core courses with a minimum grade of C- and have a collegiate GPA of 2.25 or higher. Core,

major/specialization, and capstone courses all require admission to a College of Business major.

Business Foundation Courses

- ACCT 251 - Financial Accounting **Credits:** (5)
- ACCT 252 - Managerial Accounting **Credits:** (5)
- BUS 221 - Introductory Business Statistics **Credits:** (5)
- BUS 241 - Legal Environment of Business **Credits:** (5)
- ECON 201 - Principles of Economics Micro **Credits:** (5)
- ECON 130 - Foundations for Business Analytics **Credits:** (5)
- **OR** MATH 130 - Finite Mathematics **Credits:** (5)

Select one of the following: 5 credits

- MATH 153 - Pre-Calculus Mathematics I **Credits:** (5)
- MATH 154 - Pre-Calculus Mathematics II **Credits:** (5)
- MATH 170 - Intuitive Calculus **Credits:** (5)
- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)

Foundation Total Credits: 35

Business Core Courses

- BUS 301 - Contemporary Issues in Management **Credits:** (3)
- **OR** MGT 200 - Essential Skills for Business Professionals **Credits:** (5)
- ECON 202 - Principles of Economics Macro **Credits:** (5)
- FIN 370 - Introductory Financial Management **Credits:** (5)
- MGT 382 - Principles of Management **Credits:** (5)
- MIS 386 - Management Information Systems **Credits:** (5)
- MKT 362 - Essential Marketing Concepts **Credits:** (5)
- SCM 310 - Supply Chain Management **Credits:** (5)

Select one of the following: 4-5 credits

- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- COM 345 - Business and Professional Speaking **Credits:** (4)
- ENG 310 - Technical Writing **Credits:** (4)

Business Core Total Credits: 37-40

Supply Chain Management Specialization Courses

Required Courses

- SCM 425 - Procurement and Supply Management **Credits:** (5)
- SCM 435 - Supply Chain Operations **Credits:** (5)
- SCM 475 - Global Trade and Supply Chain Management **Credits:** (5)
- SCM 480 - Supply Chain Strategy **Credits:** (5)

Select a minimum of 5 credits from the following:

- ACCT 305 - Cost Accounting **Credits:** (5)
- BUS 490 - Cooperative Education **Credits:** (1-12) (must be taken for 5 credits)
- ECON 352 - Managerial Economics **Credits:** (5)
- MGT 484 - International Management **Credits:** (5)
- SCM 420 - Lean/Six Sigma Processes **Credits:** (5)
- SCM 450 - Logistics and Transportation **Credits:** (5)
  OR one other course approved in advance by SCM advisor **Credits:** (5)

Total Specialization Credits: 25

College of Business Capstone

- MGT 489 - Strategic Management **Credits:** (5)

Capstone Total Credits: 5

Total Credits: 102-105

Business Minor

The business minor provides students with an introduction to several key areas of business administration. Business minors are only available to students with declared majors. Declaration forms, with instructions, are available online, in department and in center offices. Students must earn a cumulative grade point average of 2.25 in courses allowed in fulfilling the business administration minor requirements.

Business Minor Core

Required Courses

- ACCT 252 - Managerial Accounting **Credits:** (5)
- **OR** ACCT 301 - Financial Accounting Analysis **Credits:** (5)
- BUS 241 - Legal Environment of Business **Credits:** (5)
- BUS 374 - Personal Investments **Credits:** (5)
- **OR** ECON 201 - Principles of Economics Micro **Credits:** (5)
- HRM 381 - Management of Human Resources **Credits:** (5)
- MKT 360 - Principles of Marketing **Credits:** (5)
- MGT 380 - Organizational Management **Credits:** (5)

Total Credits: 30

Finance Minor

The finance minor provides students in business, economics, accounting and actuarial sciences with grounding in key financial principles and practices. Finance minors are only available to students who are currently pursuing a major in business, accounting or actuarial sciences. Declarations forms, with instructions, are available online, in department and in center offices. Students must earn a cumulative grade point average of 2.25 in courses allowed in fulfilling the finance minor requirements.

Required Courses

- ECON 202 - Principles of Economics Macro **Credits:** (5)
- ECON 330 - Money and Banking **Credits:** (5)
- FIN 370 - Introductory Financial Management **Credits:** (5)
- FIN 470 - Intermediate Financial Management **Credits:** (5)
- FIN 475 - Investments **Credits:** (5)

Total Credits: 25

Supply Chain Management Minor

Advisors:
Ozden Bayazit, PhD
Deepak Iyengar, PhD
Seong Jong-Joo, PhD
Ke Ke, PhD
Yong Joo Lee, MS
Kun Liao, PhD
Carlo Smith, PhD

The minor program provides the opportunity for the student to gain knowledge and skills in the full spectrum of supply chain activities-supplier relationships, purchasing management, operations and inventory management, logistics and transportation, quality management, and information technology. Typical job titles include: purchasing/supply manager, procurement manager, materials manager, demand planner, logistics analyst as well as others.

Additional Notes:
This program is open to current accounting, economics, finance, management and marketing students, and CWU students in other academic programs who have completed the necessary pre-requisite courses. The courses in the minor may be used as part of the BS Business Administration Program.

Required Courses

- ECON 130 - Foundations for Business Analytics **Credits:** (5)
- **OR** MATH 130 - Finite Mathematics **Credits:** (5)

- ECON 201 - Principles of Economics Micro **Credits:** (5)
- SCM 310 - Supply Chain Management **Credits:** (5)
- SCM 425 - Procurement and Supply Management **Credits:** (5)
- SCM 435 - Supply Chain Operations **Credits:** (5)
- SCM 475 - Global Trade and Supply Chain Management **Credits:** (5)

Select a minimum of 5 credits from the following:

- ACCT 305 - Cost Accounting **Credits:** (5)
- BUS 490 - Cooperative Education **Credits:** (1-12)
- MGT 484 - International Management **Credits:** (5)
- SCM 420 - Lean/Six Sigma Processes **Credits:** (5)

- SCM 450 - Logistics and Transportation **Credits:** (5)

Total Credits: 35

Supply Chain Management Certificate

Advisors:
Ozden Bayazit, PhD
Deepak Iyengar, PhD
Seong-Jong Joo, PhD
Ke Ke, PhD
Yong Joo Lee, MS
Kun Liao, PhD
Carlo Smith, PhD

The certificate program provides the opportunity for the student to gain knowledge and skills in the full spectrum of supply chain activities-supplier relationships, purchasing management, operations and inventory management, logistics and transportation, quality management, and information technology. Typical job titles include: purchasing/ supply manager, procurement manager, materials manager, contracts manager, purchasing agent, senior buyer and buyer/planner. Students must complete 25 credits of the supply chain management certificate in residency.

Additional Notes:
This program is open to current accounting, economics, finance, management and marketing students, CWU students in other academic programs who have completed certificate course prerequisites and persons with bachelors' degrees in other fields who have completed program prerequisite courses. The courses in the certificate program may be used as part of the BS Business Administration program. A cumulative GPA of 3.0 must be earned in the program to be eligible for the certificate.

Required Courses

- ECON 130 - Foundations for Business Analytics **Credits:** (5)
- **OR** MATH 130 - Finite Mathematics **Credits:** (5)

- ECON 201 - Principles of Economics Micro **Credits:** (5)
- SCM 310 - Supply Chain Management **Credits:** (5)
- SCM 425 - Procurement and Supply Management **Credits:** (5)
- SCM 435 - Supply Chain Operations **Credits:** (5)
- SCM 475 - Global Trade and Supply Chain Management **Credits:** (5)

Select a minimum of 5 credits from the following:

- ACCT 305 - Cost Accounting **Credits:** (5)
- BUS 490 - Cooperative Education **Credits:** (1-12)
- MGT 484 - International Management **Credits:** (5)
- SCM 420 - Lean/Six Sigma Processes **Credits:** (5)
- SCM 450 - Logistics and Transportation **Credits:** (5)
- SCM 480 - Supply Chain Strategy **Credits:** (5)

Total Credits: 35

Geography Department

College of the Sciences
Ellensburg
Dean Hall, room 301
Mail Stop 7420
509-963-1188
Fax: 509-963-1047
www.cwu.edu/geography
See website for how this program may be used for educational and career purposes.

Faculty and Staff
Interim Chair
John Bowen, PhD

Professors
Kevin Archer, PhD, globalization, cities, production of nature
Anthony Gabriel, PhD, hydrology, lake and river ecosystems, coastal and wetlands management
Robert Hickey, PhD, environmental impacts, coastal zones, GIS, Australia
Karl Lillquist, PhD, physical geography, geomorphology, soils, environmental change in arid and alpine watersheds

Associate Professors
John Bowen, PhD, economic geography, transportation geography, Asia
Jennifer Lipton, PhD, cultural ecology, remote sensing, climate change, Latin America
Craig Revels, PhD, cultural-historical geography, landscape, Latin America

Assistant Professors
Elvin E. Delgado, PhD, political ecology, energy and capitalism, political economy and nature, critical resource geography, health geography
Mathew Novak, PhD, urban land-use planning, historical geography, GIS
Michael Pease, water resources, watershed planning and analysis, North America
Megan Walsh, PhD, biogeography, paleoecology, NW fire

history, climate change

Senior Lecturers
Holly English, MS, environmental policy and energy resources
Elaine Glenn, MS, political geography, world regional geography, Middle East, Russia

Lecturer
Paul Blanton, PhD, fluvial geomorphology, river landscapes, geotechniques, Western North America

Emeritus Faculty
James Brooks, PhD
Dee Eberhart, MA
Kenneth Hammond, PhD
James Huckabay, PhD
Nancy Hultquist, PhD
Robert Kuhlken, PhD
John Ressler, PhD
Morris Uebelacker, PhD

Staff
David Cordner, instructional and classroom support technician III
Monica Reece-Bruya, secretary senior

Department Information
An understanding of geography is integral to an educated person's ability to live and act effectively in today's changing world. Abroad range of human, environmental, and technological factors are at work shaping the future of our planet, and it is the mission of the department of geography to prepare students to be active participants in that emerging future. Geography's traditional concern with human-environment interactions, the interrelationships between places, and the associated impacts and problems of these processes provides important insights into today's complex societal challenges. The department emphasizes critical thinking and applied approaches to analysis, while providing our graduates with the skills necessary to deal with issues at scales ranging from local to global.

Courses in the department of geography introduce students to world regions such as Asia and Latin America while also providing a fuller understanding for the patterns and relationships of our home region, the Pacific Northwest. We emphasize field learning and a holistic approach to the physical and societal characteristics of places. Majors in geography hone their written, verbal, and map communication skills while gaining proficiency in specialized tools such as geographic information systems (GIS) and remote sensing technology. Skills in geospatial analysis are useful in addressing a wide range of problems, from choosing a location for a neighborhood coffee shop to minimizing damage from wildfire to assessing the likely impacts of climate change.

The department maintains a state-of-the-art lab for instruction in GIS, air photo interpretation, remote sensing, and quantitative methods. Students also learn from and collaborate with faculty members in the department's well-equipped soils, paleoecology, and hydrology labs. The department also encourages students to connect their geography training with related university programs, especially those in which the department is an active participant, including: Environmental Studies, Energy Studies, Asia/Pacific Studies, Latin American Studies, International Studies and Programs, and the Resource Management Graduate Program.

Upon graduation, geography majors work in a wide range of careers, with particular success in geospatial data analysis (e.g. computer mapping and GIS), urban and regional planning, and employment in local, state, and federal government agencies. In addition, the interdisciplinary nature of geography provides many other opportunities for our majors, including graduate school.

All students who wish to major in geography must:

1. Have a 2.25 minimum GPA in all coursework taken up to the time of admission
2. Apply for acceptance into the geography major
3. Upon acceptance into the program, meet with their assigned advisor to develop a major contract
4. Earn a C- or higher grade in each of the courses in their major contract

Geography Major, BA

This major of 65 credits offers students the greatest flexibility and is suited for students with interests outside of the specializations listed below. In consultation with a departmental advisor, students may choose a specialization and design a program of component courses which best fits specific career goals and aspirations. In addition to the core requirements, students pursuing this option must take a set of department approved electives that includes an upper-division course from each of five subfields. To satisfy the overall major requirement, at least 8 of the credits must be in 400-level geography courses in addition to Geography 489 - Geography Capstone.

(NOTE: Students seeking a BA degree must complete one year college or university study or two years high school study of a single world language.)

Geography Core

Admission to the Major

All students who wish to major in geography must:

1. Have a 2.25 minimum GPA in all coursework taken up to the time of admission
2. Apply for acceptance into the geography major
3. Upon acceptance into the program, meet with their assigned advisor to develop a major contract
4. Earn a C- or higher grade in each of the courses in their major contract

Core Requirements

- GEOG 101 - World Regional Geography **Credits:** (5)
- GEOG 107 - Our Dynamic Earth **Credits:** (5)
- GEOG 108 - Introduction to Human Geography **Credits:** (5)
- GEOG 203 - Introduction to Maps and Cartography **Credits:** (4)
- GEOG 250 - Resource Exploitation and Conservation **Credits:** (4)
- GEOG 489 - Geography Capstone **Credits:** (2)

Total Core Requirement Credits: 25

Department-approved Electives

Must include one upper-division geography course in each of the five subfields: regional, physical, human, resource, and techniques.

Total Electives Credits: 40

Total Credits: 65

Geography BS, Environmental and Resource Geography Specialization

This specialization engages students in courses that primarily use field and laboratory techniques to study Earth's environmental systems and the human dimensions of resource use and allocation. The curriculum is designed to provide majors with an applied approach for developing data collection and analysis skills, as well as an ability to evaluate the societal and physical dimensions of environmental sustainability. This specialization places a strong emphasis on understanding human-environmental interactions, including climate change, hazards, and watershed and landscape dynamics in aquatic, mountain, arid, and forest environments, particularly the Pacific Northwest. Students who complete this specialization will be prepared for careers in natural resource management and are likely to be employed by federal, state, and tribal agencies, as well as private consulting firms. Students interested in graduate study in the field of environmental geography or resource management should work closely with their advisor to tailor this specialization to their particular field of interest.

Geography Core

Admission to the Major

All students who wish to major in geography must:

1. Have a 2.25 minimum GPA in all coursework taken up to the time of admission
2. Apply for acceptance into the geography major
3. Upon acceptance into the program, meet with their assigned advisor to develop a major contract
4. Earn a C- or higher grade in each of the courses in their major contract

Core Requirements

- GEOG 101 - World Regional Geography **Credits:** (5)
- GEOG 107 - Our Dynamic Earth **Credits:** (5)
- GEOG 108 - Introduction to Human Geography **Credits:** (5)
- GEOG 203 - Introduction to Maps and Cartography **Credits:** (4)
- GEOG 250 - Resource Exploitation and Conservation **Credits:** (4)
- GEOG 489 - Geography Capstone **Credits:** (2)

Total Core Requirement Credits: 25

Environmental Geography

Choose three from the following:

- GEOG 361 - Soils **Credits:** (5)
- GEOG 382 - Hydrology **Credits:** (5)
- GEOG 386 - Geomorphology **Credits:** (5)

- GEOG 387 - Biogeography **Credits:** (5)
- GEOG 388 - Weather and Climate **Credits:** (5)
- GEOG 453 - Riparian and Wetlands Analysis **Credits:** (5)

Total Environmental Geography Credits: 15

Techniques

- GEOG 409 - Quantitative Methods in Geography **Credits:** (5)
  And choose one from the following:
- GEOG 303 - Introductory GIS **Credits:** (5)
- GEOG 325 - Field Methods in Geography **Credits:** (5)
- GEOG 330 - Airphoto Interpretation **Credits:** (5)

Total Techniques Credits: 10

Regional

Choose one from the following:

- GEOG 450 - Arid Environments **Credits:** (5)
- GEOG 451 - Mountain Environments **Credits:** (5)
- GEOG 452 - Coastal Environments **Credits:** (5)
- GEOG 454 - Forest Environments **Credits:** (5)

Total Regional Credits: 5

Resource Geography

Choose three from the following:

- GEOG 305 - Introduction to Land Use Planning **Credits:** (5)
- GEOG 373 - Water Resources **Credits:** (4)
- GEOG 441 - Climate Change: Human and Biophysical Dimensions **Credits:** (4)
- GEOG 443 - Energy Policy **Credits:** (5)
- GEOG 444 - Mineral Resources **Credits:** (4)
- GEOG 445 - Natural Resources Policy **Credits:** (4)
- GEOG 448 - Geographic Approaches to Environmental Resource Analysis **Credits:** (5)
- GEOG 449 - Environmental Hazard Analysis and Management **Credits:** (5)
- GEOG 455 - Pyrogeography **Credits:** (4)

Resource Geography Credits: 12-15

Culminating Experience

Choose one from the following:

- GEOG 490 - Cooperative Education **Credits:** (1-12)
- GEOG 493 - Geography Field Experience **Credits:** (1-12)
- GEOG 496 - Individual Study **Credits:** (1-6)

Culminating Experience Credits: 5

Department-approved Electives

Taken from environmental, techniques, regional, and resource courses above, or by advisement.

Total Electives Credits: 13-15

Total Credits: 85-90

Geography BS, GIScience Specialization

This GIScience specialization recognizes the increasing importance of spatial information in understanding and managing environmental and human systems, providing majors training in the processing, display, and analysis of geographical data. Students develop familiarity with the theoretical underpinnings of spatial analytical tools and techniques as well as their application to real-world problems. Issues pertaining to the collection, management, analysis, and dissemination of spatial information are covered through courses in GIS, aerial photo interpretation, remote sensing, and quantitative analysis. Graduates of the program will be well-prepared for employment as managers and analysts of spatial information, including positions in business, governmental agencies, and private consulting, as well as graduate study and advanced professional certification.

Geography Core

Admission to the Major

All students who wish to major in geography must:

1. Have a 2.25 minimum GPA in all coursework taken up to the time of admission
2. Apply for acceptance into the geography major
3. Upon acceptance into the program, meet with their assigned advisor to develop a major contract
4. Earn a C- or higher grade in each of the courses in their major contract

Core Requirements

- GEOG 101 - World Regional Geography **Credits:** (5)
- GEOG 107 - Our Dynamic Earth **Credits:** (5)
- GEOG 108 - Introduction to Human Geography **Credits:** (5)
- GEOG 203 - Introduction to Maps and Cartography **Credits:** (4)
- GEOG 250 - Resource Exploitation and Conservation **Credits:** (4)
- GEOG 489 - Geography Capstone **Credits:** (2)

Total Core Requirement Credits: 25

GIScience Specialization

Required Courses

- CS 110 - Programming Fundamentals I **Credits:** (4)
- GEOG 303 - Introductory GIS **Credits:** (5)
- GEOG 330 - Airphoto Interpretation **Credits:** (5)
- GEOG 404 - Intermediate GIS **Credits:** (5)
- GEOG 409 - Quantitative Methods in Geography **Credits:** (5)
- GEOG 430 - Remote Sensing **Credits:** (5)

Total Required Courses Credits: 29

Upper-level Geography Courses

Select one course from the following:

- GEOG 304 - Economic Geography **Credits:** (5)
- GEOG 306 - Transportation Geography and Planning **Credits:** (4)
- GEOG 308 - Cultural Geography **Credits:** (5)
- GEOG 346 - Political Geography **Credits:** (4)
- GEOG 381 - Urban Geography **Credits:** (4)

Select one course from the following:

- GEOG 361 - Soils **Credits:** (5)
- GEOG 382 - Hydrology **Credits:** (5)
- GEOG 386 - Geomorphology **Credits:** (5)
- GEOG 387 - Biogeography **Credits:** (5)
- GEOG 388 - Weather and Climate **Credits:** (5)

Select one course from the following:

- GEOG 305 - Introduction to Land Use Planning **Credits:** (5)
- GEOG 373 - Water Resources **Credits:** (4)

Total Upper-level Geography Courses Credits: 13-15

Culminating Experience

- GEOG 417 - Advanced GIS **Credits:** (4)

Total Culminating Experience Credits: 4

Electives (minimum of three courses)

- CS 111 - Programming Fundamentals II **Credits:** (4)
- CS 250 - Web Development Technologies I **Credits:** (4)
- CS 351 - Web Development Technologies II **Credits:** (4)
- ENG 310 - Technical Writing **Credits:** (4)
- GEOG 311 - Qualitative Methods in Geography **Credits:** (4)
- GEOG 490 - Cooperative Education **Credits:** (1-12) (may be taken for 4-6 credits)
- GEOG 494 - Applied GIS Project **Credits:** (2-6) (may be taken for 4-5 credits)
- GEOG 496 - Individual Study **Credits:** (1-6) (may be taken for 4-6 credits)
- MATH 153 - Pre-Calculus Mathematics I **Credits:** (5)
- Other computer science classes, with approval from the Geography Chair.
  NOTE: GEOG 490 and GEOG 496 must employ a spatial technique and be approved by the Geography Chair.

Total Electives Credits: 12-14

Total Credits: 83-87

Public Policy BS

Public policy is a science dedicated to study of the policies and laws implemented by governments to address the needs of contemporary society. The bachelor of science in public policy is an interdisciplinary program aimed at exploration and analysis of the historical legacies as well as the contemporary forces that frame the policy making process. Because the world is increasingly pluralistic, public policy at CWU is not free-standing and must be combined with another major, frequently economics, environmental studies, geography, public health, political science, or sociology (students combining public policy and geography, political science, public health, or sociology will receive a bachelor of science degree in

public policy and a bachelor of arts degree in geography or political science, public health, or sociology).

Public Policy Core - Credits: 35-36

- ECON 201 - Principles of Economics Micro **Credits:** (5)
- ECON 202 - Principles of Economics Macro **Credits:** (5)
- ECON 332 - Public Finance **Credits:** (5)
- ENST 202 - Ecosystems, Resources, Population, and Culture **Credits:** (5)
- **OR** GEOG 250 - Resource Exploitation and Conservation **Credits:** (4)
- HED 209 - Consumer Health **Credits:** (3)
- POSC 320 - Public Administration **Credits:** (5)
- POSC 325 - Introduction to Public Policy **Credits:** (3)
- SOC 459 - Organizations **Credits:** (5)

Research Tool Elective - Credits: 4-5

Select one of the following:

- BUS 221 - Introductory Business Statistics **Credits:** (5)
- GEOG 303 - Introductory GIS **Credits:** (5)
- GEOG 311 - Qualitative Methods in Geography **Credits:** (4)
- LAJ 400 - Research Methods in Criminal Justice **Credits:** (4)
- MATH 311 - Statistical Concepts and Methods **Credits:** (5)
- PSY 362 - Introductory Statistics **Credits:** (5)
- SOC 364 - Data Analysis in Sociology **Credits:** (5)

Department-approved Electives - Credits: 12-15

Electives in economics, environmental studies, geography, information technology and management, law and justice, political science, public health, or sociology.

Total Credits: 51-56

Energy Studies Minor

Students interested in investigating energy issues are encouraged to pursue the following interdisciplinary minor which provides:

1. An introduction to the technical concepts and language relevant to energy.
2. An investigation of current and projected energy use patterns and their associated environmental conflicts.
3. A study of the legal, institutional and economic factors that influence energy policy.

With the approval of the director of energy studies, the student will select appropriate electives to meet personal and professional goals.

Required Courses

- ENST 310 - Energy and Society **Credits:** (5)
- GEOG 442 - Alternative Energy Resources and Technology **Credits:** (5)
- **OR** ETSC 442 - Alternative Energy Resources and Technology **Credits:** (5)
- GEOG 443 - Energy Policy **Credits:** (5)
- PHYS 111 - Introductory Physics **Credits:** (4)
- PHYS 111LAB - Introductory Physics Laboratory **Credits:** (1)

Select one of the following - Credits: 5

- ECON 101 - Economic Issues **Credits:** (5)
- ECON 201 - Principles of Economics Micro **Credits:** (5)
- ETSC 101 - Modern Technology and Energy **Credits:** (5)

Select one from the following - Credits: 4-5

- CMGT 452 - LEED in Sustainable Construction **Credits:** (4)
- ECON 462 - Environmental and Resource Economics **Credits:** (5)
- SCED 301 - Interdisciplinary Science and Engineering Inquiry **Credits:** (5)

Select 2 credits of Cooperative Education - Credits: 2

- BIOL 490 - Cooperative Education **Credits:** (1-12)
- ENST 490 - Cooperative Education **Credits:** (1-12)
- GEOG 490 - Cooperative Education **Credits:** (1-12)
- ETSC 490 - Cooperative Education **Credits:** (1-12)

Total Credits: 31-32

Geography Minor

All students who wish to minor in geography must:

1. Apply for acceptance into the geography minor;
2. Have a 2.25 minimum GPA in all coursework taken up to the time of admission;
3. Earn a C- or higher grade in each of the courses required for the minor.

Required Courses

- GEOG 101 - World Regional Geography **Credits:** (5)
- GEOG 107 - Our Dynamic Earth **Credits:** (5)
- GEOG 108 - Introduction to Human Geography **Credits:** (5)
- GEOG 203 - Introduction to Maps and Cartography **Credits:** (4)
- GEOG 250 - Resource Exploitation and Conservation **Credits:** (4)
- Any upper-division geography courses **Credits:** (7)

Total Credits: 30

Geographic Information Systems (GIS) Certificate

The GIS certificate provides recognition for students completing the required number of GIS-related classes at a high level of competence (minimum average GPA of 2.7). Certification will provide students with a powerful tool to assist their future job searches.

Required Courses

- GEOG 203 - Introduction to Maps and Cartography **Credits:** (4)
- GEOG 303 - Introductory GIS **Credits:** (5)
- GEOG 404 - Intermediate GIS **Credits:** (5)
- GEOG 330 - Airphoto Interpretation **Credits:** (5)
- GEOG 430 - Remote Sensing **Credits:** (5)

Department-approved Electives - Credits: 8

Choose from the following courses:

- CMGT 267 - Plane Surveying **Credits:** (3)
- CS 110 - Programming Fundamentals I **Credits:** (4)
- CS 111 - Programming Fundamentals II **Credits:** (4)
- CS 301 - Data Structures **Credits:** (4)
- GEOG 409 - Quantitative Methods in Geography **Credits:** (5)
- GEOG 417 - Advanced GIS **Credits:** (4)
- GEOG 485 - Topics in GIS and Remote Sensing **Credits:** (4)
- GEOG 490 - Cooperative Education **Credits:** (1-12) (with a GIS focus)
- GEOG 496 - Individual Study **Credits:** (1-6) (with a GIS focus)
  (Individual study classes must have a GIS focus. Online classes may count toward 496 credit at a rate of 30 hours of online class work = 1 credit.)
- Other Electives as approved by the director

Total Credits: 32

Geological Sciences Department

College of the Sciences
Ellensburg
Lind Hall, room 108B
Mail Stop 7418
509-963-2701
Fax: 509-963-2821
www.geology.cwu.edu

See website for how these programs could be used for educational and career purposes.

Faculty and Staff
Chair
Carey Gazis, PhD

Professors
Wendy A. Bohrson, PhD, volcanology, isotope geochemistry, igneous petrology
Lisa L. Ely, PhD, geomorphology, paleohydrology, and quaternary geology
Carey Gazis, PhD, environmental geochemistry, stable isotope geochemistry, and hydrogeology
Jeffrey Lee, PhD, active and regional tectonics, structural geology
Timothy I. Melbourne, PhD, seismology, continental dynamics

Associate Professors
Audrey Huerta, PhD, geodynamics, climate, and mountain building
Chris Mattinson, PhD, mineralogy and petrology

Assistant Professors
Anne Egger, PhD, Earth science education and structural geology

Susan Kaspari, PhD, climate and environmental variability and glaciochemistry
Breanyn MacInnes, PhD, sedimentary geology, coastal geomorphology
Walter Szeliga, PhD, geophysics and GPS geodesy

Faculty Research Associates
M. Meghan Miller, PhD, crustal deformation, GPS geodesy, active tectonics, and remote sensing
Beth Pratt-Sitaula, PhD, earth science education and geomorphology
Charles M. Rubin, PhD, paleoseismology, earthquake hazards, and active tectonics
Paul Winberry, PhD, glacier dynamics, seismology

Lecturers
Keegan Fengler, MS, earthquakes
Winston Norrish, PhD, petroleum geology

Emeritus Professors
Robert D. Bentley, PhD, structural geology, igneous and metamorphic petrology, regional geology of the Pacific Northwest
James Hinthorne, PhD, mineralogy, geochemistry, spatial information systems

Staff
Rex Flake, tiltmeter engineer, PANGA network engineer and geologist
Moriah Kauer, secretary
V. Marcelo Santillan, scientific programmer and GPS data analyst
Craig Scrivner, systems analyst
Linda Shepard, fiscal specialist
Nick Zentner, instructional technician supervisor

Department Information
Geosciences encompass the scientific study of the origin and evolution of the earth. Energy, mineral and water resources, geologic hazards, pollution of natural waters, and earthquake prediction are just a few of the pressing societal concerns that are addressed by geoscientists. The geological sciences program has two major parts: (1) solid-earth geosciences, such as rocks, minerals, deformation, and tectonic evolution of the Earth's crust; and (2) Earth processes over the last 10,000 years, such as active faulting, environmental geochemistry, hydrogeology and water resources, geologic hazards, seismology, surface processes, and volcanology. Field, laboratory, and computer skills are essential to the study of the geological sciences. Research in the geosciences is active and varied, with faculty and students interacting closely. BS and BA degrees are offered in geology and a BS degree in environmental geological sciences. A BA in Earth sciences is also offered, and is intended for future secondary school teachers. Minors in geology and Earth sciences are also available to supplement careers in other fields.

Students who declare a major in geology must register with the department and work out a specific program of study with the chairperson or an assigned advisor. Course programs can be tailored to the student's needs and interests with the aid of an academic advisor. Other course requirements may be modified in cases where past performance indicates superior ability. Students must be evaluated for math placement upon declaration of the major with the goal of establishing proficiency at the MATH 154 level early in the major program.

Geology Major, BA

The BA degree is designed for students preparing to incorporate geosciences into broader careers such as teaching, educational outreach, resource management, environmental planning, business, or law. The BA degree may be an appropriate prerequisite for some graduate programs, but a BS is recommended for students who anticipate pursuing a graduate degree or career in the geological sciences.

The BA in Geology pairs will with minors or double majors in communication, computer science, energy studies, environmental studies, museum studies (anthropology), science education K-8, and any other study that requires fundamental scientific skills with an emphasis on communication.

This major satisfies the criteria for an endorsement in Earth science teaching at the high school, middle, or junior high levels. Students who seek a teaching endorsement are required to complete the Professional Education Program (PEP) requirements offered through the Department of Educational Foundations and Curriculum. Students completing this program are required to demonstrate proficiency of student learning outcomes through a program portfolio prior to student teaching. In addition to the above requirements, students must pass the WEST-E exam for Earth science to receive an Earth science endorsement and must take SCED 301, SCED 324. SCED 325, and SCED 487 to meet Science Teaching Program competencies (these courses substitute for EFC 350 and EFC 416 in the PEP).

(NOTE: Students seeking a BA degree must complete one year college/university study or two years high school study of a single world language.)

Required Courses

- GEOL 101 - Physical Geology **Credits:** (4)

- **OR** GEOL 103 - Geology of Washington **Credits:** (4)
- GEOL 101LAB - Physical Geology Laboratory **Credits:** (1)
- GEOL 200 - Earth's Evolution and Global Change **Credits:** (5)
- GEOL 210 - Introduction to Geologic Field Methods **Credits:** (4)
- GEOL 305 - Quantitative Reasoning for Geoscientists **Credits:** (4)
- GEOL 320 - Rocks and Minerals **Credits:** (5)
- GEOL 351 - Geology of the Pacific Northwest **Credits:** (3)
- GEOL 370 - Sedimentology and Stratigraphy **Credits:** (5)
- GEOL 380 - Natural Hazards **Credits:** (5)
- **OR** GEOL 382 - Earth Resources and Pollution **Credits:** (4)
- GEOL 384 - Ocean, Atmosphere and Climate Interactions **Credits:** (4)
- GEOL 386 - Geomorphology **Credits:** (5)
- GEOL 487 - End-of-major Review Seminar **Credits:** (1)
- GEOL 490 - Cooperative Education **Credits:** (1-12)
- **OR** GEOL 493 - Field Methods in Environmental Geology **Credits:** (4)
- PHYS 101 - Introductory Astronomy I **Credits:** (5)
- **OR** PHYS 102 - Introductory Astronomy of the Solar System **Credits:** (4)

Total Required Credits: 52-55

Select one of the following courses - Credits: 2-5

- ANTH 361 - Museum Exhibit Design **Credits:** (4)
- COM 207 - Introduction to Human Communication **Credits:** (5)
- ENG 310 - Technical Writing **Credits:** (4)
- ENST 330 - Environmental Leadership and Advocacy **Credits:** (5)
- GEOL 306 - Communicating Geoscience **Credits:** (4)
- SCED 411 - Field Experience in Communicating Science to the Public **Credits:** (2)

Department-approved Electives Credits: 8-10

Students must take two additional department-approved electives.

BA Required and Elective Courses Total Credits: 62-70

Allied Science Requirements for Bachelor of Arts Degree

- MATH 154 - Pre-Calculus Mathematics II **Credits:** (5)

Select 10 credits from the following:

- CHEM 111 - Introduction to Chemistry **Credits:** (4)
- CHEM 111LAB - Introductory Chemistry Laboratory **Credits:** (1)
- CHEM 112 - Introduction to Organic Chemistry **Credits:** (4)
- CHEM 112LAB - Introduction to Organic Chemistry Laboratory **Credits:** (1)
- CHEM 181 - General Chemistry I **Credits:** (4)
- CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)
- CHEM 182 - General Chemistry II **Credits:** (4)
- CHEM 182LAB - General Chemistry Laboratory II **Credits:** (1)
- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)
- PHYS 111 - Introductory Physics **Credits:** (4)
- PHYS 111LAB - Introductory Physics Laboratory **Credits:** (1)
- PHYS 112 - Introductory Physics II **Credits:** (4)
- PHYS 112LAB - Introductory Physics Laboratory II **Credits:** (1)
- PHYS 181 - General Physics **Credits:** (4)
- PHYS 181LAB - General Physics Laboratory **Credits:** (1)
- PHYS 182 - General Physics II **Credits:** (4)
- PHYS 182LAB - General Physics Laboratory II **Credits:** (1)

BA Allied Science Total Credits: 15

Bachelor of Arts Total Credits: 77-85

Environmental Geological Sciences Major, BS

This major in environmental geological sciences focuses on the interactions between solid Earth and the atmosphere and hydrosphere, including ground water, soils, and climate. The BS program builds on a solid foundation in allied sciences and math, and prepares students for graduate school and a variety of careers in the environmental and geological sciences, including environmental consulting and water resources.

Required Courses Credits: (56-57)

- GEOL 101 - Physical Geology **Credits:** (4)
- **OR** GEOL 103 - Geology of Washington **Credits:** (4)
- **OR** GEOL 108 - Introduction to Environmental Geology **Credits:** (5)
- GEOL 101LAB - Physical Geology Laboratory **Credits:** (1)
- GEOL 200 - Earth's Evolution and Global Change **Credits:** (5)
- GEOL 210 - Introduction to Geologic Field Methods **Credits:** (4)
- GEOL 305 - Quantitative Reasoning for Geoscientists **Credits:** (4)
- GEOL 320 - Rocks and Minerals **Credits:** (5)
- GEOL 370 - Sedimentology and Stratigraphy **Credits:** (5)
- GEOL 380 - Natural Hazards **Credits:** (5)
- GEOL 382 - Earth Resources and Pollution **Credits:** (4)
- GEOL 384 - Ocean, Atmosphere and Climate Interactions **Credits:** (4)
- GEOL 386 - Geomorphology **Credits:** (5)
- GEOL 445 - Hydrogeology **Credits:** (5)
- GEOL 487 - End-of-major Review Seminar **Credits:** (1)
- GEOL 493 - Field Methods in Environmental Geology **Credits:** (4)

Electives selected from the following - Credits: (18)

- BIOL 362 - Biomes of the Pacific Northwest **Credits:** (4)
- CHEM 345 - Environmental Chemistry **Credits:** (5)
- GEOG 361 - Soils **Credits:** (5)
- GEOG 382 - Hydrology **Credits:** (5)
- GEOL 306 - Communicating Geoscience **Credits:** (4)
- GEOL 351 - Geology of the Pacific Northwest **Credits:** (3)
- GEOL 377 - Regional Natural History **Credits:** (2)
- **AND** GEOL 377LAB - Regional Natural History **Credits:** (3)
- GEOL 415 - Earthquake Geology and Neotectonics **Credits:** (5)
- GEOL 423 - The Cryosphere **Credits:** (5)
- GEOL 425 - Environmental Geochemistry **Credits:** (5)
- GEOL 430 - Remote Sensing **Credits:** (5)
- GEOL 434 - Petroleum Geology **Credits:** (5)
- GEOL 441 - Climate Variability and Climate Change **Credits:** (5)
- GEOL 474 - Quaternary Geology **Credits:** (4)
- GEOL 476 - Advanced Sedimentology **Credits:** (4)
- GEOL 478 - Volcanology **Credits:** (5)
- GEOL 483 - Isotope Geochemistry **Credits:** (5)

Must take at least one of the following courses: Credits: (4-5)

- ANTH 352 - Anthropology of Environmental Issues **Credits:** (4)
- ECON 462 - Environmental and Resource Economics **Credits:** (5)
- ENST 303 - Environmental Management **Credits:** (5)
- ENST 310 - Energy and Society **Credits:** (5)
- ENST 330 - Environmental Leadership and Advocacy **Credits:** (5)
- GEOG 305 - Introduction to Land Use Planning **Credits:** (5)
- GEOG 373 - Water Resources **Credits:** (4)
- GEOG 445 - Natural Resources Policy **Credits:** (4)
- HIST 454 - American Environmental History **Credits:** (5)
- PHIL 306 - Environmental Ethics **Credits:** (5)

Total Required Course Credits: 74-75

Allied Science Requirements for Bachelor of Science Environmental Geological Sciences Degree

Chemistry - Credits: (15)

- CHEM 181 - General Chemistry I **Credits:** (4)
- CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)
- CHEM 182 - General Chemistry II **Credits:** (4)
- CHEM 182LAB - General Chemistry Laboratory II **Credits:** (1)
- CHEM 183 - General Chemistry III **Credits:** (4)
- CHEM 183LAB - General Chemistry Laboratory III **Credits:** (1)

Physics - Credits: (10)

- PHYS 181 - General Physics **Credits:** (4)
- PHYS 181LAB - General Physics Laboratory **Credits:** (1)
- PHYS 182 - General Physics II **Credits:** (4)
- PHYS 182LAB - General Physics Laboratory II **Credits:** (1)

Mathematics - Credits: (10)

- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)

Total Allied Science Credits: 35

Total Credits: 109-110

Geology Major, BS

The BS in geology prepares students for graduate school and careers in solid-earth geosciences and other scientific fields. The program includes required courses across the breadth of the geosciences and allows for focused study in Earth structure and tectonics, hazards and resources, Earth materials or climate and surface processes. The core required geoscience courses build on a solid foundation in allied sciences and math and culminate in a capstone field mapping experience, thus preparing students for graduate school and a variety of careers in the geosciences, including geotechnical consulting and in Washington. The BS degree is also appropriate for students who wish to continue in other quantitative scientific fields or directions (e.g., medical school).

Required Courses

- GEOL 101 - Physical Geology **Credits:** (4)
- **OR** GEOL 103 - Geology of Washington **Credits:** (4)
- GEOL 101LAB - Physical Geology Laboratory **Credits:** (1)
- GEOL 200 - Earth's Evolution and Global Change **Credits:** (5)
- GEOL 210 - Introduction to Geologic Field Methods **Credits:** (4)
- GEOL 305 - Quantitative Reasoning for Geoscientists **Credits:** (4)
- GEOL 320 - Rocks and Minerals **Credits:** (5)
- GEOL 346 - Mineralogy **Credits:** (5)
- GEOL 360 - Structural Geology **Credits:** (5)
- GEOL 370 - Sedimentology and Stratigraphy **Credits:** (5)
- GEOL 384 - Ocean, Atmosphere and Climate Interactions **Credits:** (4)
- GEOL 487 - End-of-major Review Seminar **Credits:** (1)
- GEOL 489 - Geologic Field Methods **Credits:** (6-12)

Total Required Courses Credits: 52

Electives

Select at least four department-approved electives that total at least 17 credits. The groups of courses shown below are meant to offer guidance to students who wish to specialize in a sub-discipline or take courses across the breadth of the geological sciences. Up to 4 credits of department-approved seminars and research may count towards elective units as well.

Climate and Surface Processes

- GEOL 377 - Regional Natural History **Credits:** (2)
- **AND** GEOL 377LAB - Regional Natural History **Credits:** (3)
- GEOL 386 - Geomorphology **Credits:** (5)
- GEOL 423 - The Cryosphere **Credits:** (5)
- GEOL 441 - Climate Variability and Climate Change **Credits:** (5)
- GEOL 474 - Quaternary Geology **Credits:** (4)

Earth Materials

- GEOL 475 - Petrography and Petrogenesis **Credits:** (5)
- GEOL 476 - Advanced Sedimentology **Credits:** (4)
- GEOL 478 - Volcanology **Credits:** (5)
- GEOL 483 - Isotope Geochemistry **Credits:** (5)
- GEOL 484 - Geochronology **Credits:** (5)

Earth Structure and Tectonics

- GEOL 351 - Geology of the Pacific Northwest **Credits:** (3)
- GEOL 432 - Field Geodetic Techniques **Credits:** (3)
- GEOL 453 - Seismology **Credits:** (5)
- GEOL 456 - Geodynamics **Credits:** (5)

Hazards and Resources

- GEOL 380 - Natural Hazards **Credits:** (5)
- GEOL 382 - Earth Resources and Pollution **Credits:** (4)
- GEOL 415 - Earthquake Geology and Neotectonics **Credits:** (5)
- GEOL 425 - Environmental Geochemistry **Credits:** (5)
- GEOL 434 - Petroleum Geology **Credits:** (5)
- GEOL 445 - Hydrogeology **Credits:** (5)

Total Elective Credits: 17-20

Allied Science Requirements for Bachelor of Science Degree

Chemistry - Credits: (10)

- CHEM 181 - General Chemistry I **Credits:** (4)
- CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)
- CHEM 182 - General Chemistry II **Credits:** (4)
- CHEM 182LAB - General Chemistry Laboratory II **Credits:** (1)

Physics - Credits: (10)

- PHYS 181 - General Physics **Credits:** (4)
- PHYS 181LAB - General Physics Laboratory **Credits:** (1)
- PHYS 182 - General Physics II **Credits:** (4)
- PHYS 182LAB - General Physics Laboratory II **Credits:** (1)

Mathematics - Credits: (10)

- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)

Total Allied Science Requirement Credits: 30

Total Credits: 100-103

Geology Minor

The geology minor allows students to pursue their interests within the department's course offerings and can be combined with virtually and other major. It may be particularly useful for students in anthropology, biology, chemistry, computer science, economics, geography, history, physics, or science education.

Required Courses Credits: 15

- GEOL 101 - Physical Geology **Credits:** (4)
- **OR** GEOL 103 - Geology of Washington **Credits:** (4)
- GEOL 101LAB - Physical Geology Laboratory **Credits:** (1)
- GEOL 200 - Earth's Evolution and Global Change **Credits:** (5)
- GEOL 320 - Rocks and Minerals **Credits:** (5)

Elective Courses Credits: 18-20

Select a set of department-approved electives in geological sciences that total 18-20 credits.

Total Credits: 33-35

History Department

College of Arts and Humanities
Ellensburg
Language and Literature Bldg., room 100
Mail Stop 7553
509-963-1655
Fax: 509-963-1654
www.cwu.edu/history

See website for how this program may be used for educational and career purposes.

Faculty and Staff
Chair
Roxanne Easley, PhD

Professors
Karen J. Blair, PhD, 20th century U.S., women
Roxanne Easley, PhD, Russia, Eastern Europe
Daniel Herman, PhD, U.S. pre-1877, U.S. West, Native American
Jason Knirck, PhD, Britain/British Empire, Western Europe
Marilyn Levine, PhD, Modern China
Stephen Moore, PhD, Pacific Northwest, foreign relations, social studies education
Marji Morgan, PhD, 19th century British

Assistant Professors
Chong Eun Ahn, PhD, Modern East Asia
Brian Carroll, PhD, U.S. Colonial, American Revolution, Native American
Jason Dormady, PhD, Modern Mexico and Latin America, U.S. Borderlands
Lacy Ferrell, PhD, Africa

Emeritus Professors
Karen J. Blair, PhD, 20th century U.S., Women
Beverly Heckart, PhD, Germany, Europe
Zoltan Kramar, PhD, Ancient World
Larry Lowther, PhD, Colonial and Revolutionary America
Kent Richards, PhD, American West, Pacific Northwest

Staff
K. Angie Hill, secretary

Department Information
The history faculty offers courses leading to Bachelor of Arts and Master of Arts.

Students who declare a major in history must register with the department.

History Honors Program
Qualified students are urged to enter the Department of History's Honors Program. To qualify for the program, students must complete 25 credits in their major and have an overall GPA of 3.0 and 3.25 in history. Honors students will complete the following requirements:

- An elective course in addition to those required for their major in an area of concentration (United States, Europe, or non-western)
- A year of coursework in one departmentally approved foreign language at an accredited college or university. If it is the same language as that taken in high school, the student must complete the coursework at the 200 level
- An honors research paper (25 page minimum) completed during HIST 481. A faculty committee will judge whether the paper meets departmental standards for honors.

Students who complete the above requirements will graduate with departmental honors. Please contact the department chair for more information.

Bachelor of Arts
(NOTE: Students seeking a BA degree must complete one year college/university study or two years high school study of a single world language.)

History Major (Large Plan), BA

(Note: It is recommended that students who plan to enter graduate school should complete two years of a world language at the college level.)

Required Courses

- HIST 302 - Historical Methods **Credits:** (5) (Students must earn a minimum grade of C as a major requirement)
- HIST 481 - Senior Thesis **Credits:** (4) (Students must earn a minimum grade of C as a major requirement)
- Upper-division United States history **Credits:** (5)
- Upper-division European history **Credits:** (5)
- Upper-division African, Asian, Middle Eastern, or Latin American history **Credits:** (10)
- HIST 401, 402, or 403 - History Readings Seminar **Credits:** (5)
- Upper-division history electives **Credits:** (20)

Select 20 credits from the following:

World Civilization

- HIST 101 - World Civilization to 1500 **Credits:** (5) (Western civilization may be substituted)
- HIST 102 - World Civilization: 1500-1815 **Credits:** (5) (Western civilization may be substituted)
- HIST 103 - World Civilization Since 1815 **Credits:** (5) (Western civilization may be substituted)

United States History

- HIST 143 - United States History to 1865 **Credits:** (5)
- HIST 144 - United States History Since 1865 **Credits:** (5)

Total Credits: 74

History Major (Small Plan), BA

(Note: It is recommended that students who plan to enter graduate school should complete two years of a world language at the college level.)

Required Courses

- HIST 302 - Historical Methods **Credits:** (5) (Students must earn a minimum grade of C as a major requirement)
- HIST 481 - Senior Thesis **Credits:** (4) (Students must earn a minimum grade of C as a major requirement)
- Upper-division United States history **Credits:** (5)
- Upper-division European history **Credits:** (5)
- Upper-division African, Asian, Middle Eastern or Latin American history **Credits:** (10)
- HIST 410, 402, or 403 - History Readings Seminar **Credits:** (5)
- Upper-division history electives **Credits:** (5)

Select 20 credits from the following:

World Civilization

- HIST 101 - World Civilization to 1500 **Credits:** (5) (Western civilization may be substituted)
- HIST 102 - World Civilization: 1500-1815 **Credits:** (5) (Western civilization may be substituted)
- HIST 103 - World Civilization Since 1815 **Credits:** (5) (Western civilization may be substituted)

United States History

- HIST 143 - United States History to 1865 **Credits:** (5)
- HIST 144 - United States History Since 1865 **Credits:** (5)

Total Credits: 59*

(NOTE: *Students with fewer than 60 credits must have a minor or another major in order to graduate.

History Social Studies Teaching, BA

This major satisfies the endorsements for history and social studies. This major is designed for students in the secondary Teacher Training Program. Students taking this major are required to apply to the Teacher Certification Program and complete the Professional Education Program requirements offered through the Department of Educational Foundations and Curriculum.

Required Courses

- HIST 301 - Pacific Northwest History **Credits:** (5)
- HIST 302 - Historical Methods **Credits:** (5) (Students must earn a minimum grade of C as a major requirement)
- HIST 421 - Methods and Materials in the Social Studies, Secondary **Credits:** (5) **(**Prior completion of EFC 340 recommended. Students must be admitted to the Teacher Preparation Program prior to enrolling in this course).
- HIST 481 - Senior Thesis **Credits:** (4) (Students must earn a minimum grade of C as a major requirement)
- POSC 210 - American Politics **Credits:** (5)

Select from the following - Credits: 20

- HIST 101 - World Civilization to 1500 **Credits:** (5) (Western civilization may be substituted)
- HIST 102 - World Civilization: 1500-1815 **Credits:** (5) (Western civilization may be substituted)
- HIST 103 - World Civilization Since 1815 **Credits:** (5) (Western civilization may be substituted)
- HIST 143 - United States History to 1865 **Credits:** (5)
- HIST 144 - United States History Since 1865 **Credits:** (5)

Select from the following - Credits: 15

- Upper-division U.S. history **Credits:** (5)
- Upper-division European history **Credits:** (5)
- Upper-division African, Asian, Middle Eastern, or Latin American history **Credits:** (5)

Select from the following - Credits: 5

- ECON 101 - Economic Issues **Credits:** (5)
- ECON 102 - World Economic Issues **Credits:** (5)
- ECON 201 - Principles of Economics Micro **Credits:** (5)
- ECON 202 - Principles of Economics Macro **Credits:** (5)

Select from the following - Credits: 5

- ANTH 107 - General Anthropology **Credits:** (5)
- SOC 101 - Social Problems **Credits:** (5)
- SOC 107 - Principles of Sociology **Credits:** (5)

Select from the following - Credits: 4-5

- GEOG 101 - World Regional Geography **Credits:** (5)
- GEOG 107 - Our Dynamic Earth **Credits:** (5)
- GEOG 304 - Economic Geography **Credits:** (5)
- GEOG 308 - Cultural Geography **Credits:** (5)
- GEOG 346 - Political Geography **Credits:** (4)

Select from the following - Credits: 4-5

- GEOG 273 - Geography of Rivers **Credits:** (5)
- GEOG 315 - Geography of Oceania **Credits:** (4)
- GEOG 352 - Geography of North America **Credits:** (4)
- GEOG 355 - Geography of the Pacific Northwest **Credits:** (4)
- GEOG 366 - Geography of the Middle East **Credits:** (4)
- GEOG 368 - Geography of Middle America **Credits:** (4)
- GEOG 370 - Geography of South America **Credits:** (4)
- GEOG 371 - Geography of Europe **Credits:** (4)
- GEOG 372 - Geography of Russia **Credits:** (4)
- GEOG 375 - Geography of Asia **Credits:** (4)

Total Credits: 77-79

History Minor

Required Courses

Select from the following - Credits: 10

World Civilization

Western Civilization may be substituted.

- HIST 101 - World Civilization to 1500 **Credits:** (5)
- HIST 102 - World Civilization: 1500-1815 **Credits:** (5)
- HIST 103 - World Civilization Since 1815 **Credits:** (5)

United States History

- HIST 143 - United States History to 1865 **Credits:** (5)
- HIST 144 - United States History Since 1865 **Credits:** (5)

Upper-division History electives - Credits: 20

Total Credits: 30

Humanities Program

College of Arts and Humanities
Ellensburg
Language and Literature Bldg., room 103E

erdmanr@cwu.edu

Contact Person
Ruthi Erdman, MA

Faculty
Barry Donahue, PhD
Ruth Erdman, MA
Patricia Garrison, MA
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Individual Studies Program

College of the Sciences
Ellensburg
Dean Hall, room 130
Mail Stop 7519
509-963-1804
www.cwu.edu/sciences/individual-studies
See website for how this program may be used for educational and career purposes.

Program Director
Tim Englund

Program Information
Students interested in pursuing an area of scholarly inquiry which falls outside the purview of an established academic department or program of the university may apply for admission to the Individual Studies Program. This academic program offers students an opportunity to develop, under the guidance of faculty advisors, a major which meets their specific needs. Major areas of study are typically interdisciplinary.

Admission
Applicants must have completed 60 credit hours of study with a minimum 2.5 cumulative GPA and be in academic good standing for admission. All proposal materials must be submitted to the associate dean of the College of the Sciences at least three quarters prior to anticipate graduation. Proposals are subject to review and approval of an advisory committee which meets quarterly.

List of Degrees
The active programs available include:

Bachelor of Arts
Bachelor of Science
Bachelor of Music

(NOTE: Students seeking a BA degree must complete one year college/university study or two years high school study of a single world language.)

Proposal and Application
Detailed written procedures directing proposal preparation are available at www.cwu.edu/sciences/individual-studies. The proposal must include an application form with proposed degree title, statement of purpose, a listing of courses comprising the major, an explanation of the primary goals of the major, and support from a faculty advisor. The course of study should include a minimum of 60 credits including at

least two separate subject areas; 30 of the credits must be upper division. IS 487, End-of-Program Assessment, must be included in the course of study. No more than 15 credits may overlap with a declared minor or second major.

Students must earn a minimum grade of C- in each course counted toward fulfilling major requirements and the overall GPA in the major must be a 2.5.

Individual Studies

College of the Sciences
Ellensburg
Dean Hall, room 130
509-963-1866

Program Information
This academic program provides an opportunity for students to develop, with the assistance of a faculty advisor(s), a unique interdisciplinary program of study. Each program of study must be comprised of a coherent curriculum that supports student's stated professional and education goals. Individual Studies majors may be assigned the BA or BS degree as deemed appropriate. The Individual Studies designation and the title of the major will be noted on the diploma and the student's academic transcript (i.e., BS Individual Studies: Aviation Safety).

Admission Requirements
Applicants must have completed 60 credit hours of study with a minimum 2.5 cumulative GPA and be in academic good standing. All proposal materials must be submitted to the associate dean of the College of the Sciences at least three quarters prior to anticipated graduation. Proposals are subject to review and approval of an advisory committee which meets quarterly.

Application Procedures
Students wishing to apply to the Individual Studies major must submit a proposal to include an application form with proposed degree title, a statement of purpose, an explanation of the primary learning goals of the major, a listing of courses comprising the major, and support from a faculty liaison. The course of study should include a minimum of 60 credits including at least two separate subject areas; 30 of the credits must be upper division. The proposal will be developed under the guidance of a faculty member during the required IS 200 - Introduction to Individual Studies course.

Degree Requirements
(NOTE: Students seeking a BA degree must complete one year college/university study or two years high school study of a single world language.)

Students must earn a minimum grade of C- in each course counted toward fulfilling major requirements and the overall GPA in the major must be a 2.5.

Required Courses

- IS 200 - Introduction to Individual Studies **Credits:** (1)
- IS 487 - End-of-Program Assessment **Credits:** (1)
- No more than 15 credits may overlap with a declared major, second major, of general education requirements.
- No more than 15 credits may be numbered 490.

Information Technology and Administrative Management Department

College of Education and Professional Studies
Shaw-Smyser Hall, Second Floor - IT Management Division, room 223
Mail Stop 7488
509-963-2611
www.cwu.edu/it-management
See website for how this program may be used for educational and career purposes.

Faculty and Staff
Chair
Robert A. Lupton, PhD

Professors
Lori A. Braunstein, PhD, information technology
Robert A. Lupton, PhD, retail management technology

Associate Professors
Natalie Lupton, PhD, retail management technology and administrative management
Hideki Takei, DBA, administrative management and retail management & technology
Robert Trumpy, EdD, LMHC, LCSW, administrative management
Fen Wang, PhD, information technology

Assistant Professors
Terry Alkire, PhD, administrative management
Chester Claar, PhD, information technology
Laura Portolese Dias, DBA, administrative management
Jaclyn Krause, PhD, information technology
Jackson Muhirwe, PhD, information technology and cybersecurity

Nathan White, PhD, information technology and cybersecurity

Lecturers
Wendy Alkire, MBA, administrative management
Jeff Allen, MBA, information technology
Cathy Anderson, PhD, retail management technology
Debbie Angel, MS, administrative management
Andreas Bohman, MS, CISSP, cybersecurity
James Brown, MET, information technology
Cathy Bushá, JD, information technology
Brandi Carter-Harrington, MEd, administrative management
David Douglas, MS, administrative management
Dwayne Douglas, retail management & technology
John Durham, MM, information technology
Katrina Durham, MS, administrative management
Elizabeth Fountain, PhD, administrative management
Dennis Franecki, MS, administrative management
Kathey Hatfield, MEd, administrative management
Kurt Kirstein, EdD, administrative management
Terry Linkletter, MS, administrative management and information technology
Mary Minor, information technology
Herb Munson, MS, information technology
Ben Neumann, MS, cybersecurity
Shannon Panattoni, MEd, information technology
Amy Perry, MEd, information technology
Susan Rivera, PhD, administrative management
Chris Schmidt, information technology
Lori Thompson, PhD, administrative management
Angela Unruh, MBA, information technology
Phil Upperman, EdD, administrative management
Charles Wahle, MEd, information technology
Mike Wallace, MDiv, retail management technology
Shani Watkins, MEd, administrative management

Staff
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Ellen Bjorge, communication consultant
Dwayne Douglas, internship coordinator
Libby Gibson, office assistant
Susie Johnson, program assistant
Dawn McReynolds, online academic counselor
Laurie Stehle, director online programs

Bachelor of Science
Information Technology and Administrative Management
BS-ITAM Program Overview

The department offers coursework for the Bachelor of Science in information technology and administrative management. The BS-ITAM is comprised of two components:

- ITAM core courses that focus on the core knowledge areas of ITAM: networking, web, information management, and human-centered skills
- Specialization courses that allow for advanced study in one of the core knowledge areas or retail management and technology

The program is designed to prepare students for information technology, administrative management, or retail management careers. Students completing this major will take the core courses (61 credits) and select one of the four areas of specialization: network administration and management, web and database administration and management, administrative management, and retail management and technology.

BS-ITAM Program Admission Requirements
Students must apply and be accepted into the major prior to beginning 300- or 400-level ITAM coursework. Application forms are available in the department office or on the department website.

BS-ITAM Graduation Requirements
The following requirements apply to students seeking the BS-ITAM degree:
Students must earn a minimum cumulative GPA of 2.3 in the ITAM coursework to be eligible for the degree.
Students must earn a minimum grade of C- in each course.

Course Fees
Most ITAM courses that use computer resources are assessed a course fee of $25.

List of Specializations for the BS-ITAM
Students seeking the BS-ITAM take a common set of core courses. Additionally, students must complete a specialization within the BS-ITAM degree: administrative management, network administration and management, Web and database administration and management, or retail management and technology.

Network Administration and Management Specialization
Network administration and management specialization students become qualified business professionals prepared to pursue careers that apply a wide variety of network administration skills. These qualifications are complemented by business communications and human-centered skills. Graduates of the network administration and management specialization secure positions as network administrators, network analysts, network managers, data communication analysts, network operations analysts, network specialists, network technicians, PC support specialists, PC network engineers, and user support specialists.

Web and Database Administration and Management Specialization
Web and database administration and management specialization students become qualified business professionals prepared to pursue careers that apply a wide variety of web and database skills. These qualifications are complemented by business communications and human-centered skills. Graduates of the web and database administration and management specialization secure positions as web administrators, database administrators, web designers, database developers, web page developers, database managers, and web masters.

Retail Management and Technology Specialization
Retail management and technology specialization students become qualified business professionals prepared to pursue careers in retail environments that infuse information technology in areas such as e-commerce, management, selling, purchasing, operations, and merchandising. These qualifications are complemented by business communications and human-centered skills. Graduates of the retail management and technology specialization secure careers in store operations, store management, IT and e-commerce, sales, distribution and logistics, merchandise buying, and planning and entrepreneurship.

Administrative Management Specialization
Administrative management specialization students become qualified business professionals prepared to pursue careers that apply a blend of management, administrative, and information technology skills in contemporary administrative and information technology environments. The administrative manager supervises office employees, designs office work systems, maintains internal and external communication systems, and compiles meaningful reports from information processing. Their knowledge of IT tools complemented by the soft skills (emotional intelligence and leadership) qualifies them to seek employment in positions requiring the management of data, projects, people, and organizational change. The need for graduates with these skills crosses all types of business including agriculture, construction, finance, and retail, government, manufacturing and not-for-profits.

Information Technology and Administration Minors or Certificates
The information technology and administrative management minors and certificates provide recognition for students who complete the specified minor or certificate courses. Such recognition will benefit students in gaining professional employment or advancing in their current professional positions.

Students fulfilling the requirements for an ITAM program degree specialization cannot earn a minor with the ITAM department. However, students may earn departmental certificates in an area other than their area of specialization.

Students fulfilling the requirements for a degree program outside the ITAM department can earn a minor in the ITAM department.
Application forms for minors and certificates can be obtained in the department office or on the ITAM web site at www.cwu.edu/it-management.

Minors or certificates are available in the following areas:

- **Administrative Management**
- **Computer Applications**
- **Information Technology**
- **Retail Management and Technology**
- **Web Design and Management**

A minimum GPA of 2.3 in the minor and certificate courses must be achieved with a minimum grade of C- in each course.

Bachelor of Applied Science
Information Technology and Administrative Management
The bachelor of applied science in information technology and administrative management (BAS-ITAM) is designed for students with any applied or technical school degree to gain a baccalaureate degree in a timely fashion. This degree requires significant study in general education at the upper-division level.

BAS-ITAM Program Admission Requirements
Applicants for the BAS-ITAM must meet the following admission requirements before admittance to the program:

- Completion of an applied or technical degree from a community college or technical college with a minimum GPA of 2.3.
- A world language is not required.
- Identification of a clearly articulated academic and/or career goal in pursuing the program and approved by the department chair or designee.

BAS-ITAM Graduation Requirements

- Minimum overall GPA of 2.3.
- Completion of CWU Basic and Breadth Requirements, except the world language and computing requirements.
- Completion of the BAS-ITAM core requirement courses and one of the BAS-ITAM specialization list of courses with a minimum grade of C- in each course.

List of Specializations for BAS-ITAM program
Students seeking the BAS-ITAM program must take a common set of core courses. Additionally, students entering the BAS-ITAM program must choose a specialization. The Information Technology and Cybersecurity specializations require the completion of a two-year IT related degree program with a least 40 approved credits within the IT technical degree to qualify for the specialization. The administrative management specialization require the completion of any two-year applied degree with at least 40 credits in one applied or technical area to qualify.

ITAM BAS, Administrative Management Specialization

BAS-ITAM Program and Core Requirements

The bachelor of applied science in information technology and administrative management (BAS-ITAM) is designed for students with any applied or technical school degree to gain a baccalaureate degree in a timely fashion. This degree requires significant study in general education at the upper-division level.

BAS-ITAM Program Admission Requirements
Applicants for the BAS-ITAM must meet the following admission requirements before admittance to the program:

- Completion of an applied or technical degree from a community college or technical college with a minimum GPA of 2.3.
- A world language is not required.

BAS-ITAM Graduation Requirements

- Minimum overall GPA of 2.3.
- Completion of CWU Basic and Breadth Requirements, except the world language and computing requirements.
- Completion of the BAS-ITAM core requirement courses and one of the BAS-ITAM specialization list of courses with a minimum grade of C- in each course.

List of Specializations for BAS-ITAM program
Students seeking the BAS-ITAM program take a common set of core courses. Additionally, students entering the BAS-ITAM program must choose a specialization.

Administrative Management Specialization: adds value to any professional/technical degree by complementing those applied skills with the soft skills to manage people, projects or information. Students also learn some IT tools to work smarter and more efficiently. Any student with a professional/technical associate degree which contains at least 40 credits in an applied area is eligible for admission to this specialization.

Cybersecurity Specialization: IT professionals learn to detect, protect, and recover from attacks to an organization's information assets. This is a field in high demand by all types of businesses and industries. A professional/technical degree in a computer-related discipline is required for admission to this specialization or permission from the department.

Information Technology Specialization: The soft skills to manage in an IT environment is the target of this specialization. IT professionals wanting a career in management will stand out as well-qualified applicants for jobs with the mixture of hard skills in IT and the soft skills to manage people and projects. A completed two-year computer-related degree program which contains at least 40 credits in computer-related classes is required for admission to this specialization.

BAS-ITAM Core Requirements

- ADMG 201 - Introduction to Business **Credits:** (3)
- ADMG 271 - Business Math Applications **Credits:** (4)
- ADMG 302 - Financial Analysis for Administrative and IT Support **Credits:** (5)
- ADMG 371 - Administrative Management **Credits:** (4)
- ADMG 372 - Leadership and Supervision **Credits:** (4)
- ADMG 374 - Project Management **Credits:** (5)
- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- RMT 340 - Principles of Selling **Credits:** (4)
- RMT 366 - Customer Relationship Management **Credits:** (4)
- RMT 379 - Internship Planning **Credits:** (1)
- RMT 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 7-10 credits during the summer quarter)
- **OR** ADMG 490 - Cooperative Education **Credits:** (1-12)
- **OR** IT 490 - Cooperative Education **Credits:** (1-12)

BAS-ITAM Total Core Credits: 46-49

Administration Management Specialization

The Administrative Management Specialization is designed to provide a baccalaureate degree for those with

an applied degree from a community college in a timely fashion. It provides administrative and leadership skills for those seeking management positions in any field.

Administration Management Specialization Courses

- ADMG 373 - Training and Development for Administrative and IT Support **Credits:** (4)
- ADMG 424 - Administrative Management Policy **Credits:** (4)
- ADMG 471 - Leading Change **Credits:** (4)
- IT 101 - Computer Applications **Credits:** (3)
- IT 260 - Integrated Information Technology Application Projects **Credits:** (5)
- IT 359 - Advanced Spreadsheet Applications **Credits:** (3)

Total Specialization Credits: 20

Total Credits: 69-72

ITAM BAS, Cybersecurity Specialization

BAS-ITAM Program and Core Requirements

The bachelor of applied science in information technology and administrative management (BAS-ITAM) is designed for students with any applied or technical school degree to gain a baccalaureate degree in a timely fashion. This degree requires significant study in general education at the upper-division level.

BAS-ITAM Program Admission Requirements
Applicants for the BAS-ITAM must meet the following admission requirements before admittance to the program:

- Completion of an applied or technical degree from a community college or technical college with a minimum GPA of 2.3.
- A world language is not required.

BAS-ITAM Graduation Requirements

- Minimum overall GPA of 2.3.
- Completion of CWU Basic and Breadth Requirements, except the world language and computing requirements.
- Completion of the BAS-ITAM core requirement courses and one of the BAS-ITAM specialization list of courses with a minimum grade of C- in each course.

List of Specializations for BAS-ITAM program
Students seeking the BAS-ITAM program take a common set of core courses. Additionally, students entering the BAS-ITAM program must choose a specialization.

Administrative Management Specialization: adds value to any professional/technical degree by complementing those applied skills with the soft skills to manage people, projects or information. Students also learn some IT tools to work smarter and more efficiently. Any student with a professional/technical associate degree which contains at least 40 credits in an applied area is eligible for admission to this specialization.

Cybersecurity Specialization: IT professionals learn to detect, protect, and recover from attacks to an organization's information assets. This is a field in high demand by all types of businesses and industries. A professional/technical degree in a computer-related discipline is required for admission to this specialization or permission from the department.

Information Technology Specialization: The soft skills to manage in an IT environment is the target of this specialization. IT professionals wanting a career in management will stand out as well-qualified applicants for jobs with the mixture of hard skills in IT and the soft skills to manage people and projects. A completed two-year computer-related degree program which contains at least 40 credits in computer-related classes is required for admission to this specialization.

BAS-ITAM Core Requirements

- ADMG 201 - Introduction to Business **Credits:** (3)
- ADMG 271 - Business Math Applications **Credits:** (4)
- ADMG 302 - Financial Analysis for Administrative and IT Support **Credits:** (5)
- ADMG 371 - Administrative Management **Credits:** (4)
- ADMG 372 - Leadership and Supervision **Credits:** (4)
- ADMG 374 - Project Management **Credits:** (5)
- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- RMT 340 - Principles of Selling **Credits:** (4)
- RMT 366 - Customer Relationship Management **Credits:** (4)
- RMT 379 - Internship Planning **Credits:** (1)
- RMT 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 7-10 credits during the summer quarter)
- **OR** ADMG 490 - Cooperative Education **Credits:** (1-12)

- **OR** IT 490 - Cooperative Education **Credits:** (1-12)

BAS-ITAM Total Core Credits: 46-49

Cybersecurity Specialization

The cybersecurity specialization provides an opportunity for IT professionals to gain knowledge specific to the detection, protection, and recovery from attacks to an organization's information assets. When combined with the leadership/management skills classes in the BAS core, this specialization will provide a thorough knowledge base for managers and technology leaders concerned with the operation and management of cybersecurity systems. This baccalaureate degree requires significant study in general education at the upper-division level. A professional/technical degree in a computer-related discipline is required for admission. Students not meeting the requirement of the degree in a computer-related discipline would need department permission.

Cybersecurity Specialization Courses

- IT 238 - Introduction to Cyberterrorism **Credits:** (4)
- IT 336 - Digital Forensics **Credits:** (4)
- IT 338 - Cybercrime **Credits:** (4)
- IT 351 - Computer Networks **Credits:** (4)
- IT 436 - Cyberattack/Defense **Credits:** (4)
- IT 438 - IT Risk Management **Credits:** (4)

Total Specialization Credits: 24

Total Credits: 70-73

ITAM BAS, Information Technology Specialization

BAS-ITAM Program and Core Requirements

The bachelor of applied science in information technology and administrative management (BAS-ITAM) is designed for students with any applied or technical school degree to gain a baccalaureate degree in a timely fashion. This degree requires significant study in general education at the upper-division level.

BAS-ITAM Program Admission Requirements
Applicants for the BAS-ITAM must meet the following admission requirements before admittance to the program:

- Completion of an applied or technical degree from a community college or technical college with a minimum GPA of 2.3.
- A world language is not required.

BAS-ITAM Graduation Requirements

- Minimum overall GPA of 2.3.
- Completion of CWU Basic and Breadth Requirements, except the world language and computing requirements.
- Completion of the BAS-ITAM core requirement courses and one of the BAS-ITAM specialization list of courses with a minimum grade of C- in each course.

List of Specializations for BAS-ITAM program
Students seeking the BAS-ITAM program take a common set of core courses. Additionally, students entering the BAS-ITAM program must choose a specialization.

Administrative Management Specialization: adds value to any professional/technical degree by complementing those applied skills with the soft skills to manage people, projects or information. Students also learn some IT tools to work smarter and more efficiently. Any student with a professional/technical associate degree which contains at least 40 credits in an applied area is eligible for admission to this specialization.

Cybersecurity Specialization: IT professionals learn to detect, protect, and recover from attacks to an organization's information assets. This is a field in high demand by all types of businesses and industries. A professional/technical degree in a computer-related discipline is required for admission to this specialization or permission from the department.

Information Technology Specialization: The soft skills to manage in an IT environment is the target of this specialization. IT professionals wanting a career in management will stand out as well-qualified applicants for jobs with the mixture of hard skills in IT and the soft skills to manage people and projects. A completed two-year computer-related degree program which contains at least 40 credits in computer-related classes is required for admission to this specialization.

BAS-ITAM Core Requirements

- ADMG 201 - Introduction to Business **Credits:** (3)
- ADMG 271 - Business Math Applications **Credits:** (4)
- ADMG 302 - Financial Analysis for Administrative and IT Support **Credits:** (5)
- ADMG 371 - Administrative Management **Credits:** (4)

- ADMG 372 - Leadership and Supervision **Credits:** (4)
- ADMG 374 - Project Management **Credits:** (5)
- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- RMT 340 - Principles of Selling **Credits:** (4)
- RMT 366 - Customer Relationship Management **Credits:** (4)
- RMT 379 - Internship Planning **Credits:** (1)
- RMT 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 7-10 credits during the summer quarter)
- **OR** ADMG 490 - Cooperative Education **Credits:** (1-12)
- **OR** IT 490 - Cooperative Education **Credits:** (1-12)

BAS-ITAM Total Core Credits: 46-49

Information Technology Specialization

The Information Technology Specialization is designed to provide an opportunity for citizens who are information technology professionals with specific technical education to gain a baccalaureate degree in a timely fashion. This baccalaureate degree requires significant study in general education at the upper-division level. This specialization combines human-centered, management skills with IT technical skills - a requirement for those seeking management positions in the IT field.

Information Technology Specialization Courses

- IT 301 - Information Technology Security, Privacy, and Ethics **Credits:** (3)
- IT 376 - Project Management and Information Technology **Credits:** (3)
- IT 461 - Systems Analysis **Credits:** (4)
- IT 481 - Quality Verification and Validation **Credits:** (4)
- IT 486 - Critical Issues in Information Technology **Credits:** (4)
- Department-approved Electives - **Credits:** (2)

Total Specialization Credits: 20

Total Credits: 66-69

ITAM BS, Administrative Management Specialization

BS-ITAM Program and Core Requirements

BS-ITAM Program Overview
The department offers coursework for the Bachelor of Science in information technology and administrative management. The BS-ITAM is comprised of two components:

- ITAM core courses that focus on the core knowledge areas of ITAM: networking, web, information management, and human-centered skills
- Specialization courses that allow for advanced study in one of the core knowledge areas or retail management and technology

The program is designed to prepare students for information technology, administrative management, or retail management careers. Students completing this major will take the core courses (61 credits) and select one of the four areas of specialization: network administration and management, web and database administration and management, administrative management, and retail management and technology.

BS-ITAM Program Admission Requirements
Students must apply and be accepted into the major prior to beginning 300- or 400-level ITAM coursework. Application forms are available in the department office or on the department website.

BS-ITAM Graduation Requirements
The following requirements apply to students seeking the BS-ITAM degree: Students must earn a minimum cumulative GPA of 2.3 in the ITAM coursework to be eligible for the degree. Students must earn a minimum grade of "C-" in each course.

Course Fees
Most ITAM courses that use computer resources are assessed a course fee of $25.

List of Specializations for the BS-ITAM
Students seeking the BS-ITAM take a common set of core courses. Additionally, students must complete a specialization within the BS-ITAM degree: administrative management, network administration and management,

web and database administration and management, or retail management and technology.

BS-ITAM Core Requirements

- ADMG 201 - Introduction to Business **Credits:** (3)
- ADMG 271 - Business Math Applications **Credits:** (4)
- ADMG 302 - Financial Analysis for Administrative and IT Support **Credits:** (5)
- ADMG 371 - Administrative Management **Credits:** (4)
- ADMG 372 - Leadership and Supervision **Credits:** (4)
- ADMG 374 - Project Management **Credits:** (5)
- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- IT 101 - Computer Applications **Credits:** (3)
- IT 238 - Introduction to Cyberterrorism **Credits:** (4)
- IT 248 - Web Fundamentals **Credits:** (4)
- IT 260 - Integrated Information Technology Application Projects **Credits:** (5)
- IT 301 - Information Technology Security, Privacy, and Ethics **Credits:** (3)
- IT 351 - Computer Networks **Credits:** (4)
- IT 468 - Projects in Database **Credits:** (4)
- RMT 340 - Principles of Selling **Credits:** (4)
- RMT 366 - Customer Relationship Management **Credits:** (4)
- RMT 379 - Internship Planning **Credits:** (1)
- RMT 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 9-12 credits, summer quarter only.)
- **OR** ADMG 490 - Cooperative Education **Credits:** (1-12)
- **OR** IT 490 - Cooperative Education **Credits:** (1-12)

BS-ITAM Total Core Credits: 75-78

Administrative Management Specialization

Administrative management specialization students become qualified business professionals prepared to pursue careers that apply a blend of management, administrative, and information technology skills in contemporary administrative and information technology environments. The administrative manager supervises office employees, designs office work systems, maintains internal and external communication systems, and compiles meaningful reports from information processing. Their knowledge of IT tools complemented by the soft skills (emotional intelligence and leadership) qualifies them to seek employment in positions requiring the management of data, projects, people, and organizational change. The need for graduates with these skills crosses all types of business including agriculture, construction, finance, and retail, government, manufacturing and not-for-profits.

Administrative Management Specialization Courses

- ADMG 373 - Training and Development for Administrative and IT Support **Credits:** (4)
- ADMG 424 - Administrative Management Policy **Credits:** (4)
- ADMG 471 - Leading Change **Credits:** (4)
- IT 359 - Advanced Spreadsheet Applications **Credits:** (3)
- IT 461 - Systems Analysis **Credits:** (4)
- Department-approved Elective **Credits:** (1)

Total Specialization Credits: 20

Total Credits: 95-98

ITAM BS, Cybersecurity Specialization

BS-ITAM Program and Core Requirements

BS-ITAM Program Overview
The department offers coursework for the Bachelor of Science in information technology and administrative management. The BS-ITAM is comprised of two components:

- ITAM core courses that focus on the core knowledge areas of ITAM: networking, web, information management, and human-centered skills
- Specialization courses that allow for advanced study in one of the core knowledge areas or retail management and technology

The program is designed to prepare students for information technology, administrative management, or retail management careers. Students completing this major will take the core courses (61 credits) and select one of the four areas of specialization: network administration and management, web and database administration and management, administrative management, and retail management and technology.

BS-ITAM Program Admission Requirements
Students must apply and be accepted into the major prior to beginning 300- or 400-level ITAM coursework. Application forms are available in the department office or on the department website.

BS-ITAM Graduation Requirements
The following requirements apply to students seeking the BS-ITAM degree: Students must earn a minimum cumulative GPA of 2.3 in the ITAM coursework to be eligible for the degree. Students must earn a minimum grade of "C-" in each course.

Course Fees
Most ITAM courses that use computer resources are assessed a course fee of $25.

List of Specializations for the BS-ITAM
Students seeking the BS-ITAM take a common set of core courses. Additionally, students must complete a specialization within the BS-ITAM degree: administrative management, network administration and management, web and database administration and management, or retail management and technology.

BS-ITAM Core Requirements

- ADMG 201 - Introduction to Business **Credits:** (3)
- ADMG 271 - Business Math Applications **Credits:** (4)
- ADMG 302 - Financial Analysis for Administrative and IT Support **Credits:** (5)
- ADMG 371 - Administrative Management **Credits:** (4)
- ADMG 372 - Leadership and Supervision **Credits:** (4)
- ADMG 374 - Project Management **Credits:** (5)
- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- IT 101 - Computer Applications **Credits:** (3)
- IT 238 - Introduction to Cyberterrorism **Credits:** (4)
- IT 248 - Web Fundamentals **Credits:** (4)
- IT 260 - Integrated Information Technology Application Projects **Credits:** (5)
- IT 301 - Information Technology Security, Privacy, and Ethics **Credits:** (3)
- IT 351 - Computer Networks **Credits:** (4)
- IT 468 - Projects in Database **Credits:** (4)
- RMT 340 - Principles of Selling **Credits:** (4)
- RMT 366 - Customer Relationship Management **Credits:** (4)
- RMT 379 - Internship Planning **Credits:** (1)
- RMT 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 9-12 credits, summer quarter only.)
- **OR** ADMG 490 - Cooperative Education **Credits:** (1-12)
- **OR** IT 490 - Cooperative Education **Credits:** (1-12)

BS-ITAM Total Core Credits: 75-78

Cybersecurity Specialization

IT professionals will gain knowledge specific to the detection, protection, and recovery from attacks to an organization's information assets. You will gain skills in this high-demand field of network security that, when combined with the management/soft skills classes, will give you the competitive edge in the IT marketplace. Public utility companies, national security agencies, food and water suppliers, financial services, and companies with intellectual property to protect are now hiring experts in this area.

Required Courses

- IT 336 - Digital Forensics **Credits:** (4)
- IT 338 - Cybercrime **Credits:** (4)
- IT 436 - Cyberattack/Defense **Credits:** (4)
- IT 438 - IT Risk Management **Credits:** (4)
- IT 486 - Critical Issues in Information Technology **Credits:** (4)

Total Specialization Credits: 20

Total Credits: 95-98

ITAM BS, Network Administration and Management Specialization

BS-ITAM Program and Core Requirements

BS-ITAM Program Overview
The department offers coursework for the Bachelor of Science in information technology and administrative management. The BS-ITAM is comprised of two components:

- ITAM core courses that focus on the core knowledge areas of ITAM: networking, web, information management, and human-centered skills
- Specialization courses that allow for advanced study in one of the core knowledge areas or retail management and technology

The program is designed to prepare students for information technology, administrative management, or retail management careers. Students completing this major will take the core courses (61 credits) and select one of the four areas of specialization: network administration and management, web and database administration and management, administrative management, and retail management and technology.

BS-ITAM Program Admission Requirements
Students must apply and be accepted into the major prior to beginning 300- or 400-level ITAM coursework. Application forms are available in the department office or on the department website.

BS-ITAM Graduation Requirements
The following requirements apply to students seeking the BS-ITAM degree: Students must earn a minimum cumulative GPA of 2.3 in the ITAM coursework to be eligible for the degree. Students must earn a minimum grade of "C-" in each course.

Course Fees
Most ITAM courses that use computer resources are assessed a course fee of $25.

List of Specializations for the BS-ITAM
Students seeking the BS-ITAM take a common set of core courses. Additionally, students must complete a specialization within the BS-ITAM degree: administrative management, network administration and management, web and database administration and management, or retail management and technology.

BS-ITAM Core Requirements

- ADMG 201 - Introduction to Business **Credits:** (3)
- ADMG 271 - Business Math Applications **Credits:** (4)
- ADMG 302 - Financial Analysis for Administrative and IT Support **Credits:** (5)
- ADMG 371 - Administrative Management **Credits:** (4)
- ADMG 372 - Leadership and Supervision **Credits:** (4)
- ADMG 374 - Project Management **Credits:** (5)
- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- IT 101 - Computer Applications **Credits:** (3)
- IT 238 - Introduction to Cyberterrorism **Credits:** (4)
- IT 248 - Web Fundamentals **Credits:** (4)
- IT 260 - Integrated Information Technology Application Projects **Credits:** (5)
- IT 301 - Information Technology Security, Privacy, and Ethics **Credits:** (3)
- IT 351 - Computer Networks **Credits:** (4)
- IT 468 - Projects in Database **Credits:** (4)
- RMT 340 - Principles of Selling **Credits:** (4)
- RMT 366 - Customer Relationship Management **Credits:** (4)
- RMT 379 - Internship Planning **Credits:** (1)
- RMT 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 9-12 credits, summer quarter only.)
- **OR** ADMG 490 - Cooperative Education **Credits:** (1-12)
- **OR** IT 490 - Cooperative Education **Credits:** (1-12)

BS-ITAM Total Core Credits: 75-78

Network Administration and Management Specialization

Network administration and management specialization students become qualified business professionals prepared to pursue careers that apply a wide variety of network administration skills. These qualifications are complemented by business communications and human-centered skills. Graduates of the network administration and management specialization secure positions as network administrators, network analysts, network managers, data communication analysts, network operations analysts, network specialists, network technicians, PC support specialists, PC network engineers, and user support specialists.

Network Administrative and Management Specialization Courses

- IT 362 - Wireless Communications **Credits:** (4)
- IT 456 - Advanced Computer Network Management **Credits:** (4)
- IT 459 - Workstation Administration **Credits:** (4)
- IT 463 - Computer Network Management **Credits:** (4)
- IT 466 - Open Source Server Management **Credits:** (4)
- IT 467 - Network Security **Credits:** (4)

Total Specialization Credits: 24

Total Credits: 99-102

ITAM BS, Retail Management and Technology Specialization

BS-ITAM Program and Core Requirements

BS-ITAM Program Overview
The department offers coursework for the Bachelor of Science in information technology and administrative management. The BS-ITAM is comprised of two components:

- ITAM core courses that focus on the core knowledge areas of ITAM: networking, web, information management, and human-centered skills
- Specialization courses that allow for advanced study in one of the core knowledge areas or retail management and technology

The program is designed to prepare students for information technology, administrative management, or retail management careers. Students completing this major will take the core courses (61 credits) and select one of the four areas of specialization: network administration and management, web and database administration and management, administrative management, and retail management and technology.

BS-ITAM Program Admission Requirements
Students must apply and be accepted into the major prior to beginning 300- or 400-level ITAM coursework. Application forms are available in the department office or on the department website.

BS-ITAM Graduation Requirements
The following requirements apply to students seeking the BS-ITAM degree: Students must earn a minimum cumulative GPA of 2.3 in the ITAM coursework to be eligible for the degree. Students must earn a minimum grade of "C-" in each course.

Course Fees
Most ITAM courses that use computer resources are assessed a course fee of $25.

List of Specializations for the BS-ITAM
Students seeking the BS-ITAM take a common set of core courses. Additionally, students must complete a specialization within the BS-ITAM degree: administrative management, network administration and management, web and database administration and management, or retail management and technology.

BS-ITAM Core Requirements

- ADMG 201 - Introduction to Business **Credits:** (3)
- ADMG 271 - Business Math Applications **Credits:** (4)
- ADMG 302 - Financial Analysis for Administrative and IT Support **Credits:** (5)
- ADMG 371 - Administrative Management **Credits:** (4)
- ADMG 372 - Leadership and Supervision **Credits:** (4)
- ADMG 374 - Project Management **Credits:** (5)
- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- IT 101 - Computer Applications **Credits:** (3)
- IT 238 - Introduction to Cyberterrorism **Credits:** (4)
- IT 248 - Web Fundamentals **Credits:** (4)
- IT 260 - Integrated Information Technology Application Projects **Credits:** (5)
- IT 301 - Information Technology Security, Privacy, and Ethics **Credits:** (3)
- IT 351 - Computer Networks **Credits:** (4)
- IT 468 - Projects in Database **Credits:** (4)
- RMT 340 - Principles of Selling **Credits:** (4)
- RMT 366 - Customer Relationship Management **Credits:** (4)
- RMT 379 - Internship Planning **Credits:** (1)
- RMT 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 9-12 credits, summer quarter only.)

- **OR** ADMG 490 - Cooperative Education **Credits:** (1-12)
- **OR** IT 490 - Cooperative Education **Credits:** (1-12)

BS-ITAM Total Core Credits: 75-78

Retail Management and Technology Specialization

Retail management and technology specialization students become qualified business professionals prepared to pursue careers in retail environments that infuse information technology in areas such as e-commerce, management, selling, purchasing, operations, and merchandising. These qualifications are complemented by business communications and human-centered skills. Graduates of the retail management and technology specialization secure careers in store operations, store management, IT and e-commerce, sales, distribution and logistics, merchandise buying, and planning and entrepreneurship.

Retail Management and Technology Specialization Courses

- RMT 330 - Principles of Retailing **Credits:** (4)
- RMT 335 - Retail Information Technology **Credits:** (4)
- RMT 345 - Sustainable Retailing **Credits:** (3)
- RMT 350 - Omni Channel Retailing **Credits:** (4)
- RMT 467 - Retail Management **Credits:** (4)
- RMT 485 - International Retailing **Credits:** (4)

Total Specialization Credits: 23

Total Credits: 98-101

ITAM BS, Web and Database Administration and Management Specialization

BS-ITAM Program and Core Requirements

BS-ITAM Program Overview
The department offers coursework for the Bachelor of Science in information technology and administrative management. The BS-ITAM is comprised of two components:

- ITAM core courses that focus on the core knowledge areas of ITAM: networking, web, information management, and human-centered skills
- Specialization courses that allow for advanced study in one of the core knowledge areas or retail management and technology

The program is designed to prepare students for information technology, administrative management, or retail management careers. Students completing this major will take the core courses (61 credits) and select one of the four areas of specialization: network administration and management, web and database administration and management, administrative management, and retail management and technology.

BS-ITAM Program Admission Requirements
Students must apply and be accepted into the major prior to beginning 300- or 400-level ITAM coursework. Application forms are available in the department office or on the department website.

BS-ITAM Graduation Requirements
The following requirements apply to students seeking the BS-ITAM degree: Students must earn a minimum cumulative GPA of 2.3 in the ITAM coursework to be eligible for the degree. Students must earn a minimum grade of "C-" in each course.

Course Fees
Most ITAM courses that use computer resources are assessed a course fee of $25.

List of Specializations for the BS-ITAM
Students seeking the BS-ITAM take a common set of core courses. Additionally, students must complete a specialization within the BS-ITAM degree: administrative management, network administration and management, web and database administration and management, or retail management and technology.

BS-ITAM Core Requirements

- ADMG 201 - Introduction to Business **Credits:** (3)
- ADMG 271 - Business Math Applications **Credits:** (4)
- ADMG 302 - Financial Analysis for Administrative and IT Support **Credits:** (5)
- ADMG 371 - Administrative Management **Credits:** (4)
- ADMG 372 - Leadership and Supervision **Credits:** (4)
- ADMG 374 - Project Management **Credits:** (5)
- ADMG 385 - Business Communications and Report Writing **Credits:** (5)

- IT 101 - Computer Applications **Credits:** (3)
- IT 238 - Introduction to Cyberterrorism **Credits:** (4)
- IT 248 - Web Fundamentals **Credits:** (4)
- IT 260 - Integrated Information Technology Application Projects **Credits:** (5)
- IT 301 - Information Technology Security, Privacy, and Ethics **Credits:** (3)
- IT 351 - Computer Networks **Credits:** (4)
- IT 468 - Projects in Database **Credits:** (4)
- RMT 340 - Principles of Selling **Credits:** (4)
- RMT 366 - Customer Relationship Management **Credits:** (4)
- RMT 379 - Internship Planning **Credits:** (1)
- RMT 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 9-12 credits, summer quarter only.)
- **OR** ADMG 490 - Cooperative Education **Credits:** (1-12)
- **OR** IT 490 - Cooperative Education **Credits:** (1-12)

BS-ITAM Total Core Credits: 75-78

Web and Database Administration and Management Specialization

Web and database administration and management specialization students become qualified business professionals prepared to pursue careers that apply a wide variety of Web and database skills. These qualifications are complemented by business communications and human-centered skills. Graduates of the Web and database administration and management specialization secure positions as Web administrators, database administrators, Web designers, database developers, Web page developers, database managers and web masters.

Web and Database Administration and Management Specialization Courses

- IT 322 - Web Site Construction **Credits:** (4)
- IT 376 - Project Management and Information Technology **Credits:** (3)
- IT 381 - Web Apps for M-Commerce **Credits:** (4)
- IT 426 - Application of Web Languages **Credits:** (4)
- IT 461 - Systems Analysis **Credits:** (4)
- IT 469 - Enterprise Database Systems: SQL **Credits:** (3)

Total Specialization Credits: 22

Total Credits: 97-100

Administrative Management Minor or Certificate

Required Courses

- ADMG 201 - Introduction to Business **Credits:** (3)
- ADMG 371 - Administrative Management **Credits:** (4)
- ADMG 372 - Leadership and Supervision **Credits:** (4)
- ADMG 374 - Project Management **Credits:** (5)
- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- ADMG 471 - Leading Change **Credits:** (4)

Total Credits: 25

Computer Applications Minor or Certificate

Required Courses

- IT 101 - Computer Applications **Credits:** (3)
- IT 248 - Web Fundamentals **Credits:** (4)
- IT 260 - Integrated Information Technology Application Projects **Credits:** (5)
- IT 322 - Web Site Construction **Credits:** (4)
- IT 359 - Advanced Spreadsheet Applications **Credits:** (3)
- IT 381 - Web Apps for M-Commerce **Credits:** (4)
- IT 468 - Projects in Database **Credits:** (4)

Total Credits: 27

Cybersecurity Minor or Certificate

Students fulfilling the requirements for an ITAM program degree specialization can earn a minor in Cybersecurity.

Required Courses

- IT 238 - Introduction to Cyberterrorism **Credits:** (4)
- IT 336 - Digital Forensics **Credits:** (4)
- IT 338 - Cybercrime **Credits:** (4)
- IT 351 - Computer Networks **Credits:** (4)
- IT 436 - Cyberattack/Defense **Credits:** (4)
- IT 438 - IT Risk Management **Credits:** (4)

Total Credits: 24

Information Technology Minor or Certificate

Required Courses

- ADMG 374 - Project Management **Credits:** (5)
- IT 101 - Computer Applications **Credits:** (3)
- IT 228 - Introduction to Information Technology **Credits:** (2)
- IT 260 - Integrated Information Technology Application Projects **Credits:** (5)
- IT 301 - Information Technology Security, Privacy, and Ethics **Credits:** (3)
- IT 351 - Computer Networks **Credits:** (4)
- IT 461 - Systems Analysis **Credits:** (4)

Total Credits: 26

Project Management Minor

Students will gain knowledge specific to managing projects. Students will gain skills in this high-demand field of project management that, when combined with the soft-skills classes, will give students the competitive edge in the marketplace. Project management skills are not specific to any industry and are sought after by many organizations.

Required Courses

- ADMG 372 - Leadership and Supervision **Credits:** (4)
- ADMG 374 - Project Management **Credits:** (5)
- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- ADMG 474 - Executing Project Management I **Credits:** (4)
- ADMG 475 - Executing Project Management II **Credits:** (4)

Total Credits: 22

Retail Management and Technology Minor or Certificate

Required Courses

- ADMG 201 - Introduction to Business **Credits:** (3)
- RMT 330 - Principles of Retailing **Credits:** (4)
- RMT 335 - Retail Information Technology **Credits:** (4)
- RMT 340 - Principles of Selling **Credits:** (4)
- RMT 350 - Omni Channel Retailing **Credits:** (4)
- RMT 467 - Retail Management **Credits:** (4)

Total Credits: 23

Web Design and Management Minor or Certificate

Required Courses

IT 101 - Computer Applications **Credits:** (3)
IT 248 - Web Fundamentals **Credits:** (4)
IT 260 - Integrated Information Technology Application Projects **Credits:** (5)
IT 301 - Information Technology Security, Privacy, and Ethics **Credits:** (3)
IT 322 - Web Site Construction **Credits:** (4)
IT 381 - Web Apps for M-Commerce **Credits:** (4)
IT 426 - Application of Web Languages **Credits:** (4)

Total Credits: 27

Institute for Integrated Energy Studies

College of the Sciences
Ellensburg
Dean Hall, room 311

509-963-2184
Email: Delgado@cwu.edu
www.cwu.edu/energy

Director
Elvin Delgado

Program Information
The geopolitical conflicts over energy resources during the last decades have transformed the current energy landscapes at regional, national and global scales. These shifts in energy landscapes have made the management of energy resources more complex, the development of energy policy more important and controversial, and the innovation of energy technology front-page news. Whether it is finding new traditional sources of energy (e.g., oil, coal and natural gas) or developing alternative courses of energy (e.g., wind, solar, hydro power, geothermal) we need to understand that the world is so embedded in conventional sources of energy that policies and decisions regarding alternative sources of energy depend greatly on what happens in the fossil fuel market.

An interdisciplinary and integrated understanding of energy resources is integral to finding comprehensive solutions to the management of energy systems in today's rapidly changing world. A broad range of human, environmental, political, economic, and technological factors are at work shaping the future of current energy landscapes, and it is the mission of the Institute of Integrated Energy Studies (I2ES) to prepare students to be active participants in that emerging future. In doing so, the I2ES emphasizes critical thinking and applied approaches to analysis, while providing graduates with the skills necessary to deal with energy issues at scales ranging from local to global.

The bachelor of science in Integrated Energy Management (IEM) take these factors in consideration and provides students with an interdisciplinary education experience that includes the integration of both traditional fossil fuel-based and greener alternative energy. Students enrolled in the IEM degree program will be able to choose from three specializations: (1) integrated energy policy; (2) integrated energy business; and (3) integrated power systems. Courses in the BS in IEM introduce students to energy systems and resources, while at the same time providing a comprehensive understanding for the social, political, economic and environmental processes that shape energy systems. We emphasize field learning experience and an integrative approach to energy management. Majors in IEM hone their written, verbal, and analytical communication skills as part of their interdisciplinary education. Students also learn from and collaborate with faculty members supporting the Institute for Integrated Energy Studies.

Select students will have the opportunity to engage in a credit-baring business-hosted extended (up to six months) cooperative education/apprenticeships with participating businesses. This applied learning experience happens in a student's junior or senior year, and allows for the student to: (1) put in practice what they have learned in the classroom; (2) receive credit towards their degree; and (3) receive specialized training from a company that they may work for after graduation.

No other university in the state offers this particular type of interdisciplinary education in response to current and future professional work place needs. Upon graduation, majors in IEM will be qualifies to work in a wide range of careers, including: energy policy, energy management services, inspection field technician, contact specialists, supply chain management of energy technologies, energy business, utility locator supervisor, energy plant manager, energy forecasting, and employment in private, public and non-for-profit organizations at local, state, and federal government agencies.

Admission Requirements

Applications are accepted throughout the academic year. Admission to the program is based upon a review of completed prerequisite courses and application materials. Please see the program application at www.cwu.edu/energy.

A student must have a 2.75 minimum GPA in all coursework taken previous to application for admission.

Admission to any course requires a grade of C or higher in each prerequisite listed. Students who do not meet the prerequisite grade requirement will be dropped from the course.

A student is expected to complete each course used to fulfill a degree program requirement with a grade of C or higher. Students must complete all CWU foundation and core requirements prior to beginning 400-level coursework.

Integrated Energy Management BS, Integrated Energy Business Specialization

Integrated Energy Management, BS Core

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Ellensburg
Dean Hall, room 311

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Email: Delgado@cwu.edu
www.cwu.edu/energy

Director
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Select students will have the opportunity to engage in a credit-baring business-hosted extended (up to six months) cooperative education/apprenticeships with participating businesses. This applied learning experience happens in a student's junior or senior year, and allows for the student to: (1) put in practice what they have learned in the classroom; (2) receive credit towards their degree; and (3) receive specialized training from a company that they may work for after graduation.

No other university in the state offers this particular type of interdisciplinary education in response to current and future professional work place needs. Upon graduation, majors in IEM will be qualifies to work in a wide range of careers, including: energy policy, energy management services, inspection field technician, contact specialists, supply chain management of energy technologies, energy business, utility locator supervisor, energy plant manager, energy forecasting, and employment in private, public and non-for-profit organizations at local, state, and federal government agencies.

Admission Requirements
Applications are accepted throughout the academic year. Admission to the program is based upon a review of completed prerequisite courses and application materials. Please see the program application at www.cwu.edu/energy.

A student must have a 2.75 minimum GPA in all coursework taken previous to application for admission.

Admission to any course requires a grade of C or higher in each prerequisite listed. Students who do not meet the prerequisite grade requirement will be dropped from the course.

A student is expected to complete each course used to fulfill a degree program requirement with a grade of C or higher. Students must complete all CWU foundation and core requirements prior to beginning 400-level coursework.

Additional
Students graduate from Central Washington University and earn a *Bachelor of Science in Integrated Energy Management* making them experts of integrated energy in the global economy.

IEM Foundational Courses - Credits: 23

- ECON 201 - Principles of Economics Micro **Credits:** (5)
- GEOG 107 - Our Dynamic Earth **Credits:** (5)
- GEOG 203 - Introduction to Maps and Cartography **Credits:** (4)
- GEOG 250 - Resource Exploitation and Conservation **Credits:** (4)

Select one of the following for 5 credits:
- ECON 130 - Foundations for Business Analytics **Credits:** (5)
- MATH 130 - Finite Mathematics **Credits:** (5)
- MATH 153 - Pre-Calculus Mathematics I **Credits:** (5)
- MATH 154 - Pre-Calculus Mathematics II **Credits:** (5)
- MATH 170 - Intuitive Calculus **Credits:** (5)
- MATH 172 - Calculus I **Credits:** (5)

IEM Required Courses - Credits: 38-39

- ECON 463 - Energy Economics **Credits:** (5)
- ENST 310 - Energy and Society **Credits:** (5)
- GEOG 303 - Introductory GIS **Credits:** (5)
- GEOG 440 - Ecology and Culture **Credits:** (4)
- GEOG 442 - Alternative Energy Resources and Technology **Credits:** (5)
- IEM 301 - Energy Management **Credits:** (5)

Select one of the following Method courses for 5 credits:

- BUS 221 - Introductory Business Statistics **Credits:** (5)
- MATH 311 - Statistical Concepts and Methods **Credits:** (5)
- PSY 362 - Introductory Statistics **Credits:** (5)

Select one of the following Communication courses for 4-5 credits:

- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- COM 345 - Business and Professional Speaking **Credits:** (4)
- ENG 310 - Technical Writing **Credits:** (4)

Total Core Credits: 61-62

Integrated Energy Business Specialization

Integrated Energy Business specializes in training students in the areas of marketing, supply chain logistics, and economics as it relates to energy production distribution and consumption.

Energy Business Specialization Required Courses - Credits: 20

- ACCT 301 - Financial Accounting Analysis **Credits:** (5)
- MGT 380 - Organizational Management **Credits:** (5)
- MKT 360 - Principles of Marketing **Credits:** (5)
- SCM 310 - Supply Chain Management **Credits:** (5)

Energy Business Specialization Electives - Credits: 15

Select 15 credits from the following OR, with approval, IEM 290 and IEM 490:

Choose two of the following:
- ECON 310 - International Economics **Credits:** (5)
- ECON 330 - Money and Banking **Credits:** (5)
- ECON 352 - Managerial Economics **Credits:** (5)
- ECON 355 - Economics of Labor **Credits:** (5)
- SCM 420 - Lean/Six Sigma Processes **Credits:** (5)
- SCM 425 - Procurement and Supply Management **Credits:** (5)
- SCM 435 - Supply Chain Operations **Credits:** (5)
- SCM 475 - Global Trade and Supply Chain Management **Credits:** (5)

Choose one from the following:
- MGT 477 - Global Leadership and Culture **Credits:** (5)
- MKT 364 - Marketing Promotion Management **Credits:** (5)
- MKT 365 - International Marketing **Credits:** (5)

OR
- IEM 290 - Cooperative Education **Credits:** (1-10)
- IEM 490 - Cooperative Education **Credits:** (1-12)

Specialization Total Credits: 35

Total Credits: 96-97

Integrated Energy Management BS, Integrated Energy Policy Specialization

Integrated Energy Management, BS Core

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Program Information
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- ENST 310 - Energy and Society **Credits:** (5)
- GEOG 303 - Introductory GIS **Credits:** (5)
- GEOG 440 - Ecology and Culture **Credits:** (4)
- GEOG 442 - Alternative Energy Resources and Technology **Credits:** (5)
- IEM 301 - Energy Management **Credits:** (5)

Select one of the following Method courses for 5 credits:

- BUS 221 - Introductory Business Statistics **Credits:** (5)
- MATH 311 - Statistical Concepts and Methods **Credits:** (5)
- PSY 362 - Introductory Statistics **Credits:** (5)

Select one of the following Communication courses for 4-5 credits:

- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- COM 345 - Business and Professional Speaking **Credits:** (4)
- ENG 310 - Technical Writing **Credits:** (4)

Total Core Credits: 61-62

Integrated Energy Policy Specialization

Integrated Energy Policy specializes in training students in Geographic Information Systems (GIS), planning, and policy analysis as it relates to energy production, distribution and consumption with particular attention to the environment.

Energy Policy Specialization Required Courses - Credits: 17

- ECON 462 - Environmental and Resource Economics **Credits:** (5)
- GEOG 443 - Energy Policy **Credits:** (5)
- GEOG 445 - Natural Resources Policy **Credits:** (4)
- POSC 325 - Introduction to Public Policy **Credits:** (3)

Energy Policy Specialization Electives - Credits: 18-20

- BUS 241 - Legal Environment of Business **Credits:** (5)
- BUS 441 - Advanced Business Law **Credits:** (5)
- ECON 325 - Introduction to Forecasting **Credits:** (5)
- ECON 332 - Public Finance **Credits:** (5)
- ECON 356 - Government and Business **Credits:** (5)
- ECON 401 - Intermediate Microeconomic Analysis **Credits:** (5)
- ECON 424 - Introduction to Econometrics **Credits:** (5)
- ECON 426 - Economic Research **Credits:** (5)
- GEOG 305 - Introduction to Land Use Planning **Credits:** (5)
- GEOG 306 - Transportation Geography and Planning **Credits:** (4)
- GEOG 311 - Qualitative Methods in Geography **Credits:** (4)
- GEOG 330 - Airphoto Interpretation **Credits:** (5)
- GEOG 404 - Intermediate GIS **Credits:** (5)
- GEOG 405 - Advanced Topics in Land Use Planning **Credits:** (3)
- GEOG 409 - Quantitative Methods in Geography **Credits:** (5)
- GEOG 417 - Advanced GIS **Credits:** (4)
- GEOG 430 - Remote Sensing **Credits:** (5)
- **OR** GEOL 430 - Remote Sensing **Credits:** (5)
- GEOG 444 - Mineral Resources **Credits:** (4)
- GEOG 448 - Geographic Approaches to Environmental Resource Analysis **Credits:** (5)

- GEOL 210 - Introduction to Geologic Field Methods **Credits:** (4)
- GEOL 382 - Earth Resources and Pollution **Credits:** (4)
- GEOL 434 - Petroleum Geology **Credits:** (5)
- IEM 290 - Cooperative Education **Credits:** (1-10)
- IEM 490 - Cooperative Education **Credits:** (1-12)
- POSC 350 - Introduction to Public Law **Credits:** (5)

Total Specialization Credits: 35-37

Total Credits: 96-99

Integrated Energy Management BS, Integrated Power Systems Specialization

Integrated Energy Management, BS Core

College of the Sciences
Ellensburg
Dean Hall, room 311

509-963-2184
Email: Delgado@cwu.edu
www.cwu.edu/energy

Director
Elvin Delgado

Program Information
The geopolitical conflicts over energy resources during the last decades have transformed the current energy landscapes at regional, national and global scales. These shifts in energy landscapes have made the management of energy resources more complex, the development of energy policy more important and controversial, and the innovation of energy technology front-page news. Whether it is finding new traditional sources of energy (e.g., oil, coal and natural gas) or developing alternative courses of energy (e.g., wind, solar, hydro power, geothermal) we need to understand that the world is so embedded in conventional sources of energy that policies and decisions regarding alternative sources of energy depend greatly on what happens in the fossil fuel market.

An interdisciplinary and integrated understanding of energy resources is integral to finding comprehensive solutions to the management of energy systems in today's rapidly changing world. A broad range of human, environmental, political, economic, and technological factors are at work shaping the future of current energy landscapes, and it is the mission of the Institute of Integrated Energy Studies (I2ES) to prepare students to be active participants in that emerging future. In doing so, the I2ES emphasizes critical thinking and applied approaches to analysis, while providing graduates with the skills necessary to deal with energy issues at scales ranging from local to global.

The bachelor of science in Integrated Energy Management (IEM) take these factors in consideration and provides students with an interdisciplinary education experience that includes the integration of both traditional fossil fuel-based and greener alternative energy. Students enrolled in the IEM degree program will be able to choose from three specializations: (1) integrated energy policy; (2) integrated energy business; and (3) integrated power systems. Courses in the BS in IEM introduce students to energy systems and resources, while at the same time providing a comprehensive understanding for the social, political, economic and environmental processes that shape energy systems. We emphasize field learning experience and an integrative approach to energy management. Majors in IEM hone their written, verbal, and analytical communication skills as part of their interdisciplinary education. Students also learn from and collaborate with faculty members supporting the Institute for Integrated Energy Studies.

Select students will have the opportunity to engage in a credit-baring business-hosted extended (up to six months) cooperative education/apprenticeships with participating businesses. This applied learning experience happens in a student's junior or senior year, and allows for the student to: (1) put in practice what they have learned in the classroom; (2) receive credit towards their degree; and (3) receive specialized training from a company that they may work for after graduation.

No other university in the state offers this particular type of interdisciplinary education in response to current and future professional work place needs. Upon graduation, majors in IEM will be qualifies to work in a wide range of careers, including: energy policy, energy management services, inspection field technician, contact specialists, supply chain management of energy technologies, energy business, utility locator supervisor, energy plant manager, energy forecasting, and employment in private, public and non-for-profit organizations at local, state, and federal government agencies.

Admission Requirements
Applications are accepted throughout the academic year. Admission to the program is based upon a review of completed prerequisite courses and application materials. Please see the program application at

www.cwu.edu/energy.

A student must have a 2.75 minimum GPA in all coursework taken previous to application for admission.

Admission to any course requires a grade of C or higher in each prerequisite listed. Students who do not meet the prerequisite grade requirement will be dropped from the course.

A student is expected to complete each course used to fulfill a degree program requirement with a grade of C or higher. Students must complete all CWU foundation and core requirements prior to beginning 400-level coursework.

Additional
Students graduate from Central Washington University and earn a *Bachelor of Science in Integrated Energy Management* making them experts of integrated energy in the global economy.

IEM Foundational Courses - Credits: 23

- ECON 201 - Principles of Economics Micro **Credits:** (5)
- GEOG 107 - Our Dynamic Earth **Credits:** (5)
- GEOG 203 - Introduction to Maps and Cartography **Credits:** (4)
- GEOG 250 - Resource Exploitation and Conservation **Credits:** (4)

Select one of the following for 5 credits:
- ECON 130 - Foundations for Business Analytics **Credits:** (5)
- MATH 130 - Finite Mathematics **Credits:** (5)
- MATH 153 - Pre-Calculus Mathematics I **Credits:** (5)
- MATH 154 - Pre-Calculus Mathematics II **Credits:** (5)
- MATH 170 - Intuitive Calculus **Credits:** (5)
- MATH 172 - Calculus I **Credits:** (5)

IEM Required Courses - Credits: 38-39

- ECON 463 - Energy Economics **Credits:** (5)
- ENST 310 - Energy and Society **Credits:** (5)
- GEOG 303 - Introductory GIS **Credits:** (5)
- GEOG 440 - Ecology and Culture **Credits:** (4)
- GEOG 442 - Alternative Energy Resources and Technology **Credits:** (5)
- IEM 301 - Energy Management **Credits:** (5)

Select one of the following Method courses for 5 credits:

- BUS 221 - Introductory Business Statistics **Credits:** (5)
- MATH 311 - Statistical Concepts and Methods **Credits:** (5)
- PSY 362 - Introductory Statistics **Credits:** (5)

Select one of the following Communication courses for 4-5 credits:

- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- COM 345 - Business and Professional Speaking **Credits:** (4)
- ENG 310 - Technical Writing **Credits:** (4)

Total Core Credits: 61-62

Integrated Power Systems Specialization

Power Systems provides courses that train students in topics related to energy technologies, physical understandings of power systems, and the environmental implications of energy production, distribution, and consumption.

Power Systems Specialization Required Courses - Credits: 17-18

- ETSC 101 - Modern Technology and Energy **Credits:** (5)

- ETSC 160 - Computer-aided Design and Drafting **Credits:** (4)
- **OR** ETSC 161 - Architectural Computer Aided Design **Credits:** (3)

- ETSC 301 - Engineering Project Cost Analysis **Credits:** (4)
- PHYS 106 - Physics Inquiry **Credits:** (5)

Power Systems Specialization Electives - Credits: 18-20

Select between 18 and 20 credits from the following courses:

- CMGT 245 - Light Commercial Construction **Credits:** (5)
- CMGT 265 - Blueprint Reading and Construction Graphics **Credits:** (4)
- CMGT 320 - Electrical Systems Design **Credits:** (3)
- CMGT 452 - LEED in Sustainable Construction **Credits:** (4)

- EET 221 - Basic Electricity **Credits:** (4)
- EET 332 - Generation of Electrical Power **Credits:** (4)
- EET 426 - Advanced Electrical Network **Credits:** (4)
- EET 433 - Transmission and Distribution of Electrical Power **Credits:** (4)
- ETSC 380 - Quality Control **Credits:** (4)
- ETSC 455 - Engineering Project Management **Credits:** (4)
- ETSC 385 - Product Design and Development **Credits:** (4)
- ETSC 389 - Technical Presentations **Credits:** (3)
- IEM 290 - Cooperative Education **Credits:** (1-10)
- IEM 490 - Cooperative Education **Credits:** (1-12)
- IT 258 - Spreadsheet Applications **Credits:** (3)
- SHM 301 - Fundamentals of Safety and Health Management **Credits:** (3)
- SHM 325 - Manufacturing Safety and Health **Credits:** (3)
- SHM 351 - Incident Analysis **Credits:** (3)
- SHM 353 - Risk and Insurance **Credits:** (4)
- SHM 377 - Hazardous Materials Management **Credits:** (4)
- SHM 477 - Environmental Management **Credits:** (4)

Specialization Total Credits: 35-38

Total Credits: 96-100

Interdisciplinary Studies: Social Sciences Program

College of the Sciences
Ellensburg
Dean Hall, room 130
Mail Stop 7519
509-963-1804
www.cwu.edu/sciences/interdisciplinarystudies-socialsciences
See website for how this program may be used for educational and career purposes.

Program Academic Coordinator
Stephen Schepman

Program Directors
Trieu Doan, Lynnwood/Everett
Nicole Dunn, Online Program
Cynthia Engel, Des Moines/Pierce County
Alena Yastchenko, Ellensburg/Yakima/Wenatchee/Moses Lake

Program Information
Interdisciplinary studies-social sciences major is for students whose primary interest in the social sciences requires interdisciplinary programs and course selections which are not possible within single academic programs or established curricula. Program offers students an opportunity to devise an approved, coherent program of study with an academic advisor fulfilling academic or career goals and includes prerequisites consistent with the 300- 400-level major coursework. Since the program is a student-designed, interdisciplinary major, course selections will vary. Students in the interdisciplinary studies major must take courses in at least three disciplines within the major.

Admission Requirement
Applicants must have completed 60 credit hours of study with a minimum 2.25 cumulative GPA and be in academic good standing for admission.

Additional Degree Requirements
Application to the program must be completed at least three quarters prior to anticipated graduation. Students must earn a minimum grade of C- in each course in an approved interdisciplinary studies major plan and achieve a minimum 2.25 GPA in the major. Courses in a student's minor or second major may not be included in the interdisciplinary studies major plan without advisor's consent. Students will enroll in IDS 489 no earlier than 2 quarters following successful completion of IDS 289.

Interdisciplinary Studies-Social Sciences, BS

Program Information
Interdisciplinary studies-social sciences major is for students whose primary interest in the social sciences requires interdisciplinary programs and course selections which are not possible within single academic programs or established curricula. Program offers students an opportunity to devise an approved, coherent program of study with an academic advisor fulfilling academic or career goals and includes prerequisites consistent with the 300- 400-level major coursework. Since the program is a student-designed, interdisciplinary major, course selections will vary. Students in the interdisciplinary studies major must take courses in at least three disciplines within the major.

Admission Requirement
Applicants must have completed 60 credit hours of study

with a minimum 2.25 cumulative GPA and be in academic good standing for admission.

Additional Degree Requirements
Application to the program must be completed at least three quarters prior to anticipated graduation. Students must earn a minimum grade of C- in each course in an approved interdisciplinary studies major plan and achieve a minimum 2.25 GPA in the major. Courses in a student's minor or second major may not be included in the interdisciplinary studies major plan without advisor's consent. Students will enroll in IDS 489 no earlier than 2 quarters following successful completion of IDS 289.

Interdisciplinary Studies-Social Sciences 62-Credit Major

Required Courses

- 52-53 credits must be taken from the list of courses approved for the social science major. Students in the interdisciplinary studies-social sciences major must take courses in at least three disciplines within the major and no more than 10 credits of lower division coursework may be included. No more than 15 credits may be numbered 490.
- IDS 289 - Introduction to the Major **Credits:** (1)
- IDS 389 - Academic and Career Exploration **Credits:** (3)
- IDS 489 - Senior Portfolio Project **Credits:** (1)

Research Methods in the Social Sciences (4-5) Credits

Choose one of the following approved courses:

- ANTH 444 - Ethnographic Field Methods **Credits:** (4)
- LAJ 400 - Research Methods in Criminal Justice **Credits:** (4)
- PSY 300 - Research Methods in Psychology **Credits:** (5)
- SOC 363 - Methods of Social Research **Credits:** (5)
  Or as approved by program director.

Total Credits: 62

Interdisciplinary Studies-Social Sciences 47-Credit Major

Required Courses

- 37-38 credits must be taken from the list of courses approved for the social sciences major. Students in the interdisciplinary studies - social sciences major must take courses in at least three disciplines within the major and no more than 10 credits of lower division coursework may be included. No more than 10 credits may be numbered 490.
- In addition, a 47 credit major must complete either a traditional departmental minor or a second major.
- IDS 289 - Introduction to the Major **Credits:** (1)
- IDS 389 - Academic and Career Exploration **Credits:** (3)
- IDS 489 - Senior Portfolio Project **Credits:** (1)

Research Methods in the Social Sciences (4-5) Credits

Choose one of the following approved courses:

- ANTH 444 - Ethnographic Field Methods **Credits:** (4)
- LAJ 400 - Research Methods in Criminal Justice **Credits:** (4)
- PSY 300 - Research Methods in Psychology **Credits:** (5)
- SOC 363 - Methods of Social Research **Credits:** (5)
  Or as approved by program director.

Total Credits: 47

Courses Approved for the Interdisciplinary Studies-Social Sciences Major

American Indian Studies (all courses)
Anthropology (all courses)
Economics (all courses)
Environmental Studies (all courses)
Ethnic Studies (all courses)
Geography (all courses)
Health Education (approved courses)
  HED 209
  HED 210
  HED 310
  HED 317
  HED 387
  HED 330
  HED 450
  HED 471
  HED 472
History (all courses)
Interdisciplinary Studies - Social Sciences (all courses)
Law and Justice (all courses)
Library Science
  LIB 345 - Library Research Methods
Political Science (all courses)
Psychology (all courses)
Sociology (all courses)

University 309
Women's and Gender Studies (all courses)

International Studies and Programs

International Studies
Ellensburg
International Center, room 101
Mail Stop 7408
509-963-3612
Fax 509-963-1558
www.cwu.edu/international-programs
See website for how these programs may be used for educational and career purposes.

Executive Director, Office of International Studies and Programs
Ann B. Radwan, PhD

Staff
Bobbie Peterson, administrative assistant
Margareta (Greta) Herman, fiscal specialist
Raymond (Ray) Wells, office assistant
Stacy Soderstrom, SEVIS coordinator
Rachel Gordon, program assistant
Roslyn (Roz) Moes, international student advisor
Kathy Gallentine, international student advisor (Westside)
Sara Cass, international student recruiter

Program Information
The Office of International Studies and Programs (OISP) coordinates all internationally related activities on campus. This includes maintaining institutional linkages, facilitating faculty exchanges, recruiting international students, providing study abroad/exchange, and academic advising for both international students and American students, promoting English language acquisition through the Asia University America Program (AUAP), and the University English as a Second Language program (UESL), and collaborating with the academic deans and departments in support of the overall internationalization of the university curriculum.

OISP provides a variety of services to all segments of the university in order to meet the diverse needs of CWU's students, faculty, international students, research scholars, and professors. The following services are offered through the OISP: study abroad/exchange advising (SAEP), advising to international students, English language training through the UESL program, and a unique English language and cultural learning experience for Japanese students from Asia University in Japan through AUAP.

Institutional Linkages
Central and the Office of International Studies and Programs (OISP) maintain active inter-institutional and organizational relationships with the following universities: Anhui University, China; Gunma Prefectural Women's University, Japan; Herzen State Pedagogical University, Russia; University of Pecs, Hungary; various countries in the International Student Exchange Program; Mexico; Kyoto University of Foreign Studies, Japan; Beijing Jiaotong University, China; Queensland University of Technology, Australia; Charles Darwin University, Australia; Griffith University, Australia; Macquarie University, Australia; University of Shimane, Japan; Shimane Women's Junior College, Japan; Takushoku University, Japan; University of Hull, United Kingdom; Universidad Austral de Chile, Chile; Pukyong National University, Korea; Kyundong University, Korea; Ewha Women's University, Korea; various countries in the AHA International; Beijing University, China; Universidad Anahuac del Sur, Mexico; Universite de Pau et des Pays de l'Adour, France; College Consortium for International Studies, various countries; American Institute for Foreign Studies, various countries; Centro de Investigaciones en Medio Ambiente y Salud (CIMAS), Ecuador; University of Washington Cadiz Program, Spain; Universidad Autonoma de Guadalajara, Mexico; Asia University, Japan; American Pacific University, Vietnam and Napier University, Scotland.

Active student and faculty exchange opportunities exist between CWU and these institutions.

International Students and Scholars
International students and scholars receive academic advising, advocacy, and immigration regulations and procedures assistance through OISP. Support services are available to all international students including those here for language training in the UESL department, to take part in an academic year exchange, or to obtain a bachelor or master's degree, in International, and Area Studies.

International and Area Studies
CWU offers Chinese, French, German, Japanese, Russian, and Spanish language courses. Students studying a language are encouraged to have international experience in order to learn more about the cultural context of the language. Regular degree programs are offered in world languages with specializations in Chinese, French, German, Japanese, Russian, and Spanish. The world language broad area major may include studying abroad in a country where the target language is taken.

Students can internationalize their undergraduate education by completing a major or minor in Asia/Pacific

Studies and/or Latino and Latin American Studies Program. There is also a minor in International Studies. These programs of study are interdisciplinary and incorporate courses in anthropology, art, economics, geography, history, languages, philosophy, and political science. Other area-focused courses are also available throughout the academic year.

Asia University America Program (AUAP)

International Studies
Ellensburg
International Center, room 101

509-963-1373
Fax 509-963-1371
www.cwu.edu/international-programs/auap
See website for how these programs may be used for educational and career purposes.

Program Director
Nicki Kukar, MEd

Lecturers
Andrew Cottonwood MA, curriculum coordinator, American and Japanese history
Rose Romfo, MA, English literature
Sylvia Shriner, MA, TESL
Johanna Hamilton, MA
Nicole Rehorst, MA

Staff
Angela (Angie) Wedekind, secretary senior
Mark Werdin, MA, English literature, student services coordinator

Program Information
The Asia University America Program (AUAP) is a study abroad program for freshman and sophomore students from Asia University in Tokyo, Japan. Two groups of students come to CWU each year for five months. The program is presently ongoing at two other universities in the northwest: WWU and EWU. AUAP provides students from Asia University the opportunity to improve their English skills and experience university life in the U.S. Students attend 18 hours of AUAP classes per week following the required curriculum from Asia University.

International Study Courses
INTL courses are offered only in university-approved study abroad/exchange programs. Courses may be offered and repeated for credit under different titles.

Global Studies and Initiative (GSI)

International Studies
Ellensburg
International Center, room 101

509-963-3612
www.cwu.edu/international-programs

Program Director
Geoff Foy, PhD

Staff
Rachel Gordon, program assistant
Roslyn Moes, international student advisor
Kathy Gallentine, international student advisor (Westside)

Study Abroad and Exchange Program (SAEP)

International Studies
Ellensburg
International Center, room 101

509-963-3612
www.cwu.edu/international-programs
See website for how this program may be used for educational and career purposes.

Program Assistant Director
Steven Cook, MA

Staff
Roberta Lowe, secretary senior
Matthew Zielsdorf, MA, study abroad advisor

Program Information
Study Abroad and Exchange Programs offers more than 150 international programs in 50 countries and over 170 exchange locations within the U.S. International internships are also available. Programs range in length from 10 days to one year. Programs grant academic credit that can be applied to major, minor, or breadth requirements with departmental approval. World language proficiency is not required and many programs offer coursework in English.
SAEP Standards

- Minimum GPA 2.5 or higher; 2.0 for international internships.

- Minimum sophomore standing for most programs; freshman standing for some faculty-led programs.
- Must be in good academic and disciplinary standing.
- Program-specific eligibility criteria are available on the SAEP website at www.cwu.edu/~studyabroad.

Financial Obligations
Exempt from CWU tuition. Program-specific fees apply. For more information,
see the SAEP website at www.cwu.edu/~studyabroad.
Most types of financial aid apply toward program costs. Aid may be increased if necessary depending on student aid eligibility.

University English as a Second Language Program (UESL)

International Studies
Ellensburg
International Center, room 101

509-963-1375
www.cwu.edu/international-programs
See website for how these programs may be used for educational and career purposes.

Program Director
Sherri Fujita, MA

Staff
Margaret Jensen, office assistant
Kindra Martin, secretary senior

Senior Lecturers
Meiqi He, MA, TESL
Carl Rosser, PhD, English
James Pitts, MA
Kent R. DaVault, MA

Lecturers
Mary Beard, MA
Debra Douglas, MA
Janine Graves, MA
Gary Knight, MA
Sarah Luerken, MA
Sarah Norton, MA
Matthew Britschgi, MA, curriculum coordinator

Program Information
The UESL Program consists of a year-round intensive English program and short-term special programs. The year-round program focuses on language instruction and academic preparation for international students. Conditional undergraduate admission to CWU is an option through the UESL program. The program provides practical training for English department graduate students and an opportunity for American students to be conversation partners. Short-term special programs can be arranged for specific groups.

International Studies Minor

Executive Director, OISP
TBD, International Center, room 117

Assistant Director, SAEP
Steven Cook, International Center, room 108

Program Information
The international studies minor program goals are to provide a structured interdisciplinary opportunity for students to develop the analytical skills necessary to understand and evaluate the contemporary international system; to facilitate research and creative activities that focus on international issues; to provide opportunities to directly engage in meaningful cross-national interactions; and to encourage the apprehension of the fundamental commonalities as well as rich diversities that characterize the modern world system.

Required Courses

- ECON 102 - World Economic Issues **Credits:** (5)
- GEOG 101 - World Regional Geography **Credits:** (5)
- POSC 270 - International Politics **Credits:** (5)

International Studies Courses

- INTL 110-465 - International Studies **Credits:** (3)

Electives Credits: 18

Students must complete at least four of the following courses with no more than two from any one department:

- ANTH 358 - Culture and Politics in a Global Economy **Credits:** (4)
- COM 302 - Intercultural Communication **Credits:** (4)
- ECON 310 - International Economics **Credits:** (5)
- ENG 360 - World Cinema **Credits:** (5)
- GEOG 304 - Economic Geography **Credits:** (5)
- GEOG 460 - Geography of International Trade **Credits:** (5)

- HED 317 - Global Health **Credits:** (3)
- POSC 373 - International Politics of the Pacific Rim **Credits:** (5)
- POSC 375 - The Middle East and International Politics **Credits:** (5)
- POSC 376 - International Organization **Credits:** (3)
- POSC 378 - International Political Economy **Credits:** (5)
- POSC 470 - Contemporary Issues in International Relations **Credits:** (3-5)
- RELS 201 - Sacred Books of the World **Credits:** (5)
- SOC 326 - Demography of Contemporary World Populations **Credits:** (5)
- WGS 498 - Special Topics **Credits:** (1-6)

Other Electives

- INTL 198-498 - Special Topics **Credits:** (1-6)
- INTL 290/490 - Cooperative Education **Credits:** (1-6)

Total Credits: 36

Language, Literacy, and Special Education Department

College of Education and Professional Studies
Ellensburg
Black Hall, room 101
Mail Stop 7406
509-963-2049
www.cwu.edu/language-literacy
See website for how these programs may be used for educational and career purposes

Faculty and Staff
Chair
Janet Finke, PhD

Professors
Carol Butterfield, PhD, literacy, TESL
Susan Donahoe, PhD, literacy
Dan Fennerty, EdD, special education
Janet Finke, PhD, literacy
Craig Hughes, PhD, bilingual education, TESL
Terrance McCain, PhD, bilingual education, TESL

Associate Professors
Yukari Amos, PhD, bilingual education, TESL
YiShan Lea, EdD, bilingual education, TESL
Janet Spybrook, EdD, special education
Sharryn Walker, PhD, literacy

Assistant Professors
Cristina Santamaria, PhD, special education

Lecturer
Jennifer Hale, MS, special education
Denise LaRoque, MEd, (ESL), literacy

Staff
Nancy Schnebly, secretary lead

Department Information
Major and/or minor programs in the Department of Language, Literacy, and Special Education include bilingual education/teaching English as a second language (TESL), literacy, and special education. The courses in these programs are designated by the course prefixes EDBL, EDLT, and EDSE, respectively.

In addition to major and/or minor in LLSE, students must complete the Professional Education Program. Students choosing to complete a major or minor without completing the Professional Education Program must have program approval at the time of declaration.

Students completing a special education major or minor must complete EDCS 424 if they are pursuing a secondary discipline-specific teaching major (or EDLT 308 for those also seeking an elementary-specific teaching major) as part of the Professional Education Program. All students completing a secondary discipline-specific program must complete EDCS 424. All other education department majors or minors do not require the completion of this course. Also, at least 75 percent of the endorsable major or minor must be completed prior to EDCS 442, Student Teaching.

Department Standards
All students completing an educational endorsement must maintain a 3.0 GPA or higher for the last 45 graded credits. Students must also earn a minimum grade of C in all required education courses.

Special Education Majors
The special education majors offered are specifically designed to prepare teachers for meeting the diverse competencies required for teaching individuals with disabilities. Students electing special education teaching must follow one of the outlined programs. EDSE 302 must be taken prior to or concurrently with EDSE 311.

Special Education (P-12) Broad Area Major, BAEd

This major is for students planning to earn a teaching certificate with special education P-12 endorsement. Students majoring in special education are only allowed to teach special education unless they have another endorsable major/minor.

Required Courses

- EDEL 323 - Teaching Elementary School Mathematics **Credits:** (4)
- EDLT 308 - Literacy I **Credits:** (3)
- EDLT 409 - Literacy II **Credits:** (5)
- EDLT 422 - Teaching the Language Arts **Credits:** (4)
- EDSE 310 - Introduction to Special Education **Credits:** (4)
- EDSE 311 - Foundations of Special Education **Credits:** (1)
- EDSE 410 - Behavior Management for Students with Disabilities **Credits:** (3)
- EDSE 411 - Assessment of Students with Disabilities **Credits:** (4)
- EDSE 422 - Teaching Strategies, Curriculum, and Materials for Students with Disabilities **Credits:** (5)
- EDSE 423 - Instructional Practices/Strategies in Literacy and Math for Students with High Incident Disabilities **Credits:** (4)
- EDSE 426 - The Child with Language Disabilities **Credits:** (3)
- EDSE 431 - Individualized Educational programs for Students with Disabilities **Credits:** (4)
- EDSE 432 - Strategies for Working with Students with Low Incidence Disabilities **Credits:** (3)
- EDSE 433 - Pre-school for Students with Developmental Delays **Credits:** (3)
- EDSE 460 - Collaboration with Parents, Paraprofessionals, and Community Agencies **Credits:** (4)
- EDSE 495 - Practicum **Credits:** (5-16) (must be taken for 16 credits)

Total Credits: 70

(NOTE: Majors of 60 or more credits do not require an accompanying minor.)

University General Education and Professional Education/Core Sequence requirements must also be met for graduation/teacher certification, as well as the completion of an approved university minor.

Special Education (P-12) Major, BAEd

This major satisfies the endorsement for special education. This major is for students planning to earn a teaching certificate with special education P-12 endorsement. This major requires a minor.

Required Courses

- Department-approved electives: Credits (3)
- EDSE 310 - Introduction to Special Education **Credits:** (4)
- EDSE 311 - Foundations of Special Education **Credits:** (1)
- EDSE 410 - Behavior Management for Students with Disabilities **Credits:** (3)
- EDSE 411 - Assessment of Students with Disabilities **Credits:** (4)
- EDSE 422 - Teaching Strategies, Curriculum, and Materials for Students with Disabilities **Credits:** (5)
- EDSE 423 - Instructional Practices/Strategies in Literacy and Math for Students with High Incident Disabilities **Credits:** (4)
- EDSE 426 - The Child with Language Disabilities **Credits:** (3)
- EDSE 431 - Individualized Educational programs for Students with Disabilities **Credits:** (4)
- EDSE 432 - Strategies for Working with Students with Low Incidence Disabilities **Credits:** (3)
- EDSE 433 - Pre-school for Students with Developmental Delays **Credits:** (3)
- EDSE 460 - Collaboration with Parents, Paraprofessionals, and Community Agencies **Credits:** (4)
- EDSE 495 - Practicum **Credits:** (5-16) Credits: (16)

Total Credits: 57

Bilingual Education/Teaching English as a Second Language Minor

This minor satisfies the endorsements for bilingual education and English as a second language. This minor serves the goals and requirements of students wishing to teach in classrooms characterized by cultural and

linguistic diversity. The bilingual/TESL minor leads to K-12 endorsements in bilingual education and English Language Learners. Students must demonstrate proficiency in a non-English language in order to meet the bilingual education minor requirements. This is to be demonstrated by passing the foreign language examination assessment required by the State of Washington at the proficiency levels required for world language candidates.

Full admission into the Professional Education Program is required before enrollment in any of the EDBL courses with exception of EDBL 312 and EDBL 318.

EDBL 492 requires that four (4) required program courses be completed before enrollment.

Required Courses

- EDBL 312 - Foundations in Bilingual Education **Credits:** (3)
- EDBL 318 - Culture in the Classroom **Credits:** (3)
- EDBL 430 - Sheltering Instruction for Linguistically Diverse Students **Credits:** (3)
- EDBL 433 - Educational Linguistics **Credits:** (3)
- EDBL 435 - Bilingual Education in the Content Areas **Credits:** (3)
- EDBL 438 - Teaching English as a Second Language **Credits:** (3)
- EDBL 439 - Assessment of Linguistically Diverse Students **Credits:** (3)
- EDBL 440 - Development of Literacy with Linguistically Diverse Students **Credits:** (3)
- EDBL 492 - Practicum **Credits:** (1-15) (Must be taken for 3 credits) (Four EDBL courses must be completed before EDBL 492 admission)

Total Credits: 27

Literacy Minor

The literacy minor, with campus and field experiences, is designed to prepare literacy teachers and strengthen background preparation of elementary teachers.

EDLT 308 is a prerequisite for admittance to the minor (EDLT courses) except for EDLT 324. All EDLT courses require acceptance into the TCP. The minor should be commenced in the junior year.

EDLT 409 is a prerequisite for EDLT 493.

EDLT 493 also requires permission of the department (designated as the instructor of EDLT 493).

Permission for EDLT 493 will not be granted until 5 required courses in the literacy minor, excluding EDLT 308 is completed or will be completed the quarter prior to enrollment.

Required Courses

- EDLT 308 - Literacy I **Credits:** (3) (prerequisite for EDLT minor courses)
- EDLT 409 - Literacy II **Credits:** (5) (prerequisite for EDLT 493)
- EDLT 324 - Literacy Across the Curriculum **Credits:** (3)
- EDLT 410 - Teaching Word Recognition Skills **Credits:** (3)
- EDLT 411 - Teaching Comprehension **Credits:** (3)
- EDLT 412 - Assessment of Literacy Skills and Processes **Credits:** (3)
- EDLT 413 - Methods and Materials for Literacy Instruction **Credits:** (3)
- EDLT 414 - Teaching Literacy in a Multi-Cultural, Multi-Lingual Setting **Credits:** (3)
- EDLT 418 - Literacy and Linguistics **Credits:** (3)
- EDLT 493 - Literacy Practicum **Credits:** (6) (Requires department permission. A minimum of 5 required literacy minor courses, excluding prerequisites, must be completed for permission)

Total Credits: 35

Special Education Minor

The special education programs offered are specifically designed to prepare teachers for meeting the diverse tasks required in teaching individuals with disabilities. The minor may serve as a “pre-endorsement” plan for those wishing to add the special education endorsement at a later date. See a special education advisor for your individualized pre-endorsement plan.

Required Courses

- EDSE 310 - Introduction to Special Education **Credits:** (4)
- EDSE 311 - Foundations of Special Education **Credits:** (1)
- EDSE 410 - Behavior Management for Students with Disabilities **Credits:** (3)
- EDSE 411 - Assessment of Students with Disabilities **Credits:** (4)
- EDSE 422 - Teaching Strategies, Curriculum, and Materials for Students with Disabilities **Credits:** (5)

- EDSE 423 - Instructional Practices/Strategies in Literacy and Math for Students with High Incident Disabilities **Credits:** (4)
- EDSE 431 - Individualized Educational programs for Students with Disabilities **Credits:** (4)
- EDSE 432 - Strategies for Working with Students with Low Incidence Disabilities **Credits:** (3)
- EDSE 433 - Pre-school for Students with Developmental Delays **Credits:** (3)
- EDSE 460 - Collaboration with Parents, Paraprofessionals, and Community Agencies **Credits:** (4)

Total Credits: 35

Teaching English as a Second Language (TESL) Minor

This minor satisfies the endorsement for English as a second language. This minor prepares students to teach in classrooms where second language students are enrolled. While the bilingual/TESL minor leads to a bilingual education endorsement, the TESL minor leads to an English Language Learners endorsement. Students must complete, or have already completed, one year of study in a foreign or second language or the equivalent (at either the high school or university level).

Full admission into the Professional Education Program is required before enrollment in any of the EDBL courses.

EDBL 492 requires that four (4) required program courses be completed before enrollment.

Required Courses

- Program-approved electives **Credits:** (3)
- EDBL 312 - Foundations in Bilingual Education **Credits:** (3)
- EDBL 318 - Culture in the Classroom **Credits:** (3)
- EDBL 430 - Sheltering Instruction for Linguistically Diverse Students **Credits:** (3)
- EDBL 433 - Educational Linguistics **Credits:** (3)
- EDBL 438 - Teaching English as a Second Language **Credits:** (3)
- EDBL 439 - Assessment of Linguistically Diverse Students **Credits:** (3)
- EDBL 440 - Development of Literacy with Linguistically Diverse Students **Credits:** (3)
- EDBL 492 - Practicum **Credits:** (1-15) (Must be taken for 3 credits) (Four EDBL courses must be completed before EDBL 492 admission)

Total Credits: 27

Global Literacy Development Certificate

Students in the Global Literacy Development Certificate Program will gain knowledge of best practices in literacy development and effective communication strategies. They will be prepared to support professionals in creating and supporting literacy programs in communities across cultures and around the world. This certificate program will be offered at the Ellensburg campus and on-line.

Required Courses

- COM 365 - Organizational Communication **Credits:** (4)
- EDLT 317 - Early Literacy **Credits:** (3)
- EDLT 321 - Teaching Children's Literature **Credits:** (3)
- EDLT 414 - Teaching Literacy in a Multi-Cultural, Multi-Lingual Setting **Credits:** (3)
- EDLT 418 - Literacy and Linguistics **Credits:** (3)
- EDLT 498 - Special Topics **Credits:** (1-6)
- EDLT 499 - Seminar **Credits:** (1-5)

Total Credits: 18

Latino and Latin American Studies Program

College of Arts and Humanities
Ellensburg
Language and Literature Bldg., room 102H
509-963-3347

www.cwu.edu/latino-latin-american
See website for how this program could be used for educational and career purposes.

Director
Stella Moreno, PhD, Spanish, world languages

Faculty
Tracy Andrews, PhD, Anthropology
Daniel Beck, Ph. D, Biology
Elvin Delgado, PhD, Geography
Jason Dormady, PhD, History
Kristine Earnest, Ph. D, Biology
Susana Flores, Ph. D, Education
Gilberto Garcia, PhD, Political Science
Koushik Ghosh, PhD, Economics
Raymond Hall, PhD, Anthropology
Alejandro Lee, PhD, Spanish, World Languages

Eric Mayer, PhD, Spanish, World Languages
Stella Moreno, PhD, Spanish, World Languages
Nelson Pichardo, PhD, Sociology
Craig Revels, PhD, Geography
Fabiola Serra Fuertes, Ph. D, Biology
Chris Schedler, PhD, English

Program Information
The Latino and Latin American Studies Program (LLAS) seeks to engage CWU students, faculty, staff, and local communities in a study of Latino and Latin American experiences, peoples, and cultures. The LLAS minor provides students with broad, interdisciplinary training in the economic, social, political, and cultural realities of Latino and Latin American peoples. The minor will be extremely valuable for those pursuing careers in business, government, social work, law and justice, and teaching that require engagement with Latino communities in the United States, as well as for those who wish to travel and work in Latin America. Moreover, the Latino and Latin American Studies minor may also serve as preparation for graduate study in multiple academic or professional fields.

Latino and Latin American Studies Minor

General Program Information

The Latino and Latin American Studies Program (LLAS) seeks to engage CWU students, faculty, staff, and local communities in a study of Latino and Latin American experiences, peoples, and cultures. The LLAS minor provides students with broad, interdisciplinary training in the economic, social, political, and cultural realities of Latino and Latin American peoples. The minor will be extremely valuable for those pursuing careers in business, government, social work, law and justice, and teaching that require engagement with Latino communities in the United States, as well as for those who wish to travel and work in Latin America. Moreover, the Latino and Latin American Studies minor may also serve as preparation for graduate study in multiple academic or professional fields.

Requirements for minors in Latino and Latin American Studies

- Prerequisite: Spanish, Portuguese, or French language equivalent to the end of the first year (153).
- An average GPA of 2.0 is required in all program courses.

Required Course Credits: 5

- LLAS 102 - An Introduction to Latino and Latin American Studies **Credits:** (5)

Department-approved Elective Credits: 20

A total of 20 approved elective credits in at least three different disciplines at the 300 level or above is required (see "List of Approved CWU Courses" below). Courses taken through CWU exchange or study-abroad programs in a Latin American university may be applied for minor program credit. Courses that do not appear on the approved list but contain significant Latino and Latin American content may be used for minor program credit, upon approval of the LLAS director(s).

List of Approved CWU Courses (By Department/Program)

(a) Anthropology

- ANTH 342 - Hispanic Cultures of the Western U.S. **Credits:** (4)
- ANTH 346 - Cultures of Latin America and the Caribbean **Credits:** (4)

(b) English

- ENG 331 - Latina/o Literature **Credits:** (5)

(c) Ethnic Studies

- ETS 350 - Survey of Chicano Studies **Credits:** (5)

(d) Foreign Languages

- SPAN 301 - Introduction to Spanish and Latin American Literature **Credits:** (4)
- SPAN 310 - Hispanic Civilizations and Cultures **Credits:** (4)
- SPAN 446 - Hispanic Cinema **Credits:** (4)
- SPAN 456 - The Spanish and Latin American Short Story **Credits:** (4)
- SPAN 457 - Latin American Theater **Credits:** (4)
- SPAN 459 - Latin American Poetry **Credits:** (4)
- SPAN 467 - Spanish and Latin American Literature and Film **Credits:** (4)

(e) Geography

- GEOG 370 - Geography of South America **Credits:** (4)0

(f) History

- HIST 328 - Modern Latin America **Credits:** (5)
- HIST 386 - The Latin American Colonies **Credits:** (5)
- HIST 464 - Latin American Revolutions **Credits:** (5)
- HIST 488 - Mexico in the Modern Era **Credits:** (5)

(g) Latino and Latin American Studies

- LLAS 398 - Special Topics **Credits:** (1-6)
- LLAS 496 - Individual Study **Credits:** (1-6)

(h) Political Science

- POSC 361 - Latin American Politics **Credits:** (5)

Total Credits: 25

Latin American Business Certificate

The certificate in Latin American Business prepares students for working within an emerging economy orientated toward Latin American. It combines an overview of the nuances of the regional economy with an introduction to Latin American's cultural and historical development. Topics will include an introduction to Latin American culture and philosophy, corporate-government relations, twentieth-century history, regional development, and business strategies. It can be supplemented with study abroad opportunities and language study (French, Spanish, and Portuguese).

There are two tracks: one for College of Business majors and one for non-business majors.

Required Courses

- COM 471 - Corporate Communication in Latin America **Credits:** (4) (No prerequisites required for the Latin American Business Certificate)
- ECON 101 - Economic Issues **Credits:** (5)
- **OR** ECON 102 - World Economic Issues **Credits:** (5)
- **OR** ECON 201 - Principles of Economics Micro **Credits:** (5)
- LLAS 102 - An Introduction to Latino and Latin American Studies **Credits:** (5) (online)

Track for Business Majors:

Choose two of the following courses:

- HIST 321 - Latin America Through Film, Art, and Music **Credits:** (5)
- **OR** HIST 328 - Modern Latin America **Credits:** (5)
  OR
- GEOG 368 - Geography of Middle America **Credits:** (4)
- **OR** GEOG 370 - Geography of South America **Credits:** (4)
- **OR** SPAN 310 - Hispanic Civilizations and Cultures **Credits:** (4)

Track for Non-business Majors:

Choose two of the following courses:

- MGT 380 - Organizational Management **Credits:** (5)
- MKT 360 - Principles of Marketing **Credits:** (5)
- HRM 381 - Management of Human Resources **Credits:** (5)

Total Credits: 23-24

Law and Justice Department

College of the Sciences
Ellensburg
Farrell Hall, room 309
CWU-Des Moines (D)
CWU-Lynnwood (L)
CWU-Pierce County (PC)
Mail Stop 7580
509-963-3208
Fax: 509-963-3205

www.cwu.edu/law
See website for how these programs may be used for educational and career purposes.

Faculty and Staff
Chair
Rodrigo Murataya, PhD, MPA

University Center Department Directors
Krystal Noga-Styron, JD (L)
Mary Ellen Reimund, JD, LLM (D)

Professors
Rodrigo Murataya, PhD, criminal investigation, police-

community relations, police personnel administration
J. Michael Olivero, PhD, corrections, criminology
Charles Reasons, PhD, LLB, criminology, criminal justice, law, comparative justice
Mary Ellen Reimund, LLM, criminal law, alternative dispute resolution, restorative justice

Associate Professors
Teresa Francis, JD, LLM, criminal law, correctional law
Krystal Noga-Styron, JD, criminal law, crime and the media

Assistant Professors
Danielle Neal, PhD
Cody Stoddard, PhD, policing, courts, criminological theory, quantitative methods

Lecturers
Saul Chacon, MA
Robert Wes Clogston, MS, law enforcement, comparative criminal justice, police personnel administration
Robert Moore, MA, corrections, correctional counseling

Staff
Michael Hanscom, secretary senior

Department Standards
Admission to the major and to the minor

- Grade requirement: overall grade point average of 2.25 or higher. The department chair may admit a limited number of students with grade point averages below 2.25 under extenuating circumstances.
- Students applying to the major must submit a major application form.
- The law and justice department reserves the right to modify these requirements in special cases or as the needs of the department change.

Exit Requirements
A minimum grade of C- must be earned in all courses used to fulfill the requirements of the major and of the minor.

Bachelor of Arts
(NOTE: Students seeking a BA degree must complete one year of college/university study or two years of high school study of a single world language.)

(NOTE: for all 400-level LAJ courses, student must have completed either a DTA or ENG 101 and 102, MATH 101 or 153 or 154 or 164 or 170 or 172, MATH 102 or MATH 130 or PHIL 201 or CS 105 (basic skills in these categories.)

Law and Justice Major, BA

Admission to the Major and to the Minor

- Grade requirement: overall grade point average of 2.25 or higher. The department chair may admit a limited number of students with grade point averages below 2.25 under extenuating circumstances.
- Students applying to the major must submit a major application form.
- The law and justice department reserves the right to modify these requirements in special cases or as the needs of the department change.

Exit Requirements
A minimum grade of C- must be earned in all courses used to fulfill the requirements of the major and of the minor.

(NOTE: Students seeking a BA degree must complete one year college/university study or two years high school study of a single world language.)

Core Requirements

- LAJ 300 - Administration of Criminal Justice **Credits:** (4)
- LAJ 302 - Criminal Procedure **Credits:** (4)
- LAJ 313 - Introduction to Criminal Law **Credits:** (4)
- LAJ 400 - Research Methods in Criminal Justice **Credits:** (4)
- LAJ 401 - Ethics, Diversity, and Conflict in Criminal Justice **Credits:** (4)
- LAJ 420 - Community and Social Justice **Credits:** (4)
- LAJ 451 - Crime in America **Credits:** (4)
- LAJ 489 - Senior Seminar in Law and Justice **Credits:** (4)

Total Core Requirements Credits: 32

Electives

Select seven (7) upper-division CWU LAJ courses (other than 490, 492, 495, or 496).

Elective Credits: 28

Total Credits: 60

Law and Justice Minor

Admission to the Major and to the Minor

- Grade requirement: overall grade point average of 2.25 or higher. The department chair may admit a limited number of students with grade point averages below 2.25 under extenuating circumstances.
- Students applying to the major must submit a major application form.
- The law and justice department reserves the right to modify these requirements in special cases or as the needs of the department change.

Exit Requirements
A minimum grade of C- must be earned in all courses used to fulfill the requirements of the major and of the minor.

(NOTE: Students seeking a B.A. degree must complete one year college/university study or two years high school study of a single world language.)

Required Courses Credits: 12-13

Select three (3) LAJ courses from the LAJ core requirements.

- LAJ 300 - Administration of Criminal Justice **Credits:** (4)
- LAJ 302 - Criminal Procedure **Credits:** (4)
- LAJ 303 - Legal Research **Credits:** (4)
- LAJ 313 - Introduction to Criminal Law **Credits:** (4)
- LAJ 400 - Research Methods in Criminal Justice **Credits:** (4)
- LAJ 401 - Ethics, Diversity, and Conflict in Criminal Justice **Credits:** (4)
- LAJ 420 - Community and Social Justice **Credits:** (4)
- LAJ 451 - Crime in America **Credits:** (4)

LAJ Electives Credits: 12

Select three (3) upper-division CWU LAJ courses (other than 490, 492, 495, or 496).

Total Credits: 24-25

Library Science Program

Library
Ellensburg
James E. Brooks Library, room 206
Mail Stop 7548
509-963-1021
Fax 509-963-3684
www.lib.cwu.edu
See website for how these programs may be used for educational and career purposes.

Faculty and Administration, Deans and Chair
Patricia J. Cutright, M. Librarianship, dean of libraries
Michele Reilly, associate dean of libraries
Stephen J. Hussman, MLS, MA, public history, department chair, university archivist/library

Professors
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Stephen J. Hussman, MLS, MA, public history, archives and special collections
Mary J. Wise, MLS; MEd, music library

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Michele Reilly, MLS, government publications, maps and microforms

Assistant Professor
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Elizabeth Brown, MLIS, instruction coordinator
Julie Carmen, MLS, cataloging and digital initiatives

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Maurice (Marty) Blackson, MA, special education, archives and special collections
Lisa J. Euster, MLIS, reference services
Geri L. Hopkins, MLS, online multimodal
Courtney M. Paddick, MLIS, MA history, academic and research commons
Maureen Rust, MLIS, reference services

Program Information
At all times, students at Central have access to the library's 1.3 million books, films, government documents, and maps in print, microfiche, microfilm, and online electronic formats. The main library and two branch libraries at the University Centers at Des Moines and Lynnwood maintain subscriptions to over 20,000 newspapers,

magazines, and journals in print and online full-text electronic formats, as well as audio recordings in CD, LP, and cassette formats and videos in DVD and VHS formats. The libraries participate in the resource-sharing service with the Orbis Cascade Alliance that provides our students with access to more than 25 million information items. The libraries' online Cattrax catalog, as well as most full-text access, are available to students from any networked computer, whether on or off campus.

Library and Information Science Minor

The minor in library and information science is designed to provide students with an understanding of the methods and means of gathering, organizing, and disseminating information. The minor is appropriate for any students who wish to gain a greater understanding of the field of library and information science.

All students in the minor will be required to complete 20 credit hours in the core curriculum. Students may choose courses within the remaining curriculum areas depending on their specific interests. Students must maintain a 2.0 GPA in the program courses.

Required Courses Credits: 20

- LIS 110 - Research Fundamentals **Credits:** (1)
- LIS 201 - Foundations of Library and Information Science **Credits:** (3)
- LIS 310 - Information Literacy and User Services **Credits:** (3)
- LIS 314 - Technology in Library and Information Science **Credits:** (3)
- LIS 345 - Library Research Methods and Information Literacy **Credits:** (4)
- LIS 414 - Organization of Knowledge **Credits:** (3)
- LIS 490 - Library and Information Science Internship **Credits:** (1-12) (Must be taken for 3 credits)

Management Courses Credits: 3-4

Select one of the following courses:

- ANTH 362 - Museum Curation and Management **Credits:** (4)
- LIS 412 - Library Management and Leadership **Credits:** (3)

Collection Management Credits: 3

Select one of the following courses:

- LIS 410 - Collection Development **Credits:** (3)
- LIS 411 - Introduction to Archives **Credits:** (3)

Reader Content Advisory Credits: 3-5

Select one of the following courses:

- EDLM 436 - Survey of Children's and Young Adult Literature **Credits:** (3)
- ENG 247 - Multicultural Literature **Credits:** (5)
- ENG 302 - Poetry and Poetics **Credits:** (5)
- ENG 330 - African American Literature **Credits:** (5)
- ENG 331 - Latina/o Literature **Credits:** (5)
- ENG 332 - American Indian Literature **Credits:** (5)
- ENG 333 - Asian American Literature **Credits:** (5)
- ENG 334 - American Indian Oral and Nonfiction Literature **Credits:** (5)
- ENG 347 - Global Perspectives in Literature **Credits:** (5)
- LIS 398 - Special Topic **Credits:** (1-6)
- **OR** LIS 498 - Special Topic **Credits:** (1-6)
- Any History Course at the 300 to 500 level **Credits:** (3-5)

Total Credits: 29-32

School Library Media Studies Minor

The minor in school library media studies is designed to provide students with an understanding of the methods and means of gathering, organizing, and disseminating information as well as promoting information literacy and lifelong learning. The minor is appropriate for any student currently enrolled in a Teacher Certification Program who wishes to add a Library Media (P-12) Endorsement to their certification.

Admission to the program requires a 3.0 GPA and admittance to a Central Washington University Teacher Certification Program. Students must maintain a 3.0 GPA in the program courses to qualify for enrollment in LIS 492 School Library Media Clinical Experience and Portfolio.

Required Courses

- LIS 110 - Research Fundamentals **Credits:** (1)
- LIS 201 - Foundations of Library and Information Science **Credits:** (3)

- LIS 310 - Information Literacy and User Services **Credits:** (3)
- LIS 314 - Technology in Library and Information Science **Credits:** (3)
- LIS 410 - Collection Development **Credits:** (3)
- LIS 412 - Library Management and Leadership **Credits:** (3)
- LIS 414 - Organization of Knowledge **Credits:** (3)
- LIS 415 - Role of the School Library Media Specialist **Credits:** (5)
- LIS 492 - School Library Media Clinical Experience **Credits:** (4)

Total Credits: 28

Library and Information Science Certificate

The certificate in library and information science is designed to provide students with an understanding of the methods and means of gathering, organizing, and disseminating information. The certificate is appropriate for any students who wish to gain a greater understanding of the field of library and information science without completing an undergraduate minor and or non-matriculated students already employed as a library paraprofessional.

All students in the certificate program will be required to complete 8 credit hours in the core curriculum. Students may choose four courses within the remaining curriculum areas depending on their specific interests.

Required Courses

- LIS 110 - Research Fundamentals **Credits:** (1)
- LIS 201 - Foundations of Library and Information Science **Credits:** (3)
- LIS 345 - Library Research Methods and Information Literacy **Credits:** (4)

Choose four of the following elective courses - Credits: (12)

- LIS 310 - Information Literacy and User Services **Credits:** (3)
- LIS 314 - Technology in Library and Information Science **Credits:** (3)
- LIS 398 - Special Topic **Credits:** (1-6)
- LIS 410 - Collection Development **Credits:** (3)
- LIS 411 - Introduction to Archives **Credits:** (3)
- LIS 412 - Library Management and Leadership **Credits:** (3)
- LIS 414 - Organization of Knowledge **Credits:** (3)
- LIS 498 - Special Topic **Credits:** (1-6)

Total Credits: 20

Management Department

College of Business
Ellensburg (E)
Shaw-Smyser Hall, room 329
CWU-Des Moines (D)
CWU-Lynnwood (L)
Mail Stop 7485
509-963-3339
Fax: 509-963-2875
www.cwu.edu/business

See the website for how this program could be used for educational and career purposes.

Faculty and Staff
Chair
Jeffrey L. Stinson, PhD

Professors
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Peter J. Boyle, PhD, marketing (L)
Laura M. Milner, PhD, marketing (E)
Mark Pritchard, PhD, marketing (E)

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Nancy Graber Pigeon, JD, business law (E)
Jeffrey L. Stinson, PhD, marketing (E)

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Bryan Deptua, PhD, management (D)
Erica Holley, PhD, management (L)
Sayantani Mukherjee, PhD, management (L)
William Provaznik, PhD, management (E)
Chase Thiel, PhD, management (E)
Todd Weber, PhD, management (E)
Terry Wilson, PhD, marketing (E)
Keke (CoCo) Wu, PhD, management (E)

Staff
Marilyn Lowe, secretary

Bachelor of Science in Business Administration Program

The Department of Management and the Department of Finance and Supply Chain Management jointly support the Bachelor of Science in business administration, the general-business specialization and business minor. The

department offers coursework leading to the Bachelor of Science in business administration (BSBA) degree. In addition to the university general education requirements, the BSBA major is comprised of three principal components: 1) pre-admission courses that provide foundation knowledge and skills needed for further study in business; 2) business core courses that build on the pre-admission group and focus on decision making in the main functional areas of business; and 3) specialization courses that allow for advanced study in one of the functional areas.

Students matriculating in Ellensburg select a 25-credit specialization within the BSBA program in one of six areas: finance, general business, human resource management, leadership and management, marketing management, or supply chain management. Students matriculating at a university center choose from general business, human resource management, leadership and management, marketing management or supply chain management.

Program Goals for BSBA

The departments have identified overall educational outcomes related to knowledge, values, and skills for all BSBA graduates. Following are the outcomes for the Bachelor of Science in business administration (BSBA) programs:

1. Knowledge-based educational Outcomes. Upon completion of the BSBA program, students should:

- Have a working knowledge of business administration that will aid them in private, government, or non-profit careers and/or prepare them for additional study

2. Values-based educational outcomes. Upon completion of the BSBA program, students should:

- Comprehend ethical issues and be able to apply an ethical decision-making framework to business decisions

3. Skills-based educational outcomes. Upon completion of the BSBA program. students should:

- Function effectively when in teams both as a leader and as a member
- Demonstrate effective oral communication skills
- Demonstrate effective written communication skills
- Apply quantitative and qualitative critical thinking skills to develop, access, and use information to analyze business problems and propose feasible solutions

Admission Requirements

Admission requirements to major programs within the College of Business are identical regardless of the location of the program. Students must first be accepted by the university and, if applicable, the university center which they plan to attend. Then, students must formally apply to the College of Business and be admitted to a College of Business Program prior to enrolling in 300- and 400-level courses within the college.

Students must attend a College of Business major orientation to be fully admitted to our majors. Applications are only accepted at new student orientations. The application form must be completed and returned to the appropriate office along with copies of current transcripts.

If a student has met the requirements of admission but has struggled to do so, the College of Business reserves the right to offer conditional admission status for up to 2 quarters and/or 30 credits in order for the student to demonstrate she/he will be successful. Final admission to the College of Business under these circumstances is not guaranteed.

Students must have the below requirements to be admitted to a College of Business major. Students seeking entry to the College without these requirements will be granted pre-major standing.

- Completion of 30 credits (If a student is a transfer student, credits must be transferable)
- The applicant must be in good academic standing
- 2.25 Collegiate GPA
- Completion of ENG 101 and ENG 102 with a C- or higher, or equivalent
- Attend a College of Business Orientation

International students whose native language is not English must meet one of the following English proficiency requirements:

- A score of 71 or above on the Internet-based TOEFL or 525 or above on the paper-based TOEFL (195 for computer based, 71 for internet based), OR
- A score of 6.0 or above on the International English Language Testing System (IELTS) exam, OR
- A 3.0 (B grade) or above in each two college-level English composition courses from an accredited United States college or university. Contact the Office of Admissions to find out what courses are acceptable.

Students who have met all of the above requirements will be admitted unless the number of applicants exceeds available space. In that case, acceptance will be competitive, based on a selection index.

Previous or Transfer Coursework Policy
Business courses taken to fulfill the requirements for an undergraduate or graduate degree from the CWU College of Business must have been taken within the last 10 years at the time of graduation. Exceptions may be made, but must be approved prior to acceptance into the College of Business by the department chair and dean or designee.

Students wishing to have credits from non-United States institutions considered for transfer into the College of Business for any major or minor must have their transcripts evaluated through outside credential evaluators who are members of the National Association of Credential Evaluation Services (NACES), such as the Foundation for International Services (FIS), the World Education Service (WES), or Educational Perspectives. Students who intend to pursue the CPA may instead decide to use the NABSA (National Association of State Boards of Accountancy) international evaluation services since it is a requirement of the CPA. Credits for current students participating in a CWU study abroad program will be evaluated by the Office of the Registrar.

Equivalent lower-division (100-200 level) courses may be transferred toward meeting the foundation course requirements for any BS degree in the college. Upper-division (300-400 level) courses may be transferred toward meeting the major requirements only with the approval of the department chair and the college dean (or designee).

Academic Jeopardy Policy
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- On academic warning or probation
- Frequently withdraws from class
- Repeating coursework to be successful
- Has less that a 2.5 (2.499 and below) in any of the required GPAs for graduation.
    - CWU GPA
    - Collegiate GPA (CWU and all transfer coursework combined)
    - Major GPA
    - Upper-division coursework in the major GPA
    - Accounting majors: upper-division Accounting coursework GPA

The College of Business may do the following in response to an Academic Jeopardy situation:

- Limit College of Business coursework in future quarters
- Require academic advising with both faculty and/or professional advisors
- Require academic success plans
- Double majors or double specialization students may be limited to one major plan in the College of Business

If a student is unable to improve academically while receiving intensive advising and support or does not actively participate in required advising, the student may be subjected to the College of Business Separation Policy.

Separation Policy
If a student that has been admitted to the College of Business is placed on academic probation, suspension, received multiple academic warnings, has repeat academic course withdrawals, or whose academic performance is below the necessary grade point averages required to graduate, then the student's admission into the College of Business may be rescinded. Once rescinded, the student will be denied readmission to the College of Business for one year following which a written petition for readmission must be presented at least 30 days prior to the start of the quarter in which readmission is desired. The decision to readmit will be based on meeting current admission standards, analysis of the entire academic record, as well as any other sources of information deemed appropriate. Readmission is not guaranteed.

Service to Other Majors
Students majoring in programs outside CB who are required to take courses in this college for either their major or minor will be eligible to enroll on a space-available basis. These students will be given priority over other non-college majors wishing to enroll in courses. All students must have taken prerequisites for courses prior to enrollment.

Transfer Credits and Prior Learning Assessment
Equivalent lower-division (100-200 level) courses may be transferred toward meeting the pre-admission requirements. Upper-division (300- to 400-level) courses may also be transferred toward meeting the business core and specialization requirements, but only with the approval of the department chair and the college dean (or designee).

Repeat Policy
Business administration courses may be repeated only once.

Additional BSBA Graduation Requirements
The following special rules apply to students seeking the BSBA major:

- Students must earn a minimum cumulative GPA of 2.25 in the 99- to 100-credit in-the-major coursework to be eligible for a degree. In addition, the department requires a minimum GPA of 2.25 in the 59- to 60-credit upper-division component of the in-the-major total.
- Transfer students must complete at least 40 College of Business credits at CWU to be eligible for the BSBA degree, including MGT 489. Additionally, students seeking a Human Resource Management specialization must complete HRM 486 at CWU and students seeking a Marketing specialization must complete MKT 470 at CWU.

- The BSBA program requires a single specialization of at least 25 credits. Occasionally a student requests a second specialization. To be eligible for a second specialization, a minimum of 20 unique credits must be completed. Unique in this sense means the credits have not been used as part of any other BSBA specialization.

BSBA, General Business Specialization

College of Business Admission Requirements

Admission Requirements
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Students must attend a College of Business major orientation to be fully admitted to our majors. Applications are only accepted at new student orientations. The application form must be completed and returned to the appropriate office along with copies of current transcripts.

If a student has met the requirements of admission but has struggled to do so, the College of Business reserves the right to offer conditional admission status for up to 2 quarters and/or 30 credits in order for the student to demonstrate she/he will be successful. Final admission to the College of Business under these circumstances is not guaranteed.

Students must have the below requirements to be admitted to a College of Business major. Students seeking entry to the College without these requirements will be granted pre-major standing.

- Completion of 30 credits (If a student is a transfer student, credits must be transferable)
- The applicant must be in good academic standing
- 2.25 Collegiate GPA
- Completion of ENG 101 and ENG 102 with a C- or higher, or equivalent
- Attend a College of Business Orientation

International students whose native language is not English must meet one of the following English proficiency requirements:

- A score of 71 or above on the Internet-based TOEFL or 525 or above on the paper-based TOEFL (195 for computer based, 71 for internet based), OR
- A score of 6.0 or above on the International English Language Testing System (IELTS) exam, OR
- A 3.0 (B grade) or above in each two college-level English composition courses from an accredited United States college or university. Contact the Office of Admissions to find out what courses are acceptable.

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- Double majors or double specialization students may be limited to one major plan in the College of Business

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Separation Policy
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Repeat Policy
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Additional BSBA Graduation Requirements
The following special rules apply to students seeking the BSBA major:

- Students must earn a minimum cumulative GPA of 2.25 in the 99-to 100- credit in-the-major coursework to be eligible for a degree. In addition, the Department requires a minimum GPA of 2.25 in the 59- to 60-credit upper-division component of the in-the-major total.
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- The BSBA program requires a single specialization of at least 25 credits. Occasionally a student requests a second specialization. To be eligible for a second specialization, a minimum of 20 unique credits must be completed. Unique in this sense means the credits have not been used as part of any other BSBA specialization.

College of Business Curriculum
The College of Business Curriculum is divided into 4 tiers: foundation courses, core courses, major/specialization courses, and capstone. Students completing foundation courses may enroll in core courses so long as course pre-requisites are met. All foundation courses must be complete with a minimum grade of C- and a collegiate GPA of 2.25 or higher prior to a student enrolling in major courses. Students completing foundations courses may enroll in major courses so long as course pre-requisites are met. In order to enroll in the capstone course, students must complete all core courses with a minimum grade of C- and have a collegiate GPA of 2.25 or higher. Core,

major/specialization, and capstone courses all require admission to a College of Business major.

Business Foundation Courses

- ACCT 251 - Financial Accounting **Credits:** (5)
- ACCT 252 - Managerial Accounting **Credits:** (5)
- BUS 221 - Introductory Business Statistics **Credits:** (5)
- BUS 241 - Legal Environment of Business **Credits:** (5)
- ECON 201 - Principles of Economics Micro **Credits:** (5)
- ECON 130 - Foundations for Business Analytics **Credits:** (5)
- **OR** MATH 130 - Finite Mathematics **Credits:** (5)

Select one of the following: 5 credits

- MATH 153 - Pre-Calculus Mathematics I **Credits:** (5)
- MATH 154 - Pre-Calculus Mathematics II **Credits:** (5)
- MATH 170 - Intuitive Calculus **Credits:** (5)
- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)

Foundation Total Credits: 35

Business Core Courses

- BUS 301 - Contemporary Issues in Management **Credits:** (3)
- **OR** MGT 200 - Essential Skills for Business Professionals **Credits:** (5)
- ECON 202 - Principles of Economics Macro **Credits:** (5)
- FIN 370 - Introductory Financial Management **Credits:** (5)
- MGT 382 - Principles of Management **Credits:** (5)
- MIS 386 - Management Information Systems **Credits:** (5)
- MKT 362 - Essential Marketing Concepts **Credits:** (5)
- SCM 310 - Supply Chain Management **Credits:** (5)

Select one of the following: 4-5 credits

- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- COM 345 - Business and Professional Speaking **Credits:** (4)
- ENG 310 - Technical Writing **Credits:** (4)

Business Core Total Credits: 37-40

General Business Specialization Courses

This specialization is intended for the student who wishes to tailor a "unique" set of specialization courses to his or her needs or for the student who desires a broad-based "generalist" track within the business administration major. Twenty-five upper division elective credits are required including at least 20 credits must be business (BUS), finance (FIN), human resource management (HRM), management (MGT), and marketing (MKT), management information systems (MIS), or supply chain management (SCM) courses. The remaining five credits may be accounting (ACCT) or economics (ECON). The student is limited to 10 credits from any one area and the specialization must include at least 10 credits of 400-level courses, which cannot include BUS 490 as any of the 10 credits at the 400-level. No more than 5 credits of the specialization may be BUS 490.

Total Specialization Credits: 25

College of Business Capstone

- MGT 489 - Strategic Management **Credits:** (5)

Capstone Total Credits: 5

Total Credits: 102-105

BSBA, Human Resource Management Specialization

Advisors:
James Avey, PhD
Bryan Deptula, PhD
Wendy Cook, PhD
Nancy Graber Pigeon, JD
Erica Holley, PhD
Chase Thiel, PhD
Todd Weber, PhD

Students pursuing the HRM specialization will deal with fundamental organizational processes that must be developed and managed for continuous improvement by both HR specialists and by all managers in general. Thus, the study of HR takes on a dual emphasis. First, by pursuing an HR specialization, students will be thoroughly trained to focus decision-making as it pertains to the acquisition, utilization, development and retention

of employees. Alternatively, the study of HRM is also applicable as a strong supplement to other specializations or majors.

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Business administration courses may be repeated only once.

Additional BSBA Graduation Requirements

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College of Business Curriculum

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Business Foundation Courses

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Foundation Total Credits: 35

Business Core Courses

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Select one of the following: 4-5 credits

- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- COM 345 - Business and Professional Speaking **Credits:** (4)
- ENG 310 - Technical Writing **Credits:** (4)

Business Core Total Credits: 37-40

Human Resource Management Specialization Courses

Required Courses

- HRM 381 - Management of Human Resources **Credits:** (5)
- HRM 486 - Problems in Human Resource Management **Credits:** (5)

Select 15 credits from the following:

- BUS 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 5 credits)
- ECON 355 - Economics of Labor **Credits:** (5)
- HRM 442 - Training and Development **Credits:** (5)
- HRM 445 - Organizational Staffing **Credits:** (5)
- HRM 479 - Employee Relations **Credits:** (5)
- HRM 488 - Compensation Policy and Administration **Credits:** (5)
- MGT 386 - Principles of Organizational Behavior **Credits:** (5)

Total Specialization Credits: 25

College of Business Capstone

- MGT 489 - Strategic Management **Credits:** (5)

Capstone Total Credits: 5

Total Credits: 102-105

BSBA, Leadership and Management Specialization

Advisors:
James Avey, PhD
Wendy Cook, PhD
Bryan Deptula, PhD
Erica Holley, PhD
William Provaznik, PhD
Chase Thiel, PhD
Todd Weber, PhD
Keke Wu, PhD

The leadership and management specialization emphasizes building the skills, insights and knowledge that professionals need to succeed in a business context. Students will improve their ability to manage themselves as well as influence others as they learn to identify valuable goals and work to reach them. Courses will feature relevant concepts and theories and present opportunities to deploy this knowledge in practical situations to build a solid foundation of leadership and management ability. The program is designed to give students a portfolio of established and cutting-edge principles to draw from over their career.

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Business Foundation Courses

- ACCT 251 - Financial Accounting **Credits:** (5)
- ACCT 252 - Managerial Accounting **Credits:** (5)
- BUS 221 - Introductory Business Statistics **Credits:** (5)
- BUS 241 - Legal Environment of Business **Credits:** (5)
- ECON 201 - Principles of Economics Micro **Credits:** (5)
- ECON 130 - Foundations for Business Analytics **Credits:** (5)
- **OR** MATH 130 - Finite Mathematics **Credits:** (5)

Select one of the following: 5 credits

- MATH 153 - Pre-Calculus Mathematics I **Credits:** (5)
- MATH 154 - Pre-Calculus Mathematics II **Credits:** (5)
- MATH 170 - Intuitive Calculus **Credits:** (5)
- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)

Foundation Total Credits: 35

Business Core Courses

- BUS 301 - Contemporary Issues in Management **Credits:** (3)

- **OR** MGT 200 - Essential Skills for Business Professionals **Credits:** (5)
- ECON 202 - Principles of Economics Macro **Credits:** (5)
- FIN 370 - Introductory Financial Management **Credits:** (5)
- MGT 382 - Principles of Management **Credits:** (5)
- MIS 386 - Management Information Systems **Credits:** (5)
- MKT 362 - Essential Marketing Concepts **Credits:** (5)
- SCM 310 - Supply Chain Management **Credits:** (5)

Select one of the following: 4-5 credits

- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- COM 345 - Business and Professional Speaking **Credits:** (4)
- ENG 310 - Technical Writing **Credits:** (4)

Business Core Total Credits: 37-40

Leadership and Management Specialization Courses

Required Courses

- MGT 386 - Principles of Organizational Behavior **Credits:** (5)
- MGT 395 - Leadership in Business Organizations **Credits:** (5)
- MGT 478 - Leadership Capstone **Credits:** (5)
- MGT 483 - Decision Making and Organizational Change **Credits:** (5)

Select 15 credits from the following:

- BUS 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 5 credits)
- MGT 477 - Global Leadership and Culture **Credits:** (5)
- MGT 482 - Advanced Organizational Behavior **Credits:** (5)
- MGT 484 - International Management **Credits:** (5)
- MGT 487 - Entrepreneurism and Small Business Management **Credits:** (5)
- SCM 425 - Procurement and Supply Management **Credits:** (5)

Total Specialization Credits: 25

College of Business Capstone

- MGT 489 - Strategic Management **Credits:** (5)

Capstone Total Credits: 5

Total Credits: 102-105

BSBA, Marketing Management Specialization

Advisors:
Jim Beaghan, DBA
Peter Boyle, PhD
Sayantani Mukherjee, PhD
Mark Pritchard, PhD
Jeffrey Stinson, PhD
Theresa Wilson, PhD

The marketing curriculum provides background for careers in sales, advertising, marketing management, research, analysis, and retail management. Marketing topics include researching and analyzing consumers, market demand, pricing, product distribution, and development, and communication in order to develop marketing strategies and policies. Students must earn a C or higher in all required marketing management specialization courses.

College of Business Admission Requirements

Admission Requirements
Admission requirements to major programs within the College of Business are identical regardless of the location of the program. Students must first be accepted by the university and, if applicable, the university center which they plan to attend. Then, students must formally apply to the College of Business and be admitted to a College of Business Program prior to enrolling in 300- and 400-level courses within the college.

Students must attend a College of Business major orientation to be fully admitted to our majors. Applications are only accepted at new student orientations. The application form must be completed and returned to the appropriate office along with copies of current transcripts.

If a student has met the requirements of admission but has struggled to do so, the College of Business reserves the right to offer conditional admission status for up to 2 quarters and/or 30 credits in order for the student to demonstrate she/he will be successful. Final admission to the College of Business under these circumstances is not guaranteed.

Students must have the below requirements to be admitted to a College of Business major. Students seeking entry to the College without these requirements will be granted pre-major standing.

- Completion of 30 credits (If a student is a transfer student, credits must be transferable)
- The applicant must be in good academic standing
- 2.25 Collegiate GPA
- Completion of ENG 101 and ENG 102 with a C- or higher, or equivalent
- Attend a College of Business Orientation

International students whose native language is not English must meet one of the following English proficiency requirements:

- A score of 71 or above on the Internet-based TOEFL or 525 or above on the paper-based TOEFL (195 for computer based, 71 for internet based), OR
- A score of 6.0 or above on the International English Language Testing System (IELTS) exam, OR
- A 3.0 (B grade) or above in each two college-level English composition courses from an accredited United States college or university. Contact the Office of Admissions to find out what courses are acceptable.

Students who have met all of the above requirements will be admitted unless the number of applicants exceeds available space. In that case, acceptance will be competitive, based on a selection index.

Previous or Transfer Coursework Policy

Business courses taken to fulfill the requirements for an undergraduate or graduate degree from the CWU College of Business must have been taken within the last 10 years at the time of graduation. Exceptions may be made, but must be approved prior to acceptance into the College of Business by the department chair and dean or designee.

Students wishing to have credits from non-United States institutions considered for transfer into the College of Business for any major or minor must have their transcripts evaluated through outside credential evaluators who are members of the National Association of Credential Evaluation Services (NACES), such as the Foundation for International Services (FIS), the World Education Service (WES), or Educational Perspectives. Students who intend to pursue the CPA may instead decide to use the NABSA (National Association of State Boards of Accountancy) international evaluation services since it is a requirement of the CPA. Credits for current students participating in a CWU study abroad program will be evaluated by the Office of the Registrar.

Equivalent lower-division (100-200 level) courses may be transferred toward meeting the foundation course requirements for any BS degree in the college. Upper-division (300-400 level) courses may be transferred toward meeting the major requirements only with the approval of the department chair and the college dean (or designee).

Academic Jeopardy Policy

The College of Business is committed to the success of its students. If a student that has been admitted to the College of Business is deemed to be in academic jeopardy, the College of Business may place restrictions on the student. A student is considered in academic jeopardy for the following reasons:

- On academic warning or probation
- Frequently withdraws from class
- Repeating coursework to be successful
- Has less that a 2.5 (2.499 and below) in any of the required GPAs for graduation.
    - CWU GPA
    - Collegiate GPA (CWU and all transfer coursework combined)
    - Major GPA
    - Upper-division coursework in the major GPA
    - Accounting majors: upper-division Accounting coursework GPA

The College of Business may do the following in response to an Academic Jeopardy situation:

- Limit College of Business coursework in future quarters
- Require academic advising with both faculty and/or professional advisors
- Require academic success plans
- Double majors or double specialization students may be limited to one major plan in the College of Business

If a student is unable to improve academically while receiving intensive advising and support or does not actively participate in required advising, the student may be subjected to the College of Business Separation Policy.

Separation Policy

If a student that has been admitted to the College of Business is placed on academic probation, suspension, received multiple academic warnings, has repeat academic course withdrawals, or whose academic performance is below the necessary grade point averages required to graduate, then the student's admission into the College of Business may be rescinded. Once rescinded, the student will be denied readmission to the College of Business for one year following which a written petition for readmission must be presented at least 30 days prior to the start of the quarter in which readmission is desired.

The decision to readmit will be based on meeting current admission standards, analysis of the entire academic record, as well as any other sources of information deemed appropriate. Readmission is not guaranteed.

Service to Other Majors
Students majoring in programs outside CB who are required to take courses in this college for either their major or minor will be eligible to enroll on a space-available basis. These students will be given priority over other non-college majors wishing to enroll in courses. All students must have taken prerequisites for courses prior to enrollment.

Repeat Policy
Business administration courses may be repeated only once.

Additional BSBA Graduation Requirements
The following special rules apply to students seeking the BSBA major:

- Students must earn a minimum cumulative GPA of 2.25 in the 99-to 100- credit in-the-major coursework to be eligible for a degree. In addition, the Department requires a minimum GPA of 2.25 in the 59- to 60-credit upper-division component of the in-the-major total.
- Transfer students must complete at least 40 College of Business credits at CWU to be eligible for the BSBA degree including MGT 489. Additionally, students seeking a human resource management specialization must complete HRM 486 at CWU and students seeking a marketing specialization must complete MKT 470 at CWU.
- The BSBA program requires a single specialization of at least 25 credits. Occasionally a student requests a second specialization. To be eligible for a second specialization, a minimum of 20 unique credits must be completed. Unique in this sense means the credits have not been used as part of any other BSBA specialization.

College of Business Curriculum
The College of Business Curriculum is divided into 4 tiers: foundation courses, core courses, major/specialization courses, and capstone. Students completing foundation courses may enroll in core courses so long as course pre-requisites are met. All foundation courses must be complete with a minimum grade of C- and a collegiate GPA of 2.25 or higher prior to a student enrolling in major courses. Students completing foundations courses may enroll in major courses so long as course pre-requisites are met. In order to enroll in the capstone course, students must complete all core courses with a minimum grade of C- and have a collegiate GPA of 2.25 or higher. Core, major/specialization, and capstone courses all require admission to a College of Business major.

Business Foundation Courses

- ACCT 251 - Financial Accounting **Credits:** (5)
- ACCT 252 - Managerial Accounting **Credits:** (5)
- BUS 221 - Introductory Business Statistics **Credits:** (5)
- BUS 241 - Legal Environment of Business **Credits:** (5)
- ECON 201 - Principles of Economics Micro **Credits:** (5)
- ECON 130 - Foundations for Business Analytics **Credits:** (5)
- **OR** MATH 130 - Finite Mathematics **Credits:** (5)

Select one of the following: 5 credits

- MATH 153 - Pre-Calculus Mathematics I **Credits:** (5)
- MATH 154 - Pre-Calculus Mathematics II **Credits:** (5)
- MATH 170 - Intuitive Calculus **Credits:** (5)
- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)

Foundation Total Credits: 35

Business Core Courses

- BUS 301 - Contemporary Issues in Management **Credits:** (3)
- **OR** MGT 200 - Essential Skills for Business Professionals **Credits:** (5)
- ECON 202 - Principles of Economics Macro **Credits:** (5)
- FIN 370 - Introductory Financial Management **Credits:** (5)
- MGT 382 - Principles of Management **Credits:** (5)
- MIS 386 - Management Information Systems **Credits:** (5)
- MKT 362 - Essential Marketing Concepts **Credits:** (5)
- SCM 310 - Supply Chain Management **Credits:** (5)

Select one of the following: 4-5 credits

- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- COM 345 - Business and Professional Speaking **Credits:** (4)

- ENG 310 - Technical Writing **Credits:** (4)

Business Core Total Credits: 37-40

Marketing Management Specialization Courses

Required Courses

- MKT 468 - Consumer Behavior **Credits:** (5)
- MKT 469 - Market Research **Credits:** (5)
- MKT 470 - Marketing Problems and Policy **Credits:** (5)

Select a minimum of 10 credits from the following:

- BUS 490 - Cooperative Education **Credits:** (1-12) (May be taken for 1-6 credits)
- ECON 310 - International Economics **Credits:** (5)
- MKT 364 - Marketing Promotion Management **Credits:** (5)
- MKT 365 - International Marketing **Credits:** (5)
- MKT 370 - Sports Marketing and Sponsorship **Credits:** (5)
- MKT 371 - Sponsorship and Promotion in Sport Business **Credits:** (5)
- MKT 372 - Revenue Generation and Finance in Sport Business **Credits:** (5)
- MKT 376 - Foundations of Digital Marketing **Credits:** (5)
- MKT 476 - Advanced Digital Marketing **Credits:** (5)

Total Specialization Credits: 25

College of Business Capstone

- MGT 489 - Strategic Management **Credits:** (5)

Capstone Total Credits: 5

Total Credits: 102-105

Business Minor

The business minor provides students with an introduction to several key areas of business administration. Business minors are only available to students with declared majors. Declaration forms with instructions, are available online and, in department and center offices. Students must earn a cumulative grade point average of 2.25 in courses allowed in fulfilling the business administration minor requirements.

Business Minor Core

Required Courses

- ACCT 252 - Managerial Accounting **Credits:** (5)
- **OR** ACCT 301 - Financial Accounting Analysis **Credits:** (5)
- BUS 241 - Legal Environment of Business **Credits:** (5)
- BUS 374 - Personal Investments **Credits:** (5)
- **OR** ECON 201 - Principles of Economics Micro **Credits:** (5)
- HRM 381 - Management of Human Resources **Credits:** (5)
- MKT 360 - Principles of Marketing **Credits:** (5)
- MGT 380 - Organizational Management **Credits:** (5)

Total Credits: 30

Human Resource Management Minor

Advisors:
James Avey, PhD
Wendy Cook, PhD
Bryan Deptula, PhD
Nancy Graber Pigeon, JD
Erica Holley, PhD
Chase Thiel, PhD
Todd Weber, PhD

The human resource management minor is designed to augment the student's undergraduate degree with a focused examination of the role of human resources in business operations. Students will explore the application of training and development, staffing and employee relations, and test development issues as they apply specifically to the role of human resource managers. Students will take a sampling of courses offered as a part of the College of Business' Human Resource Specialization, as well as business-relevant, organizational psychology courses. The human resource management minor will provide curriculum to prepare students for a career in human resource management as generalists, specialists and managers.

Required Courses Credits: 9

- HRM 381 - Management of Human Resources **Credits:** (5)
- PSY 456 - Industrial and Organizational Psychology **Credits:** (4)

Elective Courses (choose 3 of the possible 4) Credits: 14-15

- HRM 442 - Training and Development **Credits:** (5)
- HRM 445 - Organizational Staffing **Credits:** (5)
- HRM 479 - Employee Relations **Credits:** (5)
- PSY 444 - Tests and Measurements **Credits:** (4)

Total Credits: 23-24

Sport Business Minor

Advisors
Mark Pritchard, PhD
Jeffrey Stinson, PhD

The sport business minor is designed to augment the student's undergraduate degree with a focused examination of the sport business industry. Student's will explore the application of marketing, management, law, finance and other business principles as they apply specifically to the sport industry. The sport certificate will provide curriculum to prepare students for a career in corporate, professional, intercollegiate or amateur sport organizations.

Students must achieve a C- or higher in all courses to earn the Sport Business Minor.

Required Courses Credits: 15

- MGT 380 - Organizational Management **Credits:** (5)
- MGT 382 - Principles of Management **Credits:** (5)
- MKT 360 - Principles of Marketing **Credits:** (5)
- MKT 362 - Essential Marketing Concepts **Credits:** (5)
- MKT 370 - Sports Marketing and Sponsorship **Credits:** (5)

Electives Courses: Choose a minimum of 15 credits from the following: Credits: 15-16

- BUS 401 - Business Boot Camp **Credits:** (1)
- MGT 394 - Legal Considerations in Sport Business **Credits:** (5)
- MGT 395 - Leadership in Business Organizations **Credits:** (5)
- MKT 371 - Sponsorship and Promotion in Sport Business **Credits:** (5)
- MKT 372 - Revenue Generation and Finance in Sport Business **Credits:** (5)

Total Credits: 30-31

Sport Business Certificate

Advisors
Mark Pritchard, PhD
Jeffrey Stinson, PhD

The sport business certificate is designed to augment the student's College of Business degree with a focused examination of the sport business industry. Students will explore the application of marketing, management, law, finance, and other business principles as they apply specifically to the sport industry. The sport certificate will provide curriculum to prepare students for a career in corporate, professional, intercollegiate or amateur sport organizations.

Students must achieve a C- or higher in all courses to earn the sport business certificate.

Required Courses Credits: 15

- MGT 380 - Organizational Management **Credits:** (5)
- **OR** MGT 382 - Principles of Management **Credits:** (5)
- MKT 360 - Principles of Marketing **Credits:** (5)
- **OR** MKT 362 - Essential Marketing Concepts **Credits:** (5)
- MKT 370 - Sports Marketing and Sponsorship **Credits:** (5)

Electives Courses: Choose a minimum of 15 credits from the following: Credits: 15-16

- MGT 394 - Legal Considerations in Sport Business **Credits:** (5)
- MGT 395 - Leadership in Business Organizations **Credits:** (5)
- MKT 371 - Sponsorship and Promotion in Sport Business **Credits:** (5)
- MKT 372 - Revenue Generation and Finance in Sport Business **Credits:** (5)
- BUS 401 - Business Boot Camp **Credits:** (1)

Total Credits: 30-31

Mathematics Department

College of the Sciences
Ellensburg
Bouillon Hall, room 108
Mail Stop 7424
509-963-2103
Fax: 509-963-3226
www.cwu.edu/math
See website for how these programs may be used for educational and career purposes.

Faculty and Staff
Chair
Aaron Montgomery, PhD

Professors
Stuart F. Boersma, PhD, differential geometry, general relativity
Yvonne Chueh, PhD, actuarial science, statistics
Timothy Englund, PhD, group theory, representation theory, statistics
James D. Harper, PhD, harmonic analysis
Scott M. Lewis, PhD, mathematics education, history of mathematics
Cen-Tsong Lin, PhD, probability and mathematical statistics, actuarial science
Michael Lundin, PhD, mathematics education
Aaron Montgomery, PhD, topology, algebra
Mark Oursland, EdD, mathematics education

Associate Professors
James Bisgard, PhD, analysis
Christine Black, PhD, mathematics education
Jonathan Fassett, PhD, topology, dynamical systems
Dominic Klyve, PhD, computational number theory, history of mathematics, statistics
Kathryn Temple, PhD, actuarial science, probability
Teri Willard, EdD, mathematics education

Assistant Professor
Jean Marie Linhart, PhD, applied mathematics
Janet Shiver, PhD, mathematics education
Brandy Wiegers, PhD, applied mathematics

Senior Lecturers
Richard Trudgeon, MA, administration and curriculum
Dale Width, MA, history

Lecturers
Molly Andaya, MAT, mathematics
Tim Brown, MAT, mathematics
Danielle Jacobson, MAT, mathematics
Jim Miller, MAT, mathematics
Thad O'Dell, MAT, mathematics
Stephen Stein, PhD, educational administration
Tyler Suronen, MS, mathematics
Frank Underdown, PhD, physics
Drewcilla Walter, MS, mathematics

Staff
Brenda Bland, secretary

Department Information
Mathematics is an expanding and evolving body of knowledge as well as a way of perceiving, formulating, and solving problems in many disciplines. The subject is a constant interplay between the worlds of thought and application. The student of mathematics will find worthy challenges and the subsequent rewards in meeting them.

The general student will find preparatory courses in pre-calculus mathematics and traditional mathematics courses such as calculus, linear algebra, geometry, abstract algebra, and analysis. Also, more specialized courses in discrete mathematics, number theory, and the history of mathematics are offered. Special needs of computer science majors, elementary education majors, and general education requirements are also met by courses in the mathematics department.

For those desiring concentrated work in mathematics, the mathematics department offers four programs leading to bachelor's degrees. A Bachelor of Arts or Bachelor of Science in mathematics prepares the student as a mathematician for industry or graduate work. A bachelor of arts in secondary teaching prepares the student to teach at the junior, middle, or high school levels. A bachelor of science in mathematics with an actuarial science specialization prepares the student to work as an actuary or in applied statistics. A mathematics minor and a secondary teaching minor are also available.

One graduate degree is offered: the Master of Arts for teachers. This is described in the graduate section of the catalog.

All programs (major, minor, including electives) must be on file and approved by the department at least one academic year preceding graduation.

Admission and Placement Notes
1. Enrollment in MATH 100C, MATH 101, MATH 102, MATH 130, and MATH 164 requires a satisfactory score on one of the following tests: SAT, ACT, COMPASS Test, or the Intermediate Assessment Test. The scores on the SAT or ACT tests must have been achieved within the last three years before math placement. The student with insufficient test scores is encouraged to enroll in developmental classes. For more information drop by the

Math Center in Hertz Hall, room 101 or call 509-963-1834.

2. Students who wish to enroll in pre-calculus (MATH 153 or MATH 154) or calculus (MATH 170 or MATH 172) and who have not had the necessary prerequisite course at a college or university must take the mathematics placement test. Students will be placed in accordance with their results on this test as determined by the mathematics department. Students may be placed into pre-calculus I (MATH 153) if they received a B or better in a one-year high school calculus course. See the mathematics department for more details.

3. Admission to any mathematics course having prerequisites requires either a suitable math placement test score or a grade of 2.0 or better in each listed prerequisite to that course.

Admission Requirements for Mathematics Teaching Secondary Program
Admission to the mathematics teaching secondary major or certificate program is selective. A cumulative grade point average of 2.50 is required in the pre-admission courses listed below. Further, students must successfully complete MATH 272 and MATH 265 by spring quarter of the academic year of their acceptance into the program. A completed application must include the standard major application form and a mathematics-advisor-approved graduation plan.

Students planning to major or take the certificate in secondary mathematics teaching must first take MATH 172, MATH 173, MATH 265, and MATH 272; be accepted as a mathematics education major or accepted into the certificate program; and be preliminary accepted into the Professional Education Program to enroll in MATH 299E, Orientation Seminar: Secondary Mathematics, fall quarter.

Students interested in the Secondary Mathematics Teaching Program need to meet with a mathematics education advisor during their first quarter at CWU. Students taking this major are required to complete the Professional Education Program with the exception of EFC 315, EFC 330, EFC 340, EFC 350, and EFC 416 (37 total credits required).

Pre-admission Requirements

Applicants for admission into the Secondary Mathematics Teaching Program:

1. Must have completed English and Math basic skills courses or have completed an AA degree.

2. Must have completed MATH 272 and MATH 265, with a grade of C or better, before enrolling MATH 299E.

3. Must be preliminarily accepted into the Professional Education Program.

Admission Requirements for Mathematics Major and Minor
Admission to any major in the mathematics department will be considered after the first two quarters of calculus are taken (MATH 172 and MATH 173). Transfer students with the calculus background will generally take and successfully complete (2.0 or higher) 10 hours of math beyond calculus to be admitted to a major. Application forms are available from the mathematics department office. Students must meet with an advisor in the mathematics department before being considered for major or minor. In addition, students must earn a minimum grade of C in any course that fulfills a major or minor requirement.

Mathematics: Teaching Secondary Major, BA

This major satisfies the endorsement for mathematics. Students taking this major are required to complete the Professional Education Program requirements offered through the Department of Educational Foundations and Curriculum.

Admission Requirements for Mathematics Teaching Secondary Program
Admission to the mathematics teaching secondary major or certificate program is selective. A cumulative grade point average of 2.50 is required in the pre-admission courses listed below. Further, students must successfully complete MATH 272 and MATH 265 by spring quarter of the academic year of their acceptance into the program. A completed application must include the standard major application form and a mathematics-advisor-approved graduation plan.

Students planning to major or take the certificate in secondary mathematics teaching must first take MATH 172, MATH 173, MATH 265, and MATH 272; be accepted as a mathematics education major or accepted into the certificate program; and be preliminary accepted into the Professional Education Program to enroll in MATH 299E, Orientation Seminar: Secondary Mathematics, fall quarter.

Students interested in the Secondary Mathematics Teaching Program need to meet with a mathematics education advisor during their first quarter at CWU. Students taking this major are required to complete the Professional Education Program with the exception of EFC

315, EFC 330, EFC 340, EFC 350, and EFC 416 (37 total credits required).

Pre-admission Requirements

Applicants for admission into the Secondary Mathematics Teaching Program:

1. Must have completed English and Math basic skills courses or have completed an AA degree.

2. Must have completed MATH 272 and MATH 265, with a grade of C or better, before enrolling MATH 299E.

3. Must be preliminarily accepted into the Professional Education Program.

Endorsement for Teaching Secondary Mathematics
Students who are interested in adding secondary mathematics as a teaching endorsement or as a post-baccalaureate teacher certification program must see a mathematics education advisor for more information.

Required Courses

- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)
- MATH 260 - Sets and Logic **Credits:** (5)
- MATH 265 - Linear Algebra I **Credits:** (4)
- MATH 272 - Multivariable Calculus I **Credits:** (5)
- MATH 299E - Orientation Seminar: Secondary Mathematics **Credits:** (2)
- MATH 311 - Statistical Concepts and Methods **Credits:** (5)
- MATH 320 - History of Mathematics **Credits:** (3)
- MATH 322 - Assessment of Student Learning for Mathematics Teachers **Credits:** (5)
- MATH 324 - Methods and Materials in Mathematics-Secondary **Credits:** (5)
- MATH 325 - Instructional Practices for Teaching Mathematics **Credits:** (4)
- MATH 331 - Continuous Models **Credits:** (3)
- MATH 332 - Discrete Models **Credits:** (4)
- MATH 355 - College Geometry I **Credits:** (4)
- MATH 360 - Algebraic Structures I **Credits:** (3)
- MATH 361 - Algebraic Structures II **Credits:** (3)
- MATH 430 - Introduction to Theory of Numbers **Credits:** (3)
- MATH 455 - College Geometry II **Credits:** (3)
- MATH 499E - Senior Seminar: Secondary Mathematics **Credits:** (4)

Total Credits: 75

Middle-level Mathematics Teaching Major, BA

This major is designed for students who wish to teach mathematics at the middle-level (grades 5-9). The coursework provides experiences in math content and pedagogy including field experience. The major addresses the Washington State competencies for middle-level math teachers. Students must be accepted into the Teacher Preparation Program and have successfully completed MATH 102 and MATH 153 prior to acceptance into this major. Students completing this program are required to demonstrate knowledge, skill, and disposition proficiency through a program portfolio prior to student teaching. Students who complete this major and receive a passing score on the WEST-E exams for middle-level mathematics are eligible to receive the middle-level math endorsement.

Prerequisites

MATH 102 and MATH 153 and acceptance into the Teacher Preparation Program.

Total Prerequisites Credits: 10

Required Courses

- EDEL 477 - Middle School Students and Their Environment **Credits:** (4)
- EDEL 478 - Developmentally Responsive Curriculum in the Middle Grades **Credits:** (3)
- MATH 170 - Intuitive Calculus **Credits:** (5)
- MATH 216 - Number and Operations 2 **Credits:** (4)
- MATH 226 - Geometry and Measurement **Credits:** (4)
- MATH 306 - Middle-level Mathematics Standards Review **Credits:** (2)
- MATH 323 - Teaching Middle-level Mathematics **Credits:** (4)
- MATH 325 - Instructional Practices for Teaching Mathematics **Credits:** (4)
- MATH 405 - Probability and Statistics for Teachers **Credits:** (4)
- MATH 406 - Modern Algebra for Teachers **Credits:** (4)
- MATH 486 - Mathematical Modeling for Middle-level Teaching **Credits:** (4)

Total Required Courses Credits: 42

Total Credits: 52

Actuarial Science Major, BS

An actuary is a business professional who uses specialized skills from probability, statistics and economics to define, analyze, and solve financial and social problems. Actuaries create and manage insurance programs that reduce the adverse financial impact of both expected and unexpected events, such as illnesses, accidents, death, or catastrophes. In addition, actuaries design healthcare and pension plans, making sure there are sufficient resources to pay health and retirement benefits while charging participants a fair price. Actuaries are also in demand in the growing enterprise risk management field, helping companies analyze and hedge risks.

The Bachelor of Science in actuarial science is listed below and is designed to prepare a student in both the mathematics and business areas necessary for success in the rigorous but rewarding actuarial profession.

Required Courses

- ACCT 251 - Financial Accounting **Credits:** (5)
- CS 105 - The Logical Basis of Computing **Credits:** (4)
- **OR** CS 110 - Programming Fundamentals I **Credits:** (4)
- CS 367 - Advanced Visual Basic Programming **Credits:** (4)
- ECON 201 - Principles of Economics Micro **Credits:** (5)
- ECON 202 - Principles of Economics Macro **Credits:** (5)
- FIN 370 - Introductory Financial Management **Credits:** (5)
- FIN 475 - Investments **Credits:** (5)
- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)
- MATH 265 - Linear Algebra I **Credits:** (4)
- MATH 272 - Multivariable Calculus I **Credits:** (5)
- MATH 273 - Multivariable Calculus II **Credits:** (5)
- MATH 311 - Statistical Concepts and Methods **Credits:** (5)
- MATH 410A - Advanced Statistical Methods I **Credits:** (3)
- MATH 410B - Advanced Statistical Methods II **Credits:** (3)
- MATH 411A - Probability Theory **Credits:** (4)
- MATH 411B - Mathematical Statistics I **Credits:** (3)
- MATH 411C - Mathematical Statistics II **Credits:** (3)
- MATH 414 - Time Series Analysis **Credits:** (3)
- MATH 418A - Financial Mathematics I **Credits:** (3)
- MATH 418B - Financial Mathematics II **Credits:** (3)
- MATH 418C - Financial Mathematics III **Credits:** (3)
- MATH 440 - Mathematical Theory of Financial Economics **Credits:** (5)

Select one of the following sequences - Credits: 9

Loss Models

- MATH 417A - Loss Models I **Credits:** (3)
- MATH 417B - Loss Models II **Credits:** (3)
- MATH 417C - Loss Models III **Credits:** (3)
  OR

Actuarial Mathematics

- MATH 419A - Actuarial Mathematics I **Credits:** (3)
- MATH 419B - Actuarial Mathematics II **Credits:** (3)
- MATH 419C - Actuarial Mathematics III **Credits:** (3)

Total Credits: 104

Mathematics Major, BS (Large Plan)

Admission Requirements for Mathematics Major and Minor
Admission to any major in the mathematics department will be considered after the first two quarters of calculus are taken (MATH 172 and MATH 173). Transfer students with the calculus background will generally take and successfully complete (2.0 or higher) 10 hours of math beyond calculus to be admitted to a major. Application forms are available from the mathematics department office. Students must meet with an advisor in the mathematics department before being considered for major or minor. In addition, students must earn a minimum grade of C in any course that fulfills a major or minor requirement.

Required Courses

- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)
- MATH 260 - Sets and Logic **Credits:** (5)

- MATH 265 - Linear Algebra I **Credits:** (4)
- MATH 272 - Multivariable Calculus I **Credits:** (5)
- MATH 273 - Multivariable Calculus II **Credits:** (5)
- MATH 299S - Seminar - Math Major Orientation **Credits:** (4)
- MATH 314 - Probability and Statistics **Credits:** (5)
- MATH 335 - Combinatorics and Graph Theory **Credits:** (4)
- MATH 351 - Point Set Topology **Credits:** (4)
- MATH 365 - Linear Algebra II **Credits:** (4)
- MATH 371 - Advanced Calculus **Credits:** (4)
- MATH 376 - Differential Equations I **Credits:** (3)
- MATH 377 - Differential Equations II **Credits:** (3)
- MATH 461 - Abstract Algebra I **Credits:** (4)
- MATH 462 - Abstract Algebra II **Credits:** (4)
- MATH 471 - Advanced Analysis I **Credits:** (4)
- MATH 472 - Advanced Analysis II **Credits:** (4)
- MATH 499S - Senior Seminar **Credits:** (2)

Math Electives - Credits: 20

Electives Courses: 207, 320, 337, 372, 398, or any 400-level MATH course (excluding MATH 405, 406, 486, 490, 491, 499E). At most 4 credits total can be from MATH 207 and 407.

Total Credits: 98

Mathematics Major, BS (Small Plan)

The small plan major is intended primarily for students completing a double major.

Admission Requirements for Mathematics Major and Minor
Admission to any major in the mathematics department will be considered after the first two quarters of calculus are taken (MATH 172 and MATH 173). Transfer students with the calculus background will generally take and successfully complete (2.0 or higher) 10 hours of math beyond calculus to be admitted to a major. Application forms are available from the mathematics department office. Students must meet with an advisor in the mathematics department before being considered for major or minor. In addition, students must earn a minimum grade of C in any course that fulfills a major or minor requirement.

Required Courses

- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)
- MATH 260 - Sets and Logic **Credits:** (5)
- MATH 265 - Linear Algebra I **Credits:** (4)
- MATH 272 - Multivariable Calculus I **Credits:** (5)
- MATH 273 - Multivariable Calculus II **Credits:** (5)
- MATH 299S - Seminar - Math Major Orientation **Credits:** (4)
- MATH 335 - Combinatorics and Graph Theory **Credits:** (4)
- MATH 351 - Point Set Topology **Credits:** (4)
- MATH 365 - Linear Algebra II **Credits:** (4)
- MATH 371 - Advanced Calculus **Credits:** (4)
- MATH 499S - Senior Seminar **Credits:** (2)

At least two courses from the following - Credits: 8

- MATH 461 - Abstract Algebra I **Credits:** (4)
- MATH 462 - Abstract Algebra II **Credits:** (4)
- MATH 471 - Advanced Analysis I **Credits:** (4)
- MATH 472 - Advanced Analysis II **Credits:** (4)

Math Electives - Credits: 8

Electives Courses: 207, 320, 337, 372, 376, 377, 398, or any 400-level MATH course (excluding MATH 405, 406, 486, 490, 491, 499S). At most 4 credits total can be from MATH 207 and 407.

Applications of Math Electives - Credits: 6

Math department-approved electives in Application oriented courses, numbered 300 or higher (could be in Math, Physics, Econ, Finance, Chemistry, and Biology)

Total Credits: 73

Mathematics Minor

Required Courses

- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)

Electives

- At least 12 credits of electives in mathematics at the 200 level or above, which MUST include at least one of MATH 260 or MATH 265. **Credits:** (12)

Total Credits: 22

McNair Scholars Program

Undergraduate Studies and Research
Ellensburg
Hertz Hall, room 201
Mail Stop 7516
509-963-2869
www.cwu.edu/mcnair-scholars
See website for how these programs may be used for educational and career purposes

Director
Ian Buvit

Staff
Pam Nevar, PhD, faculty coordinator
Kristina Owens, program coordinator

Program Information
The Ronald E. McNair Scholars Program at CWU is funded by a grant from the Department of Education under the TRIO Programs.
This is an academically rigorous program, not a scholarship. The program is designed to provide underrepresented (low-income and first-generation, and/or ethnic minority) students with the training and opportunity to prepare for and successfully apply to graduate school programs. To this end, admitted scholars are required to complete graduate school preparation seminars. The goal of the program is for scholars to attain their doctorates and teach at universities.

A cornerstone of this program is the linking of scholars with faculty mentors. Students are expected to complete a summer research internship under the supervision of a research mentor. Scholars also have the option of a teaching internship during one academic quarter and/or pursuing a leadership development track during their second year as a McNair Scholar.

CWU students are encouraged to apply to the McNair Scholars Program as sophomores or juniors and are selected on the basis of their academic excellence, career objectives and faculty recommendations.

Admission Requirements
Students must meet the following eligibility requirements:

- Be a U.S. citizen or permanent resident;
- Be a low-income student who is also a first-generation college student; or must be a member of a group that is underrepresented in graduate education (African American, American Indian/Alaskan Native, Hispanic/Latino, or Native Hawaiian/Pacific Islander);
- Be currently enrolled as an undergraduate in a degree program at CWU
- Must have completed 90 quarter credits by the time you begin the McNair Scholars Program
- Must have at least one year remaining before graduation
- Must have a minimum cumulative GPA of 2.9 and a major GPA of at least 3.1
- Must express a desire to attain a PhD

Complete an application, complete with form, two letters of recommendation, and a personal statement. Application materials and deadlines are available on the program website.

Military Science Department

(Army Reserve Officers' Training Corps)

College of Education and Professional Studies
Ellensburg
Peterson Hall, room 202
Mail Stop 7569
509-963-3518
Fax 509-963-3588
www.cwu.edu/army
See website for how these programs may be used for educational and career purposes.

Faculty and Staff
Chair
LTC Scott W. Carpenter, infantry

Professor
LTC Scott W. Carpenter, MED, administration and leadership, BS, justice studies

Assistant Professors
MAJ Aaron R. Johnson, military intelligence, criminal justice
CPT Benjamin M. Glasgall, field artillery, BA, history
CPT Andrew S. Partin, armor, psychology

Instructors
MSG Kori J. Kvalevog, infantry
SFC Francisco J. H. Hinojos, air defense artillery

Staff
Kevin I. Bannister, GS, supply technician
David M. Mirro, GS, human resource technician
Angela Moore, program coordinator
Andrew Van Den Hoek, recruitment operations officer

Department Information
The Department of Military Science's courses are designed to prepare scholars, athletes, and junior leaders for commissioning in the U.S. Army. Students who complete the Military Science Program and meet commissioning requirements will be eligible for a commission as a second lieutenant in the U.S. Army, Army Reserve, or Army National Guard. The on-campus instructional program is designed to fit into the regular academic schedule of the university and is taught by Army professors and instructors.

The academic program consists of military science, leadership labs, and off-campus summer training. Academic studies include courses in basic military tactics, principles of leadership, officership, communication, personnel and logistics management, staff management procedures, physical conditioning, land navigation, and military law. Various training activities are scheduled each quarter to further familiarize the student with the ROTC Program.

Textbooks and uniform items are furnished through the Department of Military Science. The MSL 100 and MSL 200 classes are open to any student to explore their military interests and are non-contractual. Advancement to MSL 300 and MSL 400 courses to complete a minor in military science is by permission only.

Upon completion of the military science core (OPTION 1, 2, or 3; see below) requirements, leadership development and assessment course, and receipt of a bachelor's degree, students seeking an officer commission are able to select full-time employment (active Army) or part-time employment through the Army National Guard or the Army Reserve.

Additional information concerning the Military Science Program may be obtained by writing: Central Washington University, Military Science, Peterson Hall, 400 E. University Way, Ellensburg, Washington 98926-7569, stopping by the military science department in Peterson Hall, room 202, calling 509-963-3518, or by visiting the military science website at www.cwu.edu/~roo/.

Post Bachelor's Degree Fellowships: Graduating seniors may compete for several fully-funded Army graduate fellowships.

Transfer Students: Students transferring from other institutions, including community colleges considering entrance in the Military Science Program must make an appointment for a departmental interview for candidacy and scholarships.

Graduate Students: Graduate students interested in obtaining a commission as a second lieutenant should contact the Department of Military Science in Peterson Hall for academic planning and application.

Veterans: Veterans are encouraged to contact one of the military science academic advisors for information and outline of benefits available while participating in the ROTC program.

Scholarships: ROTC scholarships pay tuition and required fees. They're awarded on merit-academic achievements, extracurricular activities, and personal interviews. Four-, three- and two-year scholarships are available each academic year to qualified students. Applications can be obtained from the military science department.

Stipends: All fully contracted cadets receive a stipend ($300 freshman, $350 sophomore, $450 junior, $500 senior) for each academic month plus an allowance for books and other educational items. Non-scholarship students can receive the stipend as a contracted cadet during their last two years.

Special Training Opportunities: Summer training opportunities are through the Department of the Army Schools. The available schools include: airborne (parachute) training, air assault training, Northern Warfare School, and Special Forces. Additionally, Cadet Troop Leadership Training (CTLT) is also available to all cadets who have completed the military science minor core, been accepted in the military science minor, completed the MSL 301, 302, and 303 courses of study, and the leader development and assessment course. CTLT provides leadership experience in an active Army unit for two weeks prior to returning for the senior year of college study. CTLT is available in the U.S., Europe, and the Pacific Rim. Specialized training opportunities are by permission only.

Prerequisites for Advancement to the Military Science Minor

1. Admission into the MSL minor will be based upon an overall grade point average (GPA) of 2.5.
2. The department chair may admit a limited number of students with GPAs under 2.5.
3. Students seeking the military science minor must complete all application requirements prior to declaring military science as a minor.
4. Complete the core requirements with a GPA of 3.0 or higher.

5. The Department of Military Science reserves the right to modify these requirements in special cases.

Military Science Minor

Participation in this minor is contingent upon completion of the ROTC core (Option 1, 2 or 3) listed above and acceptance as a contracted student in the advanced course in the Army ROTC program. Application may be made at the military science department, Peterson Hall.

Military Science Minor Core

Option 1

No military obligation is incurred under Option 1 or Option 3.

Required Courses

- MSL 101 - Foundations of Officership **Credits:** (1)
- MSL 102 - Basic Leadership **Credits:** (2)
- MSL 103 - Advanced Leadership **Credits:** (2)
- MSL 201 - Individual Leadership Studies **Credits:** (2)
- MSL 202 - Leadership and Teamwork **Credits:** (2)
- MSL 211 - Land Navigation **Credits:** (2)

Military Science Core Total Credits: 11

Option 2

Required Courses

- Select 3 credits from the list of approved electives **Credits:** (3)
- MSL 292 - Leader's Training Course, Internship **Credits:** (8) (This course can be taken as non-credit)

Military Science Core Total Credits: 11

Option 3

No military obligation is incurred under Option 1 or Option 3.

Verification of completion of prior military service initial entry program. This option is by permission only. See department for further information.

Required Courses

- HIST 314 - Military History of the United States **Credits:** (5)
- MSL 301 - Leadership and Problem Solving **Credits:** (3)
- MSL 302 - Leadership and Ethics **Credits:** (3)
- MSL 303 - Leadership and Small Group Tactics **Credits:** (3)
- MSL 401 - Leadership and Management **Credits:** (4)
- MSL 402 - Officership **Credits:** (4)
- MSL 403 - Officership II **Credits:** (2)

Select from the following - Credits: 2-5

- CS (Computer Science), Any Course **Credits:** (4-5)
- IT 101 - Computer Applications **Credits:** (3)

Total Credits: 26-29

Music Department

College of Arts and Humanities
Ellensburg
Jerilyn S. McIntyre Music Building
Mail Stop 7458
509-963-1216
Fax: 509-963-1239
www.cwu.edu/music
See website for how these programs may be used for educational and career purposes.

Faculty and Staff
Chair
Todd Shiver, DMA

Associate Chair
Jeff Snedeker, DMA

Professors
Joseph Brooks, MM, clarinet, saxophone, woodwind methods
Chris Bruya, MM, jazz studies
Larry D. Gookin, MM, bands, low brass, music education, conducting
Mark Goodenberger, MM, percussion
John Harbaugh, MME, trumpet, jazz studies
Carrie Rehkopf-Michel, MM, violin, chamber music, Kairos String Quartet
John Michel, MM, cello, chamber music, pedagogy, Kairos String Quartet
Hal Ott, DM, flute, literature

John F. Pickett, DM, piano, literature, pedagogy
Vijay Singh, MAT, jazz studies, choir, voice

Associate Professors

Gayla Blaisdell, PhD, voice, opera
Nikolas Caoile, DMA, orchestra, conducting
Mark Lane, MM, music education, band
Daniel Lipori, DMA, music history, bassoon, double reed methods
Bret Smith, PhD, music education, string pedagogy
Gary Weidenaar, DMA, choir, conducting, music education

Assistant Professors
Martin Kennedy, DMA, theory, composition
John Neurohr, DMA, trombone, brass pedagogy, brass literature
Melissa Schiel, DMA, voice, pedagogy

Lecturers
Tim Betts, MM, viola, music appreciation, Kairos String Quartet
Tor Blaisdell, MM, voice
Denise Dillenbeck, MM, Kairos String Quartet
Brent Hages, BM, oboe
Jon Hamar, MM, string bass
Teresa Harbaugh, MM, class piano
Kirsten Neurohr, DMA, theory, music appreciation
Curtis Peacock, MM, tuba, euphonium, history of jazz
Scott Peterson, DMA, men's choir
Barbara Pickett, MM, piano, class piano
Maria Roditeleva-Wibe, PhD, music history, theory, world music
Leslie Schneider, MM, music education
Emelie Spencer, MM, voice, theory
Norm Wallen, MM, theory
Adam Pelandini, MM, saxophone

Staff
Marcie Brown, program assistant
Sara Caroll, advisor/recruiter
Star Heger, fiscal specialist
Allen Larsen, hall manager, audio technician, web manager
Teresa Larsen, secretary supervisor
Harry Whitaker, piano technician

Department Information

Mission
The Department of Music is a community of artists, scholars, and educators dedicated to achieving the highest standards of musical knowledge, performance, and teaching. The department is committed to preparing students for careers in music, providing the opportunity to become literate, skilled, knowledgeable, and confident music educators, performers, and practitioners, able to influence and enrich the musical lives of the communities in which they serve. The department provides opportunities for the general student to study music as an essential part of a liberal arts education and engage in artistic experiences, serve as a leader for K-12 music education, and provides opportunities for the general public to experience music performances of the highest quality in a broad range of styles and genres.

Department Vision
The Department of Music will be recognized and respected for its challenging curriculum and supportive environment, for the excellence of its student, ensemble and faculty performances in a broad range of styles and genres, and for the fulfillment of its motto: "Where teaching is a performing art."

Core Values
As a community of practicing musicians and scholars, we believe that the department's mission is best realized when we:

- Hold each student's greatest good as our primary concern
- Provide models of the highest ethical and moral standards
- Deem outstanding teaching to be the most important attribute of the faculty
- Implement a rigorous curriculum in each degree program
- Regard each degree program as equally valid, with no program intrinsically superior to any other
- Create an intellectually and emotionally safe environment in which students can learn, develop and mature
- Respect and embrace diversity in all its forms
- Respond creatively and thoughtfully to the inevitable changes of the fluid society in which we live

Accreditation
The department is an institutional member of the National Association of Schools of Music (NASM).

Admission Requirement
All entering students who plan to pursue either a major or minor in the music department must audition for acceptance into the program before a faculty committee. See the department's website for audition information.

Common Exit Requirements
All music majors must pass a keyboard proficiency exam as a graduation requirement. Music education majors will

not be scheduled for student teaching until this proficiency is completed.

Standards
Music education majors must meet the standards for acceptance into the Professional Education Program.

Required Participation:

1. All entering music majors with no previous college music theory credits must pass an online exam in music fundamentals as a prerequisite for MUS 144, the first quarter of the theory sequence (fee required).
2. All entering music majors with college credits in music theory must take an in-house diagnostic theory exam, which will be given during the transfer student orientation sessions and before the fall quarter begins. Credit for previous college theory courses may be given based on the results of this exam. Details about both exams can be found on the department website.
3. All music majors must enroll in a large ensemble appropriate to their major performance area during each quarter of enrollment as a full-time student. Enrollment in either Women's Choir or Men's Choir can be substituted for enrollment in a choral large ensemble for a maximum of three quarters.

Graduation Requirements

1. All music majors must pass the required piano proficiency exam. MUS 154A (Piano Class III) must be retaken until this requirement is fulfilled.
2. All music majors must attend four (4) convocations and an average of eight (8) recitals/concerts for each quarter, (fall, winter, and spring) that they are in residence.

Departmental Honors
Consult the department website for information about the departmental honors program.

Certification Programs
Students enrolled in music education degree programs will be concurrently enrolled in the teacher certification program and will graduate with Teacher Certification. The department also offers post-baccalaureate students the opportunity to earn Teaching Certification in three endorsement areas. To enter the certification program, a baccalaureate degree in music is required. Endorsement for certification requires completion of all courses listed in the CWU curricular requirements of each specialization. Consultation with the faculty music education specialist is mandatory for students entering this program.

Department Fees
All fees are billed to students' accounts.

- $15 fee for each MUS 154 (Class Instruction) course (all sections except B and H).
- $85 fee for 1 credit and $170 fee for 2 credits each quarter of enrollment in MUS 164, 264, or 364 (Individual applied instruction).
- $170 fee each quarter of enrollment in MUS 464 (Individual applied instruction).
- $85 fee for 2 credits and $170 fee for 4 credits each quarter of enrollment in MUS 564 and 664 (Individual applied instruction).
- $85 fee each quarter of enrollment in X71 (Secondary applied instruction).
- $40 fee each quarter for students enrolled in Vocal Jazz I
- $40 fee for each scheduled student recital
- $15 fee for each MUS 252, 253, and 254 (Class Instrumental Methods) course
- $5 annual locker fee (Optional if you choose to get a locker)
- $5 fee for students enrolled in Percussion Ensemble
- $25 university tech fee covers use of electronic equipment used in all music courses. Part-time students enrolled in theory, class piano, composition, or electronic music courses will be assessed this fee.

Applied Music (Individual Lessons)
Student advancement through performance levels (164-464) is determined by jury examination. This is done at the end of the quarter when a level change is attempted. Students studying at the 364 level must present a one-half recital as a graduation requirement. Students studying at the 464 level must present at least a full recital as a graduation requirement. See the Undergraduate Handbook for policies regarding applied music study. The handbook is available on the department website at www.cwu.edu/~music. Applied music requirements differ according to the degree.

Ensemble Participation
Participation in performance ensembles is an essential part of the music major experience. Rehearsing and performing as part of a band, orchestra, or choir provides many benefits. It develops musical listening and performing skills, expands knowledge of repertoire, including contemporary and traditional works, provides the opportunity to learn the style characteristics of historical periods and elements of musical structures, and promotes cohesiveness in the musical community.

For future music directors and educators, the ensemble

directors serve as models of how to develop such ensembles and how to utilize efficient and productive rehearsal techniques. To ensure that all music majors derive full benefit of this experience, participation in a large ensemble (defined below) appropriate to the major performing area is required of all music majors every quarter in residence as a full-time student, regardless of the number of credits required in each degree.

When circumstances justify not being in a large ensemble, a large ensemble participation waiver form, available in the music department office and signed by the applied instructor/advisor and ensemble director, must be submitted for approval by the department chair.

Only the following are designated as large ensembles: Wind Ensemble, MUS 266/466; Choir, MUS 267/467; Chamber Choir, MUS 268/468; Orchestra, MUS 277/477; Marching and Concert Band, MUS 287/487 (fall quarter only); Concert Band, MUS 288/488. Enrollment in either Women's Choir or Men's Choir can be substituted for enrollment in a choral large ensemble for a maximum of three quarters.

Bachelor of Music - Composition Major
Bachelor of music in composition is intended for students whose primary interest is in composition and for those who intend to pursue graduate work in music theory or composition. Audition requirement: Submit 2 or 3 short contrasting compositions and demonstrate proficiency on a primary instrument. (Formal declaration of a major in composition cannot occur until the end of the first-year theory sequence 146 and 146A with the grade of at least a B- in all theory courses. Students must also, complete MUS 120, and have instructor.) Transfer students may bypass MUS 120 with permission based upon composition knowledge, submissions, and a successful audition on their primary instrument. It will normally take transfer students three years to complete the degree requirements.

Bachelor of Music - Music Education with Specializations
All students majoring in music education will be assigned a music education advisor form the music education committee. During each year of full-time enrollment, students will meet with their advisor. The purpose of these reviews is to assist the student in developing all the skills necessary to be an effective music educator and make sure the student is on track to student teach. One year before student teaching, the student's accomplishments are reviewed by the entire music faculty. In order to receive an endorsement to student teach the student must receive a satisfactory evaluation in all areas of music study. All music education majors must pass the required piano proficiency examination prior to endorsement for student teaching. Students in this major must apply for admission into the Teacher Certification Program with the education foundations and curriculum department. This is typically done at the beginning of the students second year. Transfer students should apply prior to or during their first quarter on campus. Students are required to complete the Professional Education Program requirements offered through the education foundations and curriculum department.

Music Courses
Performance activities are designated by the following code:
A. Piano
B. Voice
C. Strings
D. Woodwinds
E. Brass
G. Percussion

Music Major, BA

(NOTE: Students seeking a BA degree must complete one year college/university study or two years high school study of a single world language.)

BA Music Core Requirements

Music Theory - Credits: 21

Students must pass an online fundamental exam with 75% ($10 fee) or take and pass (75%) an online fundamental course ($99 fee) to enroll in MUS144. Students must take a placement exam to waive any of the following courses. Concurrent enrollment of the following is required: (MUS 144, 144A, 152A), (MUS 145, 145A, 153A), and (MUS 146, 146A, 154A). A grade of C or better is required in both the written and aural components to continue in the theory sequence.

- MUS 144 - Theory 1 **Credits:** (3)
- MUS 144A - Aural Skills 1 **Credits:** (1)
- MUS 145 - Theory 2 **Credits:** (3)
- MUS 145A - Aural Skills 2 **Credits:** (1)
- MUS 146 - Theory 3 **Credits:** (3)
- MUS 146A - Aural Skills 3 **Credits:** (1)
- MUS 244 - Theory 4 **Credits:** (3)
- MUS 245 - Theory 5 **Credits:** (3)
- MUS 246 - Theory 6 **Credits:** (3)

Class Piano - Credits: 3

A waiver of this requirement can be obtained by demonstrating sufficient keyboard skills to designated piano faculty members.

- MUS 152A - Class Piano I **Credits:** (1)
- MUS 153A - Class Piano II **Credits:** (1)
- MUS 154A - Class Piano III **Credits:** (1)

Music History - Credits: 11

- MUS 359 - Survey of Music in Cross-cultural Perspectives **Credits:** (2)
- MUS 372 - Music History 1 **Credits:** (3)
- MUS 373 - Music History 2 **Credits:** (3)
- MUS 374 - Music History 3 **Credits:** (3)

Total Core Credits: 35

Required Courses

Ensembles - Credits: 12

- Large Ensemble (minimum) **Credits:** (12) only the following are designated as large ensembles: MUS 267-467 (choir), MUS 268-468 (chamber choir), MUS 266-466 (wind ensemble), MUS 277-477 (orchestra), MUS 287-487 (marching and concert band-fall quarter only), and MUS 288-488 (symphonic band).

Applied Music - Credits: 12

- Individual Instruction - (MUS 164, 264, and 364) - **Credits:** (12) (NOTE: at least two credits of 364 on primary instrument or at least two credits of 264 on primary instrument and additional 164 credits on a secondary instrument)

Upper-division Music Theory - Credits: 3

- MUS 340 - Form and Analysis **Credits:** (3)

Conducting - Credits: 3

- MUS 341 - Conducting I **Credits:** (3)

Upper-division Music Theory - Credits: 3

Choose one:

- MUS 356 - Jazz Styles **Credits:** (3)
- MUS 379 - Philosophy of Music **Credits:** (3)
- MUS 382 - Survey of Chamber Music **Credits:** (3)
- MUS 384 - Survey of Choral Music **Credits:** (3)
- MUS 385 - Survey of Opera **Credits:** (3)
- MUS 386 - Survey of 20th-century Music **Credits:** (3)

Additional Courses - Credits: 2

- MUS 495 - Senior Project **Credits:** (2)

Total Credits: 70

Music Composition Major, BM

Bachelor of music in composition is intended for students whose primary interest is in composition and for those who intend to pursue graduate work in music theory or composition. Audition requirement: Submit 2 or 3 short contrasting compositions and demonstrate proficiency on a primary instrument. (Formal declaration of a major in composition cannot occur until the end of the first-year theory sequence 146 and 146A with the grade of at least a B- in all theory courses, completion of MUS 120, and permission of instructor.) Transfer students may bypass MUS 120 with permission based upon composition knowledge, submissions, and sufficient audition on primary instrument. It will normally take transfer students three years to compete the degree requirements. UNIV 101 for music major - Gen Ed. requirement (not in degree program).

BM Composition Core Requirements

Music Theory - Credits: (21)

Students must pass an online fundamental exam with 75% ($10 fee) or take and pass (75%) an online fundamental course ($99 fee) to enroll in MUS 144. Students must take a placement exam to waive any of the following courses. Concurrent enrollment of the following is required: (MUS 144, 144A, 152A), (MUS 145, 145A, 153A) and (MUS 146, 146A, 154A). A grade of C or better is required in both the written and aural components to continue in the theory sequence.

- MUS 144 - Theory 1 **Credits:** (3)
- MUS 144A - Aural Skills 1 **Credits:** (1)
- MUS 145 - Theory 2 **Credits:** (3)
- MUS 145A - Aural Skills 2 **Credits:** (1)
- MUS 146 - Theory 3 **Credits:** (3)
- MUS 146A - Aural Skills 3 **Credits:** (1)
- MUS 244 - Theory 4 **Credits:** (3)
- MUS 245 - Theory 5 **Credits:** (3)
- MUS 246 - Theory 6 **Credits:** (3)

Class Piano - Credits: (3)

A waiver of this requirement can be obtained by demonstrating sufficient keyboard skills to designated piano faculty members.

- MUS 152A - Class Piano I **Credits:** (1)
- MUS 153A - Class Piano II **Credits:** (1)
- MUS 154A - Class Piano III **Credits:** (1)

Ensemble - Credits: (20)

Large Ensembles Credits (14-16)

Only the following are designated as large ensembles: MUS 267-467 (Choir), MUS 268-468 (Chamber Choir), MUS 266-466 (Wind Ensemble), MUS 277-477 (Orchestra), MUS 287-487 (Marching and Concert Band-fall quarter only) and MUS 288-488 (Symphonic Band).

Chamber Ensembles (4-6)

Applied Music - Credits: (13)

- Individual Instruction **Credits:** (12) - MUS 164, 264, and 364 (at least 2 credits of 364 are required)
- MUS 300 - Recital Performance **Credits:** (1) (Must be concurrently enrolled in 364)

Upper-division Music Theory - Credits: (21)

- MUS 340 - Form and Analysis **Credits:** (3)
- MUS 343 - Counterpoint I **Credits:** (3)
- MUS 422 - Orchestration **Credits:** (3)
- MUS 423 - Advanced Orchestration **Credits:** (3)
- MUS 440 - Analytical Techniques II **Credits:** (3)
- MUS 485 - Choral Arranging **Credits:** (3)
- MUS 486 - Jazz Band Arranging **Credits:** (3)

Conducting - Credits: (6)

- MUS 341 - Conducting I **Credits:** (3)
- MUS 342 - Conducting II **Credits:** (3)

Music History - Credits: (11)

- MUS 359 - Survey of Music in Cross-cultural Perspectives **Credits:** (2)
- MUS 372 - Music History 1 **Credits:** (3)
- MUS 373 - Music History 2 **Credits:** (3)
- MUS 374 - Music History 3 **Credits:** (3)

Total Core Credits: 95

Required Courses

Music Composition - Credits: (24)

- MUS 120 - Composition 1 **Credits:** (3)
- MUS 220 - Composition 2 **Credits:** (2) (Must be taken for 6 credits)
- MUS 320 - Composition 3 **Credits:** (2) (Must be taken for 6 credits)
- MUS 420 - Composition 4 **Credits:** (3) (Must be taken for 9 credits) (Full Composition Recital Required to complete MUS 420)

Secondary Applied Area (Keyboard) - Credits: (4)

- MUS 171A - Secondary Applied Area Piano **Credits:** (1) (Must be taken for 3 credits) (If piano is major applied area then select another area of study)
- MUS 255 - Jazz Harmony and Keyboard **Credits:** (1)

Additional Courses - Credits: (5)

- Music Electives **Credits:** (2)
- MUS 347 - Electronic Music Composition **Credits:** (3)

Total Required Course Credits: 33

Total Credits: 128

Music Education Major BM, Broad Area Specialization

General Music, Instrument and Choral Endorsements

All students majoring in music education will be reviewed and counseled by the Music Education Committee during each year of full-time enrollment. The purpose of these reviews is to assist the student in developing all the skills necessary to be an effective music educator. One year before student teaching, the student's accomplishments are reviewed by the entire music faculty. In order to receive an endorsement to student teach, the student must receive a satisfactory evaluation in all areas of music study. All music education majors must pass the required piano proficiency examination prior to endorsement for student teaching. **Students taking this major must apply for admission into the Teacher Certification Program with the education foundations and curriculum department and are required to complete the Professional Education Program requirements offered**

through the education foundations and curriculum department.

This major satisfies the endorsements for music-general, music-instrumental, and music-choral, K-12. To qualify for student teaching, the following courses must be completed: MUS 325, MUS 329, MUS 341, and MUS 342.

BM Music Education Core Requirements

Music Theory - Credits: 21

Students must pass an online fundamental exam with 75% ($10 fee) or take and pass (75%) an online fundamental course ($99 fee) to enroll in MUS144. Students must take a placement exam to waive any of the following courses. Concurrent enrollment of the following is required: (MUS 144, 144A, 152A), (MUS 145, 145A, 153A), and (MUS 146, 146A, 154A). A grade of C or better is required in both the written and aural components to continue in the theory sequence.

- MUS 144 - Theory 1 **Credits:** (3)
- MUS 144A - Aural Skills 1 **Credits:** (1)
- MUS 145 - Theory 2 **Credits:** (3)
- MUS 145A - Aural Skills 2 **Credits:** (1)
- MUS 146 - Theory 3 **Credits:** (3)
- MUS 146A - Aural Skills 3 **Credits:** (1)
- MUS 244 - Theory 4 **Credits:** (3)
- MUS 245 - Theory 5 **Credits:** (3)
- MUS 246 - Theory 6 **Credits:** (3)

Class Piano - Credits: 3

A waiver of this requirement can be obtained by demonstrating sufficient keyboard skills to designated piano faculty members.

- MUS 152A - Class Piano I **Credits:** (1)
- MUS 153A - Class Piano II **Credits:** (1)
- MUS 154A - Class Piano III **Credits:** (1)

Ensembles - Credits: 22

- Only the following are designated as large ensembles: MUS 267-467 (Choir), MUS 268-468 (Chamber Choir), MUS 266-466 (Wind Ensemble), MUS 277-477 (Orchestra), MUS 287-487 (marching and concert band-fall quarter only), and MUS 288-488 (Symphonic Band).

Applied Music - Credits: 11

- Individual Instruction - Credits (11) MUS 164, 264, and 364 (at least 2 credits of 364 are required)
- MUS 300 - Recital Performance **Credits:** (1) (Must be concurrently enrolled in 364)

Upper-division Music Theory - Credits: 3

- MUS 422 - Orchestration **Credits:** (3)
  OR Choral Music Specialization may take MUS 340 - Form and Analysis (3)

Conducting - Credits: 6

- MUS 341 - Conducting I **Credits:** (3)
- MUS 342 - Conducting II **Credits:** (3)

Music History - Credits: 11

- MUS 359 - Survey of Music in Cross-cultural Perspectives **Credits:** (2)
- MUS 372 - Music History 1 **Credits:** (3)
- MUS 373 - Music History 2 **Credits:** (3)
- MUS 374 - Music History 3 **Credits:** (3)

Total Core Credits: 78

Required Courses: Credits 19

- Music Electives - Credits (1)
- MUS 171 - Secondary Applied Area (Individual Instruction) **Credits:** (1)
  (Must be voice for non-voice primary applied area or instrumental for voice primary applied area)
- MUS 253C - Class Instrumental Methods Strings I **Credits:** (1)
- MUS 253D - Class Instrumental Methods Woodwinds I **Credits:** (1)
- MUS 253E - Class Instrumental Methods Brass I **Credits:** (1)
- MUS 253G - Class Instrumental Methods Percussion I **Credits:** (1)
- MUS 254B - Class Vocal Methods **Credits:** (1)
- MUS 254C - Class Instrumental Methods Strings II **Credits:** (1)
- MUS 254D - Class Instrumental Methods Woodwinds II **Credits:** (1)
- MUS 254E - Class Instrumental Methods Brass II **Credits:** (1)
- MUS 323 - Choral Music Education **Credits:** (3)
- MUS 325 - Instrumental Music Education **Credits:** (3)
- MUS 329 - General Music Methods **Credits:** (3)

Broad Area Total Credits: 97

Music Education Major BM, Choral Music Specialization

General Music and Choral Endorsements

All students majoring in music education will be reviewed and counseled by the Music Education Committee during each year of full-time enrollment. The purpose of these reviews is to assist the student in developing all the skills necessary to be an effective music educator. One year before student teaching, the student's accomplishments are reviewed by the entire music faculty. In order to receive an endorsement to student teach, the student must receive a satisfactory evaluation in all areas of music study. All music education majors must pass the required piano proficiency examination prior to endorsement for student teaching. **Students taking this major must apply for admission into the Teacher Certification Program with the education foundations and curriculum department and are required to complete the Professional Education Program requirements offered through the education foundations and curriculum department.**

This major satisfies the endorsements for Music-General and Music-Instrumental, K-12. To qualify for student teaching, the following courses must be completed: MUS 325, MUS 329, MU 341, and MUS 342.

BM Music Education Core Requirements

Music Theory - Credits: 21

Students must pass an online fundamental exam with 75% ($10 fee) or take and pass (75%) an online fundamental course ($99 fee) to enroll in MUS144. Students must take a placement exam to waive any of the following courses. Concurrent enrollment of the following is required: (MUS 144, 144A, 152A), (MUS 145, 145A, 153A), and (MUS 146, 146A, 154A). A grade of C or better is required in both the written and aural components to continue in the theory sequence.

- MUS 144 - Theory 1 **Credits:** (3)
- MUS 144A - Aural Skills 1 **Credits:** (1)
- MUS 145 - Theory 2 **Credits:** (3)
- MUS 145A - Aural Skills 2 **Credits:** (1)
- MUS 146 - Theory 3 **Credits:** (3)
- MUS 146A - Aural Skills 3 **Credits:** (1)
- MUS 244 - Theory 4 **Credits:** (3)
- MUS 245 - Theory 5 **Credits:** (3)
- MUS 246 - Theory 6 **Credits:** (3)

Class Piano - Credits: 3

A waiver of this requirement can be obtained by demonstrating sufficient keyboard skills to designated piano faculty members.

- MUS 152A - Class Piano I **Credits:** (1)
- MUS 153A - Class Piano II **Credits:** (1)
- MUS 154A - Class Piano III **Credits:** (1)

Ensembles - Credits: 22

- Only the following are designated as large ensembles: MUS 267-467 (Choir), MUS 268-468 (Chamber Choir), MUS 266-466 (Wind Ensemble), MUS 277-477 (Orchestra), MUS 287-487 (marching and concert band-fall quarter only), and MUS 288-488 (Symphonic Band).

Applied Music - Credits: 11

- Individual Instruction - Credits (11) MUS 164, 264, and 364 (at least 2 credits of 364 are required)
- MUS 300 - Recital Performance **Credits:** (1) (Must be concurrently enrolled in 364)

Upper-division Music Theory - Credits: 3

- MUS 422 - Orchestration **Credits:** (3)
  OR Choral Music Specialization may take MUS 340 - Form and Analysis (3)

Conducting - Credits: 6

- MUS 341 - Conducting I **Credits:** (3)
- MUS 342 - Conducting II **Credits:** (3)

Music History - Credits: 11

- MUS 359 - Survey of Music in Cross-cultural Perspectives **Credits:** (2)
- MUS 372 - Music History 1 **Credits:** (3)
- MUS 373 - Music History 2 **Credits:** (3)
- MUS 374 - Music History 3 **Credits:** (3)

Total Core Credits: 78

Required Courses Credits: 13

- MUS 240 - Diction in Singers I (Intro to IPA, Italian, Latin, English) **Credits:** (2)
- MUS 241 - Diction for Singers 2 (Advanced IPA and German) **Credits:** (2)
  OR MUS 242 - Diction for Singers 3 (Advanced IPA and German) Credits: (2)

- MUS 323 - Choral Music Education **Credits:** (3)
- MUS 329 - General Music Methods **Credits:** (3)
- MUS 425B - Pedagogy, Vocal **Credits:** (3)

Choral Music Total Credits: 91

Music Education Major BM, Instrumental Music Specialization

General Music and Instrumental Endorsements

All students majoring in music education will be reviewed and counseled by the Music Education Committee during each year of full-time enrollment. The purpose of these reviews is to assist the student in developing all the skills necessary to be an effective music educator. One year before student teaching, the student's accomplishments are reviewed by the entire music faculty. In order to receive an endorsement to student teach, the student must receive a satisfactory evaluation in all areas of music study. All music education majors must pass the required piano proficiency examination prior to endorsement for student teaching. **Students taking this major must apply for admission into the Teacher Certification Program with the education foundations and curriculum department and are required to complete the Professional Education Program requirements offered through the education foundations and curriculum department.**

This major satisfies the endorsements for Music-General and Music-Instrumental, K-12. To qualify for student teaching, the following courses must be completed: MUS 325, MUS 329, MU 341, and MUS 342.

BM Music Education Core Requirements

Music Theory - Credits: 21

Students must pass an online fundamental exam with 75% ($10 fee) or take and pass (75%) an online fundamental course ($99 fee) to enroll in MUS144. Students must take a placement exam to waive any of the following courses. Concurrent enrollment of the following is required: (MUS 144, 144A, 152A), (MUS 145, 145A, 153A), and (MUS 146, 146A, 154A). A grade of C or better is required in both the written and aural components to continue in the theory sequence.

- MUS 144 - Theory 1 **Credits:** (3)
- MUS 144A - Aural Skills 1 **Credits:** (1)
- MUS 145 - Theory 2 **Credits:** (3)
- MUS 145A - Aural Skills 2 **Credits:** (1)
- MUS 146 - Theory 3 **Credits:** (3)
- MUS 146A - Aural Skills 3 **Credits:** (1)
- MUS 244 - Theory 4 **Credits:** (3)
- MUS 245 - Theory 5 **Credits:** (3)
- MUS 246 - Theory 6 **Credits:** (3)

Class Piano - Credits: 3

A waiver of this requirement can be obtained by demonstrating sufficient keyboard skills to designated piano faculty members.

- MUS 152A - Class Piano I **Credits:** (1)
- MUS 153A - Class Piano II **Credits:** (1)
- MUS 154A - Class Piano III **Credits:** (1)

Ensembles - Credits: 22

- Only the following are designated as large ensembles: MUS 267-467 (Choir), MUS 268-468 (Chamber Choir), MUS 266-466 (Wind Ensemble), MUS 277-477 (Orchestra), MUS 287-487 (marching and concert band-fall quarter only), and MUS 288-488 (Symphonic Band).

Applied Music - Credits: 11

- Individual Instruction - Credits (11) MUS 164, 264, and 364 (at least 2 credits of 364 are required)
- MUS 300 - Recital Performance **Credits:** (1) (Must be concurrently enrolled in 364)

Upper-division Music Theory - Credits: 3

- MUS 422 - Orchestration **Credits:** (3)
  OR Choral Music Specialization may take MUS 340 - Form and Analysis (3)

Conducting - Credits: 6

- MUS 341 - Conducting I **Credits:** (3)
- MUS 342 - Conducting II **Credits:** (3)

Music History - Credits: 11

- MUS 359 - Survey of Music in Cross-cultural Perspectives **Credits:** (2)
- MUS 372 - Music History 1 **Credits:** (3)
- MUS 373 - Music History 2 **Credits:** (3)
- MUS 374 - Music History 3 **Credits:** (3)

Total Core Credits: 78

Required Courses Credits: 14

- MUS 253C - Class Instrumental Methods Strings I **Credits:** (1)
- MUS 253D - Class Instrumental Methods Woodwinds I **Credits:** (1)
- MUS 253E - Class Instrumental Methods Brass I **Credits:** (1)
- MUS 253G - Class Instrumental Methods Percussion I **Credits:** (1)
- MUS 254B - Class Vocal Methods **Credits:** (1)
- MUS 254C - Class Instrumental Methods Strings II **Credits:** (1)
- MUS 254D - Class Instrumental Methods Woodwinds II **Credits:** (1)
- MUS 254E - Class Instrumental Methods Brass II **Credits:** (1)
- MUS 325 - Instrumental Music Education **Credits:** (3)
- MUS 329 - General Music Methods **Credits:** (3)

Instrumental Music Total Credits: 92

Music Performance Major BM, Keyboard Specialization

Student advancement through performance levels (164-464) is determined by jury examination.

BM Performance Core Requirements

Music Theory - Credits: 21

Students must pass an online fundamental exam with 75% ($10 fee) or take and pass (75%) an online fundamental course ($99 fee) to enroll in MUS144. Students must take a placement exam to waive any of the following courses. Concurrent enrollment of the following is required: (MUS 144, 144A, 152A), (MUS 145, 145A, 153A), and (MUS 146, 146A, 154A). A grade of C or better is required in both the written and aural components to continue in the theory sequence.

- MUS 144 - Theory 1 **Credits:** (3)
- MUS 144A - Aural Skills 1 **Credits:** (1)
- MUS 145 - Theory 2 **Credits:** (3)
- MUS 145A - Aural Skills 2 **Credits:** (1)
- MUS 146 - Theory 3 **Credits:** (3)
- MUS 146A - Aural Skills 3 **Credits:** (1)
- MUS 244 - Theory 4 **Credits:** (3)
- MUS 245 - Theory 5 **Credits:** (3)
- MUS 246 - Theory 6 **Credits:** (3)

Class Piano - Credits: 3

A waiver of this requirement can be obtained by demonstrating sufficient keyboard skills to designated piano faculty members.

- MUS 152A - Class Piano I **Credits:** (1)
- MUS 153A - Class Piano II **Credits:** (1)
- MUS 154A - Class Piano III **Credits:** (1)

Applied Music - Credits: 29

- Individual Instruction - (MUS 164, 264, and 364) **Credits:** (18)
- MUS 300 - Recital Performance **Credits:** (1) (Must be concurrently enrolled in 364)
- MUS 400 - Recital Performance **Credits:** (1) (Must be concurrently enrolled in 464)
- MUS 464 - Major Applied Area (Individual Instruction) **Credits:** (3) (Must be taken for 9 credits)

Upper-division Music Theory - Credits: 3

- MUS 340 - Form and Analysis **Credits:** (3)

Conducting - Credits: 6

- MUS 341 - Conducting I **Credits:** (3)
- MUS 342 - Conducting II **Credits:** (3)

Music History - Credits: 11

- MUS 359 - Survey of Music in Cross-cultural Perspectives **Credits:** (2)
- MUS 372 - Music History 1 **Credits:** (3)
- MUS 373 - Music History 2 **Credits:** (3)
- MUS 374 - Music History 3 **Credits:** (3)

Total Core Credits: 73

Required Courses

Ensembles - Credits: 21

- Large Ensembles **Credits:** (6-12) only the following are designated as large ensembles: MUS 266-466 (wind ensemble), MUS 268-468 (chamber choir), MUS 277-477 (orchestra), MUS 287-487 (marching and concert band-fall quarter only), and MUS 288-488 (symphonic band).

  (NOTE: All ensemble courses have 200-level and

400-level numbers. The 200-level numbers are freshmen and sophomores, the 400-level numbers are used by juniors and seniors.)
- Chamber Ensembles **Credits:** (9-15)

Upper-division Music Theory - Credits: 6

- MUS 343 - Counterpoint I **Credits:** (3)
- MUS 422 - Orchestration **Credits:** (3)

Additional Courses - Credits: 21

- Music Electives - **Credits:** (7)
- MUS 292 - Accompanying Practicum **Credits:** (1-3) (Must be taken for 4 credits)
- MUS 425A - Pedagogy (Studio Piano) **Credits:** (3)
- MUS 426A - Literature (Studio Piano) **Credits:** (3)
- MUS 492 - Accompanying Practicum **Credits:** (1-3) (Must be taken for 4 credits)

Total Credits: 118

Music Performance Major BM, Percussion/Wind/String Specialization

Student advancement through performance levels (164-464) is determined by jury examination.

BM Performance Core Requirements

Music Theory - Credits: 21

Students must pass an online fundamental exam with 75% ($10 fee) or take and pass (75%) an online fundamental course ($99 fee) to enroll in MUS144. Students must take a placement exam to waive any of the following courses. Concurrent enrollment of the following is required: (MUS 144, 144A, 152A), (MUS 145, 145A, 153A), and (MUS 146, 146A, 154A). A grade of C or better is required in both the written and aural components to continue in the theory sequence.

- MUS 144 - Theory 1 **Credits:** (3)
- MUS 144A - Aural Skills 1 **Credits:** (1)
- MUS 145 - Theory 2 **Credits:** (3)
- MUS 145A - Aural Skills 2 **Credits:** (1)
- MUS 146 - Theory 3 **Credits:** (3)
- MUS 146A - Aural Skills 3 **Credits:** (1)
- MUS 244 - Theory 4 **Credits:** (3)
- MUS 245 - Theory 5 **Credits:** (3)
- MUS 246 - Theory 6 **Credits:** (3)

Class Piano - Credits: 3

A waiver of this requirement can be obtained by demonstrating sufficient keyboard skills to designated piano faculty members.

- MUS 152A - Class Piano I **Credits:** (1)
- MUS 153A - Class Piano II **Credits:** (1)
- MUS 154A - Class Piano III **Credits:** (1)

Applied Music - Credits: 29

- Individual Instruction - (MUS 164, 264, and 364) **Credits:** (18)
- MUS 300 - Recital Performance **Credits:** (1) (Must be concurrently enrolled in 364)
- MUS 400 - Recital Performance **Credits:** (1) (Must be concurrently enrolled in 464)
- MUS 464 - Major Applied Area (Individual Instruction) **Credits:** (3) (Must be taken for 9 credits)

Upper-division Music Theory - Credits: 3

- MUS 340 - Form and Analysis **Credits:** (3)

Conducting - Credits: 6

- MUS 341 - Conducting I **Credits:** (3)
- MUS 342 - Conducting II **Credits:** (3)

Music History - Credits: 11

- MUS 359 - Survey of Music in Cross-cultural Perspectives **Credits:** (2)
- MUS 372 - Music History 1 **Credits:** (3)
- MUS 373 - Music History 2 **Credits:** (3)
- MUS 374 - Music History 3 **Credits:** (3)

Total Core Credits: 73

Required Courses

Upper-division Music Theory - Credits: 3

- MUS 422 - Orchestration **Credits:** (3)

Additional Courses Credits: 12

- Music Electives - **Credits:** (6)
- MUS 425 - Pedagogy (Studio) **Credits:** (3) C, D, E, or G, Pedagogy (Studio)

(G) In appropriate performance area: C=string, D=woodwinds, E=brass, G=percussion.
- MUS 426 - Literature (Studio) **Credits:** (3) C, D, E, or G, Literature (Studio)
  In appropriate performance area: C=string, D=woodwinds, E=brass, G=percussion.

Ensembles - Credits: 30

- Large Ensemble **Credits:** (20-24) Only the following are designated as large ensembles: MUS 267-467 (choir), MUS 268-468 (chamber choir), MUS 266-466 (wind ensemble), MUS 277-477 (orchestra), MUS 287-487 (marching and concert band-fall quarter only), and MUS 288-488 (symphonic band).
- Chamber Ensemble **Credits:** (6-10)

Total Credits: 118

Music Performance Major BM, Vocal Specialization

Student advancement through performance levels (164-464) is determined by jury examination. Prior to completion of the bachelor's degree, vocal performance majors must:

1. Demonstrate the ability to translate musical texts in French and German
2. Demonstrate competency in French or German equal to the successful completion of French 153 or German 153.

BM Performance Core Requirements

Music Theory - Credits: 21

Students must pass an online fundamental exam with 75% ($10 fee) or take and pass (75%) an online fundamental course ($99 fee) to enroll in MUS144. Students must take a placement exam to waive any of the following courses. Concurrent enrollment of the following is required: (MUS 144, 144A, 152A), (MUS 145, 145A, 153A), and (MUS 146, 146A, 154A). A grade of C or better is required in both the written and aural components to continue in the theory sequence.

- MUS 144 - Theory 1 **Credits:** (3)
- MUS 144A - Aural Skills 1 **Credits:** (1)
- MUS 145 - Theory 2 **Credits:** (3)
- MUS 145A - Aural Skills 2 **Credits:** (1)
- MUS 146 - Theory 3 **Credits:** (3)
- MUS 146A - Aural Skills 3 **Credits:** (1)
- MUS 244 - Theory 4 **Credits:** (3)
- MUS 245 - Theory 5 **Credits:** (3)
- MUS 246 - Theory 6 **Credits:** (3)

Class Piano - Credits: 3

A waiver of this requirement can be obtained by demonstrating sufficient keyboard skills to designated piano faculty members.

- MUS 152A - Class Piano I **Credits:** (1)
- MUS 153A - Class Piano II **Credits:** (1)
- MUS 154A - Class Piano III **Credits:** (1)

Applied Music - Credits: 29

- Individual Instruction - (MUS 164, 264, and 364) **Credits:** (18)
- MUS 300 - Recital Performance **Credits:** (1) (Must be concurrently enrolled in 364)
- MUS 400 - Recital Performance **Credits:** (1) (Must be concurrently enrolled in 464)
- MUS 464 - Major Applied Area (Individual Instruction) **Credits:** (3) (Must be taken for 9 credits)

Upper-division Music Theory - Credits: 3

- MUS 340 - Form and Analysis **Credits:** (3)

Conducting - Credits: 6

- MUS 341 - Conducting I **Credits:** (3)
- MUS 342 - Conducting II **Credits:** (3)

Music History - Credits: 11

- MUS 359 - Survey of Music in Cross-cultural Perspectives **Credits:** (2)
- MUS 372 - Music History 1 **Credits:** (3)
- MUS 373 - Music History 2 **Credits:** (3)
- MUS 374 - Music History 3 **Credits:** (3)

Total Core Credits: 73

Additional Required Courses

Ensemble - Credits: 30

- Large Ensemble **Credits:** (20-24) Only the following are designated as large ensembles:

MUS 267-467 (choir), MUS 268-468 (chamber choir), MUS 266-466 (wind ensemble), MUS 277-477 (orchestra), MUS 287-487 (marching and concert band-fall quarter only), and MUS 288-488 (symphonic band).
- Chamber Ensemble **Credits:** (6-10)

Additional Courses - Credits: 13-17

- Music electives - **Credits:** (1-2)
- MUS 240 - Diction in Singers I (Intro to IPA, Italian, Latin, English) **Credits:** (2)
- MUS 241 - Diction for Singers 2 (Advanced IPA and German) **Credits:** (2)
- MUS 242 - Diction for Singers 3 (Advanced IPA and French) **Credits:** (2)
- MUS 425B - Pedagogy, Vocal **Credits:** (3)
- MUS 426 - Literature (Studio) **Credits:** (3)
- MUS 462 - Opera Production **Credits:** (1-3)

Total Credits: 116-120

Music Minor

Required Courses

Ensembles - Credits: 6

- Large ensemble or chamber ensemble - **Credits:** (6)

Applied Music - Credits: 3

- Individual Instruction - (MUS 164 or MUS 264) - **Credits:** (3)

Class Piano - Credits: 3

A waiver of this requirement can be obtained by demonstrating sufficient keyboard skills to designated piano faculty members.

- MUS 152A - Class Piano I **Credits:** (1)
- MUS 153A - Class Piano II **Credits:** (1)
- MUS 154A - Class Piano III **Credits:** (1)

Music Theory - Credits: 12

Students must pass an online fundamental exam with 75% ($10 fee) or take and pass (75%) an online fundamental course ($99 fee) to enroll in MUS144. Students must take a placement exam to waive any of the following courses. Concurrent enrollment of the following is required: (MUS 144, 144A, 152A), (MUS 145, 145A, 153A), and (MUS 146, 146A, 154A). A grade of C or higher is required in both the written and aural components to continue in the theory sequence.

- MUS 144 - Theory 1 **Credits:** (3)
- MUS 144A - Aural Skills 1 **Credits:** (1)
- MUS 145 - Theory 2 **Credits:** (3)
- MUS 145A - Aural Skills 2 **Credits:** (1)
- MUS 146 - Theory 3 **Credits:** (3)
- MUS 146A - Aural Skills 3 **Credits:** (1)

Additional Required Courses - Credits: 2-3

- MUS 359 - Survey of Music in Cross-cultural Perspectives **Credits:** (2)
- **OR** MUS 379 - Philosophy of Music **Credits:** (3)

Music Electives - Credits: 6

Total Credits: 32-33

Jazz Studies Certificate

The jazz studies certificate is designed to provide a secondary focus to the existing music degrees with emphasis in jazz performance, jazz improvisation, jazz harmony, jazz composition and arranging, and jazz history or jazz pedagogy. Students in the certificate program will usually be wither instrumentalists (drum set, bass, vibes, piano, guitar, saxophone, trombone, and trumpet) or vocalists and will participate in both large and small jazz ensembles, and other coursework as outlined below.

Required Courses

- MUS 210 - Vocal Jazz Choir **Credits:** (1) (These two courses must be taken for a total of 6 credits)
- **AND** MUS 410 - Vocal Jazz Choir **Credits:** (1) **OR**
- MUS 232 - Big Band **Credits:** (1) (These two courses must be taken for a total of 6 credits)
- **AND** MUS 432 - Big Band **Credits:** (1)

- MUS 218 - Jazz Combo **Credits:** (1) (These two courses must be taken for a total of 6 credits)
- **AND** MUS 418 - Jazz Combo **Credits:** (1)

- MUS 255 - Jazz Harmony and Keyboard **Credits:** (1)

Improvisation Sequence - Credits: 3

- MUS 353 - Jazz Improvisation I **Credits:** (1)
- MUS 354 - Jazz Improvisation II **Credits:** (1)
- MUS 355 - Jazz Improvisation III **Credits:** (1)

Choose one of the following - Credits: 3

- MUS 357 - Jazz Composition and Arranging **Credits:** (3)
- MUS 485 - Choral Arranging **Credits:** (3)
- MUS 486 - Jazz Band Arranging **Credits:** (3)

Choose one of the following - Credits: 3

- MUS 356 - Jazz Styles **Credits:** (3)
- MUS 424 - Jazz Pedagogy **Credits:** (3)

Total Credits: 22

Nutrition Exercise and Health Sciences Department

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Ellensburg
Dorothy Purser Hall., room 101
Mail Stop 7572
509-963-1912
Fax: 509-963-1848
www.cwu.edu/health-science
See website for how these programs may be used for educational and career purposes.

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Clinical Physiology Program Director
Vincent M. Nethery, PhD

Emergency Medical Services- EMS Paramedicine Program Director
Keith A. Monosky, PhD

Exercise Science Program Director
Timothy R. Burnham, PhD

Food and Nutrition Sciences Program Director
David L. Gee, PhD

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Leonardo J. D'Acquisto, EdD, sport physiology, kinesiology, human anatomy
David L. Gee, PhD, nutrition & metabolism, nutrition and chronic diseases, nutritional epidemiology
Susan Hawk, PhD, RDN, dietetics, clinical nutrition
Keith A. Monosky, PhD, MPM, EMT-P, emergency medical services, emergency services management, health policy
Vincent M. Nethery, PhD, clinical physiology, sport physiology, environmental physiology, human anatomy

Associate Professors
Timothy R. Burnham, PhD, clinical physiology, sport physiology, human anatomy

Assistant Professors
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Dana Ogan, MS, RDN, CD, dietetic internship director
Kelly Pritchett, PhD, RDN sports nutrition
Robert Pritchett, PhD
Karen Roemer, PhD, biomechanics, clinical mechanics, kinematics and kinetics
Nicole Stendell-Hollis, PhD, MS, RDN, obesity, nutrition and chronic disease

Senior Lecturers
Susan Blair, MS, AT-C, athletic training-sports medicine, exercise physiology, human anatomy
Ken Kladnik

Lecturers
Stephanie Campbell, MS, CPT
Robert Carlson, BA, EMT-P, emergency medical services
Rich Elliott, MBA, EMT, emergency medical services
Steve Chrisman, MS,EMT-P, emergency medical services
James Pierce, EMT-P, emergency medical services

Medical Director
Jack Horsley

Staff
Bryan Contreras, MS, instructional classroom support technician- clinical physiology and exercise science
Lucinda Engel, instructional classroom support technician- food science
Vickie Ostrow, Program Coordinator, EMS-Paramedicine
Cynthia Strawder, program support supervisor II

Department Information
The Department of Nutrition, Exercise, and Health Sciences prepares students in a variety of professions that focus on the physical and functional abilities of humans. Human functioning is the overriding theme of all

curricula offerings. In addition to didactic aspects, many classes provide experiential learning through structured laboratories, practicums, and internships. All programs provide opportunities to interact with faculty and to participate in both undergraduate and graduate research.

NEHS offers the following undergraduate degrees:
Bachelor of Science: Clinical Physiology
Bachelor of Science: Exercise Science
Bachelor of Science: FSN-Dietetics Specialization
Bachelor of Science: FSN-Foods and Nutrition Specialization
Bachelor of Science: Paramedicine

NEHS offers the following supporting minors:
Exercise Science
Athletic Training
Nutrition
Food Service Management

NEHS offers the following certificate programs:
Paramedic
Emergency Medical Technician
Dietetic Internship (Accredited by the Academy of Nutrition and Dietetics Accreditation Council for Education in Nutrition and Dietetics (ACEND)

NEHS offers the following graduate degrees - (For details: See Graduate Studies and Research section:
Master of Science: Exercise Science
Master of Science: Nutrition

Admission Requirements
To be admitted to a major or minor, all students must:

- Meet with an advisor in the specific program of interest. Because of the variety of options and the pre-admission requirements of programs, it is advisable to meet with an advisor early to plan the program schedule and to facilitate timely graduation.
- Complete specific pre-admission requirements (see individual programs).
- Complete and file a major application with the department office, signed by the academic advisor and the program director. Application forms can be obtained from the advisor or the department office.
- Complete and file with the department office, a program of study that lists the required and elective courses necessary for program completion. Course of study forms can be obtained from the academic advisor.

Student Scholarly Activities:
The department is student oriented and all programs provide a wide range of laboratory and field experiences as part of specific degree requirements and degree options. Students who engage early in optional learning experiences gain a better understanding of their profession, are more competitive in the job market, and increase their chances for graduate school admission.

Student Organizations:
Exercise Science Club: All EXSC students are required to join the EXSC Club. This student-run organization meets regularly to discuss academic planning and career opportunities, performs service activities, and plans recreational outings.

Nutrition Science Club: The NSC provides opportunities for students to use their knowledge and skills in performing service activities, learn about career opportunities, discuss academic planning, and engage in recreational activities.

EMT Club: The EMT Club is a student organization that is purposed to provide basic life support services to on-campus activities as a means of first-line-response. The EMT Club is comprised of current students that are certified emergency medical technicians. The EMT Club is supervised by a faculty member of the Paramedic Program and is provided the necessary emergency medical equipment and continuing education to provide essential emergency medical services.

Fees:
Additional fees are assessed for many of the department's laboratory and field experience courses. These fees are used to partially support materials purchased and transportation costs.

Graduation Requirements

- Satisfactory completion of all requirements of the university and of the specific degree program of study.
- Application for the bachelor's degree must be filed by the second Friday of the quarter preceding the quarter in which the degree is to be received. Instructions and deadlines are available through Registrar Services.

Clinical Physiology Major, BS

Program Director
Vincent M. Nethery, PhD

Faculty
Susan Blair, MS, AT-C
Timothy Burnham PhD
Leonardo D'Acquisto, EdD
Eric Foch, PhD
Vincent Nethery, PhD
Kelly Pritchett, PhD, RDN
Robert Pritchett, PhD

The bachelor of science - clinical physiology specifically prepares students to enter graduate or specialized post-baccalaureate professional programs in critical high-demand, health-care arenas including physical and occupational therapy, physicians' assistants, cardiopulmonary rehabilitation, sports medicine-athletic training, chiropractic medicine, and others. This degree also prepares students for advanced graduate study in integrated human and exercise physiology. Most clinical health-care professions require education beyond the bachelor degree level. Additional courses may be needed to satisfy all prerequisites for admission eligibility to some graduate and professional programs.

A grade of C or higher is required in all pre-admission, required courses, and elective courses in this major.

Pre-admission Requirements

- CHEM 111 - Introduction to Chemistry **Credits:** (4)
- CHEM 111LAB - Introductory Chemistry Laboratory **Credits:** (1)
- **OR** CHEM 181 - General Chemistry I **Credits:** (4)
- CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)
  AND
- CHEM 112 - Introduction to Organic Chemistry **Credits:** (4)
- CHEM 112LAB - Introduction to Organic Chemistry Laboratory **Credits:** (1)
- **OR** CHEM 182 - General Chemistry II **Credits:** (4)
- CHEM 182LAB - General Chemistry Laboratory II **Credits:** (1)
  AND
- CHEM 113 - Introduction to Biochemistry **Credits:** (4)
- CHEM 113LAB - Introduction to Biochemistry Laboratory **Credits:** (1)
- **OR** CHEM 183 - General Chemistry III **Credits:** (4)
- CHEM 183LAB - General Chemistry Laboratory III **Credits:** (1)
  AND
- PHYS 111 - Introductory Physics **Credits:** (4)
- PHYS 111LAB - Introductory Physics Laboratory **Credits:** (1)
- **OR** PHYS 181 - General Physics **Credits:** (4)
- PHYS 181LAB - General Physics Laboratory **Credits:** (1)

Pre-admission Total Credits: 20

Required Courses

- BIOL 355 - Human Anatomy and Physiology I **Credits:** (5)
- BIOL 356 - Human Anatomy and Physiology II **Credits:** (5)
- EXSC 350 - Gross Anatomy **Credits:** (3)
- EXSC 350LAB - Gross Anatomy Laboratory **Credits:** (2)
- EXSC 351 - Physiology **Credits:** (4)
- EXSC 351LAB - Physiology Laboratory **Credits:** (1)
- EXSC 352 - Assessment and Treatment of Athletic Injuries **Credits:** (4)
- EXSC 370 - Biomechanics **Credits:** (5)
- EXSC 450 - Physiology of Exercise **Credits:** (4)
- EXSC 450LAB - Physiology of Exercise Laboratory **Credits:** (1)
- EXSC 455 - Fitness Assessment and Exercise Prescription **Credits:** (4)
- EXSC 455LAB - Fitness Assessment and Exercise Prescription Laboratory **Credits:** (1)
- EXSC 456 - Clinical Physiology **Credits:** (4)
- EXSC 470 - Clinical Biomechanics **Credits:** (3)
- EXSC 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 12 credits)
- EXSC 495B - Practicum: Clinical **Credits:** (2)

Total Required Courses Credits: 60

Choose from the following electives:

- BIOL 322 - Introductory Microbiology **Credits:** (5)
- BIOL 323 - Microbiology **Credits:** (5)
- BIOL 353 - Integrative Anatomy **Credits:** (6)

- EMS 443 - Myocardial Disease and Basic Electrocardiography **Credits:** (4)
- EMS 444 - Twelve-lead Electrocardiography **Credits:** (4)
- EXSC 438 - Therapeutic Exercise **Credits:** (3)
- EXSC 446 - Sports Nutrition **Credits:** (3)
- EXSC 452 - Therapeutic Modalities **Credits:** (3)
- NUTR 433 - Macronutrients **Credits:** (3)
- NUTR 443 - Metabolism and Micronutrients **Credits:** (5)
- PHYS 112 - Introductory Physics II **Credits:** (4)
- PHYS 112LAB - Introductory Physics Laboratory II **Credits:** (1)
- PHYS 113 - Introductory Physics III **Credits:** (4)
- PHYS 113LAB - Introductory Physics Laboratory III **Credits:** (1)
- PHYS 182 - General Physics II **Credits:** (4)
- PHYS 182LAB - General Physics Laboratory II **Credits:** (1)
- PHYS 183 - General Physics III **Credits:** (4)
- PHYS 183LAB - General Physics Laboratory III **Credits:** (1)
- PSY 313 - Developmental Psychology **Credits:** (4)
- PSY 314 - Human Development and the Learner **Credits:** (4)
- PSY 362 - Introductory Statistics **Credits:** (5)
- PSY 421 - Human Neuroanatomy **Credits:** (4)
- PSY 449 - Abnormal Psychology **Credits:** (4)
- PSY 478 - Behavioral Neuroscience **Credits:** (4)

Total Elective Credits: 20

Total Credits: 100

EMS Paramedicine Major, BS

Program Director
Keith A. Monosky, PhD, MPM, EMT-P

Medical Program Director
Jackson Horsley, MD

Program Coordinator
Vickie Ostrow

Faculty
Robert Carlson, BA, EMT-P
Steve Chrisman, MS, EMT-P
Rich Elliot, MBA, EMT
Liesl Jones
Dan Limmer, NREMT-P
Keith A. Monosky, PhD, MPM, EMT-P
James Pierce, EMT-P
Lenny Ugaitafa, BS, EMT-P

The EMS paramedicine major is designed for students who plan to become a certified pre-hospital professional in emergency medical services. The paramedicine major provides the graduate with the requisite skill sets for entry-level competence in advanced life support emergency medical services, as well as superior skills in advanced life support and leadership abilities in emergency medical services.

The delivery format includes classroom lectures, group discussions, laboratory skills training, hospital clinical experience with observations and practice, field internships, educational internships, administrative internships, pre-hospital research, and simulated scenario-based exercises of complex patient condition which willfully prepare the student for occupations in advanced emergency medical services. This nationally-accredited program meets all of the national curriculum and Washington State standards.

In addition to general admissions, all applicants must meet specific entrance criteria (including a current EMT certification) and be approved by the paramedic selection committee before being admitted into the program. Admission to CWU does not assure entry into the paramedicine major.

Advanced Standing is an option for currently certified and practicing paramedics to earn their Bachelor of Science degree and EMS Paramedicine. This option is made available only for currently certified paramedics that received their education from accredited institutions and that reside in a state that participates in online instruction with Washington State.

Upon acceptance into the Advanced Standing status of the online EMS Paramedicine program, the student shall be awarded up to 44 credits in experiential learning in the major. The explanation of requirements and the substitution of major courses are listed at www.cwu.edu/health-science/paramedicine.

Completion of the major listed below and other degree requirements leads to the Bachelor of Science in paramedicine and eligibility to take the National Registry EMTs examination for paramedic certification. For students not seeking a degree, a certification option is available.

Required Courses for Entry:

- EXSC 350 - Gross Anatomy **Credits:** (3)

- EXSC 350LAB - Gross Anatomy Laboratory **Credits:** (2)
- EXSC 351 - Physiology **Credits:** (4)
- EXSC 351LAB - Physiology Laboratory **Credits:** (1)
- EMS 440 - Medical Mathematics and Terminology **Credits:** (2)

Required Courses

- EMS 335 - Paramedicine I **Credits:** (4)
- EMS 335LAB - Advanced Clinical Practice I **Credits:** (2)
- EMS 336 - Paramedicine II **Credits:** (4)
- EMS 336LAB - Advanced Clinical Practice II **Credits:** (2)
- EMS 337 - Paramedicine III **Credits:** (3)
- EMS 337LAB - Advanced Clinical Practice III **Credits:** (2)
- EMS 350 - Paramedicine Instructional Methodologies **Credits:** (2)
- EMS 430 - Problem-based Learning I **Credits:** (4)
- EMS 431 - Problem-based Learning II **Credits:** (4)
- EMS 441 - General Pharmacology for Paramedics **Credits:** (3)
- EMS 443 - Myocardial Disease and Basic Electrocardiography **Credits:** (4)
- EMS 444 - Twelve-lead Electrocardiography **Credits:** (4)
- EMS 451 - Advanced Trauma Care **Credits:** (3)
- EMS 455 - Introduction to Pathophysiology **Credits:** (3)
- EMS 459 - Emergencies in Pediatric/Geriatric Care **Credits:** (3)
- EMS 460 - Research in EMS I **Credits:** (3)
- EMS 461 - Research in EMS II **Credits:** (3)
- EMS 465 - Educational Methodologies in EMS **Credits:** (3)
- EMS 470 - Current Topics in Emergency Medicine **Credits:** (3)
- EMS 475 - EMS Response to Terrorism **Credits:** (3)
- EMS 480 - Financial Analysis of EMS Systems **Credits:** (3)
- EMS 481 - Quality Improvement and Administration of EMS **Credits:** (3)
- EMS 482 - Systems Analysis of EMS **Credits:** (4)
- EMS 485 - Strategic Planning for EMS **Credits:** (3)
- EMS 488 - Health Policy in EMS **Credits:** (3)
- EMS 489 - Leadership in EMS **Credits:** (3)
- EMS 493A - Paramedicine Internship I **Credits:** (3)
- EMS 493B - Paramedicine Internship II **Credits:** (4)
- EMS 493C - Paramedicine Internship III **Credits:** (5)

Total Credits: 105

Exercise Science Major, BS

Program Director
Timothy Burnham, PhD

Faculty
Susan Blair, MS, AT-C
Timothy Burnham PhD
Leonardo D'Acquisto, EdD
Eric Foch, PhD
Vincent Nethery, PhD
Kelly Pritchett, PhD, RDN
Robert Pritchett, PhD
Karen Roemer, PhD

The Exercise Science Program prepares student to enter career areas where exercise is an integral part of general health and human performance. Such areas include corporate health-wellness, private health-fitness clubs, diverse non-profit fitness-wellness agencies such as YMCA, and athletic performance including strength and conditioning.

Admission Requirements
Admission to the Bachelor of Science in exercise science is selective. For details on eligibility for admission, please see program components noted below, paying special attention to pre-admission requirements.

Grade Requirement
A grade of "C" or higher is required for all courses in major and minor programs.

Required Pre-admission Courses

The following pre-admission courses must be completed prior to gaining full admission to the major.

- BIOL 201 - Human Physiology **Credits:** (5)
- CHEM 111 - Introduction to Chemistry **Credits:** (4)
- CHEM 111LAB - Introductory Chemistry Laboratory **Credits:** (1)
- CHEM 112 - Introduction to Organic Chemistry **Credits:** (4)
- CHEM 112LAB - Introduction to Organic Chemistry Laboratory **Credits:** (1)
- EXSC 254 - Foundations of Fitness **Credits:** (3)

- PHYS 111 - Introductory Physics **Credits:** (4)
- PHYS 111LAB - Introductory Physics Laboratory **Credits:** (1)
- **OR** PHYS 181 - General Physics **Credits:** (4)
- *AND* PHYS 181LAB - General Physics Laboratory **Credits:** (1)

Pre-admission Total Credits: 23

Required Courses

- CHEM 113 - Introduction to Biochemistry **Credits:** (4)
- CHEM 113LAB - Introduction to Biochemistry Laboratory **Credits:** (1)
- EXSC 350 - Gross Anatomy **Credits:** (3)
- EXSC 350LAB - Gross Anatomy Laboratory **Credits:** (2)
- EXSC 351 - Physiology **Credits:** (4)
- EXSC 351LAB - Physiology Laboratory **Credits:** (1)
- EXSC 352 - Assessment and Treatment of Athletic Injuries **Credits:** (4)
- EXSC 370 - Biomechanics **Credits:** (5)
- EXSC 446 - Sports Nutrition **Credits:** (3)
- EXSC 450 - Physiology of Exercise **Credits:** (4)
- EXSC 450LAB - Physiology of Exercise Laboratory **Credits:** (1)
- EXSC 455 - Fitness Assessment and Exercise Prescription **Credits:** (4)
- EXSC 455LAB - Fitness Assessment and Exercise Prescription Laboratory **Credits:** (1)
- EXSC 456 - Clinical Physiology **Credits:** (4)
- EXSC 471 - Sports Biomechanics **Credits:** (3)
- EXSC 480 - Science of Resistance Exercise **Credits:** (4)
- EXSC 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 12 credits)
- EXSC 495A - Practicum: Fitness Centers/Clubs **Credits:** (2)
- **OR** EXSC 495B - Practicum: Clinical **Credits:** (2)
- EXSC 495D - Practicum: Laboratory Assessment **Credits:** (2)

Required Courses Total Credits: 64

Electives

- ACCT 301 - Financial Accounting Analysis **Credits:** (5)
- BUS 241 - Legal Environment of Business **Credits:** (5)
- COM 345 - Business and Professional Speaking **Credits:** (4)
- ECON 201 - Principles of Economics Micro **Credits:** (5)
- HRM 381 - Management of Human Resources **Credits:** (5)
- MGT 380 - Organizational Management **Credits:** (5)
- MKT 360 - Principles of Marketing **Credits:** (5)
- PSY 401 - Psychology of Sport **Credits:** (4)
- PSY 449 - Abnormal Psychology **Credits:** (4)

Electives Total Credits: 15

Total Credits: 102

Food Science and Nutrition BS, Dietetics Specialization

Food Science and Nutrition Core

Program Director
David Gee, PhD

Faculty
Ethan Bergman, PhD, RDN
David Gee, PhD
Susan Hawk, PhD, RDN
Dana Ogan, MS, RDN, CD
Kelly Pritchett, PhD, RDN,CSSD
Nicole Stendell-Hollis, PhD, RDN

The bachelor of science in food science and nutrition prepares students for employment or advanced study in one of several professions in the broad area of foods and nutrition. To complete degree requirements, students must complete the required core courses listed below. Students must also complete courses listed in their chosen specialization (foods and nutrition, dietetics, nutrition science).

Admission Requirements
Students wishing to attain full admission to the BS in food science and nutrition major must meet the following requirements:

- Successful completion of NUTR 101, Introduction to Human Nutrition, NUTR 240, Introduction to Foods and NUTR 240LAB, Introduction to Foods Laboratory with a grade of B (3.0) or higher.
- Students must receive a grade of C (2.0) or higher in all of the other major courses.

In addition to the requirements listed above, students wishing to enter any of the food science and nutrition specializations must successfully complete CHEM 111, Introduction to Chemistry, CHEM 111LAB, Chemistry Laboratory or CHEM 181, General Chemistry I and CHEM 181LAB, General Chemistry Laboratory I, and MATH 100C, Intermediate Algebra, or their equivalents, before being admitted to the major. Students must consult with a major advisor for approval of the program specialization.

Students are highly encouraged to complete at least five credits of NUTR 490, Cooperative Education.

Core Requirements

- NUTR 101 - Introduction to Human Nutrition **Credits:** (5)
- NUTR 240 - Introduction to Foods **Credits:** (2)
- NUTR 240LAB - Introduction to Foods Laboratory **Credits:** (2)
- NUTR 344 - Medical Nutrition Therapy I **Credits:** (3)
- NUTR 345 - Nutrition and the Lifecycle **Credits:** (5)
- NUTR 350 - Weight Management **Credits:** (3)
- NUTR 447 - Community Nutrition **Credits:** (3)

Select either:

- EDCS 312 - Educational Statistics **Credits:** (4)
- **OR** PSY 362 - Introductory Statistics **Credits:** (5)

Total Core Credits: 27-28

Dietetics Specialization

The dietetics specialization is a program accredited by the Accreditation Council Education in Nutrition and Dietetics (ACEND). In addition to those classes required for the Dietetics Specialization, ANTH 130 and PSY 101 are required to meet the knowledge requirements set forth by ACEND, 120 South Riverside Plaza Ste. 2000, Chicago, IL 60606-6995, 312-899-0040, ext, 5400). ACEND is a specialized accrediting body recognized by the Council on Post-secondary Accreditation and the United States Department of Education. Completion of this program qualifies the student to apply for admission to an ACEND accredited Supervised Practice Experience, also known as a dietetic internship. Following this the student is eligible to sit for the registration examination. Passing the registration exam qualifies the graduate to become a registered dietitian nutritionist (RDN).

Pre-specialization Major Requirements

Prior to being admitted into the dietetics specialization, students shall apply to the BS in food science and nutrition major with a specialization in foods and nutrition and must then complete the core requirements plus the following courses:

- BIOL 201 - Human Physiology **Credits:** (5)

- CHEM 111 - Introduction to Chemistry **Credits:** (4)
- **AND** CHEM 111LAB - Introductory Chemistry Laboratory **Credits:** (1)
- **OR** CHEM 181 - General Chemistry I **Credits:** (4)
- **AND** CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)

- CHEM 112 - Introduction to Organic Chemistry **Credits:** (4)
- CHEM 112LAB - Introduction to Organic Chemistry Laboratory **Credits:** (1)
- CHEM 113 - Introduction to Biochemistry **Credits:** (4)
- CHEM 113LAB - Introduction to Biochemistry Laboratory **Credits:** (1)
- NUTR 343 - Foods and Nutrition Professionalism **Credits:** (1)

Total Pre-specialization Requirement Credits: 21

Additional Courses

In addition to successfully completing all of the pre-specialization courses, applicants to this specialization must have CWU/Transfer combined GPA of at least 3.0 at the time of application and a GPA in all of the pre-major classes of 3.0. Students planning on entering the dietetics specialization are encouraged to declare their major in the BS food science and nutrition with a foods and nutrition specialization as early in their studies as possible so that they may be assigned a major advisor and receive proper advising in this field.

- BIOL 220 - Introductory Cell Biology **Credits:** (5)

- BIOL 322 - Introductory Microbiology **Credits:** (5)
- **OR** BIOL 323 - Microbiology **Credits:** (5)

- NUTR 340 - Management of Food Resources **Credits:** (2)
- NUTR 340LAB - Management of Food Resources Laboratory **Credits:** (1)

- NUTR 342 - Quantity Food Production and Service **Credits:** (4)
- NUTR 342LAB - Quantity Food Production and Service Laboratory **Credits:** (1)
- NUTR 347 - Nutrition Education and Counseling **Credits:** (4)
- NUTR 433 - Macronutrients **Credits:** (3)
- NUTR 440 - Experimental Foods **Credits:** (2)
- NUTR 440LAB - Experimental Foods Laboratory **Credits:** (1)
- NUTR 442 - Nutrition Assessment Laboratory **Credits:** (2)
- NUTR 443 - Metabolism and Micronutrients **Credits:** (5)
- NUTR 444 - Medical Nutrition Therapy II **Credits:** (3)
- NUTR 445 - Experimental Food Research **Credits:** (1)
- NUTR 445LAB - Experimental Food Research Laboratory **Credits:** (1)
- NUTR 446 - Sports Nutrition **Credits:** (3)
- NUTR 448 - Food Service Systems Management **Credits:** (4)

Total Additional Course Credits: 47

Total Credits: 95-96

Additional Information

Students wishing to apply for admission into an ACEND-accredited dietetic internship must be successfully admitted to the Dietetics Specialization, complete the major requirements plus the following two courses: ANTH 130, Introduction to Cultural Anthropology (5) OR ANTH 357, Medical Anthropology: Cross-Cultural Perspectives on Health and Healing (4), and PSY 101, General Psychology (5). These courses may also meet breadth requirements at Central Washington University.

The requirement for CHEM 111, 111LAB, Introduction to Chemistry and Laboratory, may be met by satisfactorily completing CHEM 181, 181LAB, 182, 182LAB, and 183, 183LAB General Chemistry and Laboratory. The requirement for CHEM 112, 112LAB, Introduction to Organic Chemistry and Laboratory, may be met by satisfactorily completing CHEM 361, 361LAB, 362, and 363 Organic Chemistry and Laboratory. The requirement for CHEM 113, 113LAB, Introduction to Biochemistry, may be met by satisfactorily completing CHEM 431, 431LAB and 432, Biochemistry and Laboratory. The requirement for BIOL 201, Human Physiology, may be met by satisfactorily completing BIOL 355, 356, Human Anatomy and Physiology. Students interested in applying to nursing programs following the completion of this degree should take BIOL 355 and BIOL 356 instead of BIOL 201.

Food Science and Nutrition BS, Foods and Nutrition Specialization

Food Science and Nutrition Core

Program Director
David Gee, PhD

Faculty
Ethan Bergman, PhD, RDN
David Gee, PhD
Susan Hawk, PhD, RDN
Dana Ogan, MS, RDN, CD
Kelly Pritchett, PhD, RDN,CSSD
Nicole Stendell-Hollis, PhD, RDN

The bachelor of science in food science and nutrition prepares students for employment or advanced study in one of several professions in the broad area of foods and nutrition. To complete degree requirements, students must complete the required core courses listed below. Students must also complete courses listed in their chosen specialization (foods and nutrition, dietetics, nutrition science).

Admission Requirements
Students wishing to attain full admission to the BS in food science and nutrition major must meet the following requirements:

- Successful completion of NUTR 101, Introduction to Human Nutrition, NUTR 240, Introduction to Foods and NUTR 240LAB, Introduction to Foods Laboratory with a grade of B (3.0) or higher.
- Students must receive a grade of C (2.0) or higher in all of the other major courses.

In addition to the requirements listed above, students wishing to enter any of the food science and nutrition specializations must successfully complete CHEM 111, Introduction to Chemistry, CHEM 111LAB, Chemistry Laboratory or CHEM 181, General Chemistry I and CHEM 181LAB, General Chemistry Laboratory I, and MATH 100C, Intermediate Algebra, or their equivalents, before being admitted to the major. Students must consult with a major advisor for approval of the program specialization.

Students are highly encouraged to complete at least five credits of NUTR 490, Cooperative Education.

Core Requirements

- NUTR 101 - Introduction to Human Nutrition **Credits:** (5)
- NUTR 240 - Introduction to Foods **Credits:** (2)
- NUTR 240LAB - Introduction to Foods Laboratory **Credits:** (2)
- NUTR 344 - Medical Nutrition Therapy I **Credits:** (3)
- NUTR 345 - Nutrition and the Lifecycle **Credits:** (5)
- NUTR 350 - Weight Management **Credits:** (3)
- NUTR 447 - Community Nutrition **Credits:** (3)

Select either:

- EDCS 312 - Educational Statistics **Credits:** (4)
- **OR** PSY 362 - Introductory Statistics **Credits:** (5)

Total Core Credits: 27-28

Foods and Nutrition Specialization

The foods and nutrition specialization prepares students for a wide variety of careers in the food and nutrition industry including food processing companies (quality assurance and product development positions), food distributors, food brokerage companies, restaurant and institutional food service, pharmaceutical sales, and nutrition positions not requiring being a registered dietitian. It is highly recommended that students discuss possible minors with their academic advisor that would complement this specialization and enhance employment opportunities. Possible minors include food service management, exercise science, community health education, business, and administrative management. Students interested in applying to nursing programs following the completion of this degree are recommended to take BIOL 355 and BIOL 356, Human Anatomy and Physiology, instead of BIOL 201, Human Physiology and BIOL 220, Introductory Cell Biology, plus BIOL 322, Introductory Microbiology.

Required Courses

- BIOL 201 - Human Physiology **Credits:** (5)

- CHEM 111 - Introduction to Chemistry **Credits:** (4)
- **AND** CHEM 111LAB - Introductory Chemistry Laboratory **Credits:** (1)
  OR
- CHEM 181 - General Chemistry I **Credits:** (4)
- **AND** CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)

- CHEM 112 - Introduction to Organic Chemistry **Credits:** (4)
- CHEM 112LAB - Introduction to Organic Chemistry Laboratory **Credits:** (1)
- CHEM 113 - Introduction to Biochemistry **Credits:** (4)
- CHEM 113LAB - Introduction to Biochemistry Laboratory **Credits:** (1)
- NUTR 340 - Management of Food Resources **Credits:** (2)
- NUTR 340LAB - Management of Food Resources Laboratory **Credits:** (1)
- NUTR 342 - Quantity Food Production and Service **Credits:** (4)
- NUTR 342LAB - Quantity Food Production and Service Laboratory **Credits:** (1)
- NUTR 343 - Foods and Nutrition Professionalism **Credits:** (1)
- NUTR 347 - Nutrition Education and Counseling **Credits:** (4)
- NUTR 433 - Macronutrients **Credits:** (3)
- NUTR 440 - Experimental Foods **Credits:** (2)
- NUTR 440LAB - Experimental Foods Laboratory **Credits:** (1)
- NUTR 445 - Experimental Food Research **Credits:** (1)
- NUTR 445LAB - Experimental Food Research Laboratory **Credits:** (1)
- NUTR 446 - Sports Nutrition **Credits:** (3)
- NUTR 448 - Food Service Systems Management **Credits:** (4)

Total Required Course Credits: 48

Total Credits: 75-76

Athletic Training Minor

This minor provides students with exposure to the knowledge and skills needed to become an athletic trainer: however, it does not qualify students to sit for board certification. Students interested in becoming NATA certified should contact the National Athletic Trainer's Association for more information. This minor is designed primarily for those individuals who major in disciplines such as nutrition, biology, physical and health education, and public health. This minor may also be of interest for students in pre-professional programs including pre-medicine, pre-chiropractic, pre-occupational therapy, and pre-physical therapy. Courses in this minor may also be used to satisfy requirements in other major programs. For information, please contact Vince Nethery, netheryv@cwu.edu.

Required Courses

- EXSC 350 - Gross Anatomy **Credits:** (3)
- EXSC 350LAB - Gross Anatomy Laboratory **Credits:** (2)
- EXSC 351 - Physiology **Credits:** (4)
- EXSC 351LAB - Physiology Laboratory **Credits:** (1)
- EXSC 352 - Assessment and Treatment of Athletic Injuries **Credits:** (4)
- EXSC 370 - Biomechanics **Credits:** (5)
- EXSC 438 - Therapeutic Exercise **Credits:** (3)
- EXSC 446 - Sports Nutrition **Credits:** (3)
- EXSC 450 - Physiology of Exercise **Credits:** (4)
- EXSC 450LAB - Physiology of Exercise Laboratory **Credits:** (1)
- EXSC 452 - Therapeutic Modalities **Credits:** (3)
- EXSC 470 - Clinical Biomechanics **Credits:** (3)

Total Credits: 36

Exercise Science Minor

This minor is designed primarily for those individuals who major in disciplines such as nutrition, biology, physical education, public health, and business. This minor may also be of interest for students in pre-professional programs including pre-medicine, pre-chiropractic, pre-occupational therapy, and pre-physical therapy. Courses in this minor may also be used to satisfy requirements in other major programs. For information, please contact Tim Burnham, tim.burnham@cwu.edu.

Required Courses Credits: 20

- EXSC 350 - Gross Anatomy **Credits:** (3)
- EXSC 350LAB - Gross Anatomy Laboratory **Credits:** (2)
- EXSC 351 - Physiology **Credits:** (4)
- EXSC 351LAB - Physiology Laboratory **Credits:** (1)
- EXSC 370 - Biomechanics **Credits:** (5)
- EXSC 450 - Physiology of Exercise **Credits:** (4)
- EXSC 450LAB - Physiology of Exercise Laboratory **Credits:** (1)

Select from two of the following: Credits: 4-8

- EXSC 446 - Sports Nutrition **Credits:** (3)
- EXSC 455 - Fitness Assessment and Exercise Prescription **Credits:** (4)
- EXSC 455LAB - Fitness Assessment and Exercise Prescription Laboratory **Credits:** (1)
- EXSC 471 - Sports Biomechanics **Credits:** (3)
- PSY 401 - Psychology of Sport **Credits:** (4)

Total Credits: 24-28

Food Service Management Minor

This minor is designed primarily for students earning degrees in business administration or in tourism management that will allow them better access to careers in food service management. Courses in this 26- to 27-credit minor may also be used to satisfy requirements in other major programs. This minor may not be used for students earning a BS degree in food science and nutrition or a BAS in food service management.

Required Courses: Credits (22)

- NUTR 101 - Introduction to Human Nutrition **Credits:** (5)
- NUTR 240 - Introduction to Foods **Credits:** (2)
- NUTR 340 - Management of Food Resources **Credits:** (2)
- NUTR 342 - Quantity Food Production and Service **Credits:** (4)
- NUTR 448 - Food Service Systems Management **Credits:** (4)
- NUTR 490 - Cooperative Education **Credits:** (1-12) (Must be taken for at least 5 credits)

Department-approved electives Credits (4-5)

- MGT 380 - Organizational Management **Credits:** (5)
- NUTR 240LAB - Introduction to Foods Laboratory **Credits:** (2)

- NUTR 340LAB - Management of Food Resources Laboratory **Credits:** (1)
- NUTR 342LAB - Quantity Food Production and Service Laboratory **Credits:** (1)
- NUTR 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 5 credits)

Total Credits: 26-27

Nutrition Minor

This program is designed primarily for those individuals in other majors who desire a more in-depth study of nutrition. This program is intended for students in majors such as exercise science, family studies, physical and health education, and public health. This minor may also be of interest for students in pre-professional programs including pre-medicine, pre-dentistry, pre-veterinary, and pre-physical therapy. Courses in this minor may also be used to satisfy requirements in other major programs.

Students wishing to attain full admission to the minor must meet the following requirements: Successful completion of NUTR 101 - Introduction to Human Nutrition, NUTR 240 - Introduction to Foods, and NUTR 240LAB- Introduction to Foods Laboratory with a grade of B (3.0) or higher. Students must receive a grade of C (2.0) or higher in all other minor courses.

Required Courses

- NUTR 101 - Introduction to Human Nutrition **Credits:** (5)
- NUTR 240 - Introduction to Foods **Credits:** (2)
- NUTR 240LAB - Introduction to Foods Laboratory **Credits:** (2)
- NUTR 340 - Management of Food Resources **Credits:** (2)
- NUTR 340LAB - Management of Food Resources Laboratory **Credits:** (1)
- NUTR 345 - Nutrition and the Lifecycle **Credits:** (5)
- NUTR 350 - Weight Management **Credits:** (3)

Department-approved Electives - Credits: (3-5)

- NUTR 346 - Theory and Treatment of Eating Disorders **Credits:** (3)
- NUTR 347 - Nutrition Education and Counseling **Credits:** (4)
- NUTR 446 - Sports Nutrition **Credits:** (3)
- NUTR 447 - Community Nutrition **Credits:** (3)
- NUTR 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 5 credits)

Total Credits: 23-25

Philosophy and Religious Studies Department

College of Arts and Humanities
Ellensburg
Language and Literature Bldg., room 337
Mail Stop 7555
509-963-1818
Fax 509-963-1822
www.cwu.edu/philosophy
See website for how these programs may be used for educational and career purposes.

Faculty and Staff
Chair
Matthew Altman, PhD

Professors
Cynthia Coe, PhD, 20th century continental philosophy, feminist philosophy, 19th century philosophy, critical race theory
Jeffrey Dippmann, PhD, world religions, Chinese Buddhism, Daoism; director of Asia/Pacific studies

Associate Professors
Matthew Altman, PhD, Kant, ethics and applied ethics, 19th century philosophy, social and political philosophy, philosophy of law, philosophy of art
Gary Bartlett, PhD, philosophy of mind, philosophy of science, cognitive science, epistemology

Assistant Professor
Michael Goerger, PhD, ethical theory, ancient Greco-Roman philosophy, applied ethics, social and political philosophy

Visiting Assistant Professor
Anne Blankenship, PhD, religion and politics, Christianity, new religious movements, religion in America

Senior Lecturer
Karen Turcotte, MA, philosophy and world religions, women/gender and religion, philosophy of humor

Lecturers
Michelle Carpenter, PhD, ancient Greek philosophy, ethics
Michael Fletcher, PhD, history of modern philosophy (Kant), philosophy of mind, logic and critical thinking, history of Western philosophy
Geraldine O'Mahony, MDiv, MA, African politics and development, politics, Islamic studies, divinity

Staff
Kristy Magdlin, secretary senior

Department Information
The original meaning of the word philosophy is "the love of wisdom." Philosophy therefore represents an ongoing process of critical and speculative inquiry into questions representing people's deepest concerns, such as the meaning of existence, the nature of reality, and the grounds of human conduct. The religious studies specialization is a path of inquiry into the nature of religion, its pervasive role in human life, and its contribution to understanding human existence.

Bachelor of Arts
Philosophy Major
Students may choose either a 50-credit major or a 62-credit major. In order to graduate, a student who completes the 50-credit major must also have a minor or second major in another discipline. A student who completes the 62-credit major is not required to have a minor or second major.

Maximum Credit Overlap
No more than 10 credits of coursework counting toward any of the department's major or minor programs may also be counted toward one of the department's other programs.

Departmental Honors in Philosophy and Religious Studies
The honors program in Philosophy and Religious Studies recognizes the exceptional scholarship of qualified students in either the Philosophy major or the Religious Studies specialization. To qualify, students must have completed at least 25 credits in their major or specialization and have a minimum GPA of 3.0 overall and 3.5 in their major coursework.

In addition to their normal coursework, students seeking departmental honors must take one additional upper division course in their program, complete a superior thesis (PHIL 497 or RELS 497: Honors Thesis) to be evaluated by a second reader from the departmental faculty, and make an oral presentation. Students graduating with honors will have that accomplishment recorded on their transcripts.

Bachelor of Arts
(NOTE: Students seeking a BA degree must complete one year college/university study or two years high school study of a single world language.)

Philosophy Major, BA (50 or 62 credits)

Students may choose either a 50-credit major or a 62-credit major. In order to graduate, a student who completes the 50-credit major must also have a minor or second major in another discipline. A student who completes the 62-credit major is not required to have a minor or second major.

Departmental Honors in Philosophy and Religious Studies
The honors program in Philosophy and Religious Studies recognizes the exceptional scholarship of qualified students in either the Philosophy major or Religious Studies specialization. To qualify, students must have completed at least 25 credits in their major or specialization and have a minimum GPA of 3.0 overall and 3.5 in their major coursework.

In addition to their normal coursework, students seeking departmental honors must take one additional upper division course in their program, complete a superior thesis (RELS 497: Honors Thesis) to be evaluated by a second reader from the departmental faculty, and make an oral presentation. Students graduating with honors will have that accomplishment recorded on their transcripts.

Philosophy Core Requirements

- PHIL 302 - Ethical Theory **Credits:** (5)
  Select either:
- PHIL 352 - Greek and Roman Philosophy **Credits:** (5)
- **OR** PHIL 209 - Asian Philosophy **Credits:** (5)
  Select either:
- PHIL 353 - Early Modern Philosophy **Credits:** (5)
- **OR** PHIL 305 - Philosophy of Religion **Credits:** (5)
  Select either:
- PHIL 354 - Kant and the 19th Century Philosophy **Credits:** (5)
- **OR** RELS 376 - Contemporary Religious Thought **Credits:** (5)
  Select either:
- PHIL 494 - Undergraduate Thesis Preparation **Credits:** (2)
- **OR** RELS 494 - Undergraduate Thesis Preparation **Credits:** (2)
  Select either:
- PHIL 495 - Undergraduate Thesis **Credits:** (3)
- **OR** RELS 495 - Undergraduate Thesis **Credits:** (3)
- PHIL 497 - Honors Thesis **Credits:** (3)
- **OR** RELS 497 - Honors Thesis **Credits:** (3)

NOTE: PHIL 209, PHIL 305, RELS 376, RELS 494, RELS 495, PHIL 497 and RELS 497 are by advisor's approval.

Total Core Credits: 25

Required Courses

- PHIL 150 - Critical Thinking **Credits:** (5)
- **OR** PHIL 307 - Introduction to Formal Logic **Credits:** (5)
  AND
- PHIL 488 - Junior Seminar **Credits:** (5)
- PHIL 490 - Cooperative Education **Credits:** (1-12) **Credits: (2)** (required only for the 62 credit major)

Select one course from the following contemporary-based courses - Credits: (5)

- PHIL 304 - Business Ethics **Credits:** (5)
- PHIL 308 - Medical Ethics **Credits:** (5)
- PHIL 358 - Existentialism **Credits:** (5)
- PHIL 361 - Theory of Knowledge **Credits:** (5)
- PHIL 364 - Philosophy of Mind **Credits:** (5)
- PHIL 380 - Philosophy of Science **Credits:** (5)
- PHIL 459 - Phenomenology **Credits:** (5)

Select one course from the following diversity courses - Credits: (5)

- PHIL 325 - Women and Philosophy **Credits:** (5)
- PHIL 345 - Chinese Philosophy **Credits:** (5)
- PHIL 356 - American Philosophies **Credits:** (5)
- PHIL 357 - Philosophy of Race **Credits:** (5)

Philosophy electives - Credits: 5-15

Any PHIL courses (at most 5 credits at the 100- or 200-level).

Total Credits: 50 or 62

Philosophy Major, BA (50 or 62 credits), Religious Studies Specialization

The religious studies specialization is comparative in nature, but complemented by a philosophical component focused on religion and unique electives designed to accommodate student interests. Students may choose either a 50- or 62-credit specialization. In order to graduate, a student who completes the 50-credit major or 50-credit specialization must also have a minor or second major in another discipline. A student who completes the 62-credit major is not required to have a minor or second major.

Departmental Honors in Philosophy and Religious Studies
The honors program in Philosophy and Religious Studies recognizes the exceptional scholarship of qualified students in either the Philosophy major or Religious Studies specialization. To qualify, students must have completed at least 25 credits in their major or specialization and have a minimum GPA of 3.0 overall and 3.5 in their major coursework.

In addition to their normal coursework, students seeking departmental honors must take one additional upper division course in their program, complete a superior thesis (RELS 497: Honors Thesis) to be evaluated by a second reader from the departmental faculty, and make an oral presentation. Students graduating with honors will have that accomplishment recorded on their transcripts.

Philosophy Core Requirements

- PHIL 302 - Ethical Theory **Credits:** (5)
  Select either:
- PHIL 352 - Greek and Roman Philosophy **Credits:** (5)
- **OR** PHIL 209 - Asian Philosophy **Credits:** (5)
  Select either:
- PHIL 353 - Early Modern Philosophy **Credits:** (5)
- **OR** PHIL 305 - Philosophy of Religion **Credits:** (5)
  Select either:
- PHIL 354 - Kant and the 19th Century Philosophy **Credits:** (5)
- **OR** RELS 376 - Contemporary Religious Thought **Credits:** (5)
  Select either:
- PHIL 494 - Undergraduate Thesis Preparation **Credits:** (2)

- **OR** RELS 494 - Undergraduate Thesis Preparation **Credits:** (2)
  Select either:
- PHIL 495 - Undergraduate Thesis **Credits:** (3)
- **OR** RELS 495 - Undergraduate Thesis **Credits:** (3)
- PHIL 497 - Honors Thesis **Credits:** (3)
- **OR** RELS 497 - Honors Thesis **Credits:** (3)

  NOTE: PHIL 209, PHIL 305, RELS 376, RELS 494, RELS 495, PHIL 497 and RELS 497 are by advisor's approval.

Total Core Credits: 25

Required Courses

- RELS 101 - World Religions **Credits:** (5)
- RELS 201 - Sacred Books of the World **Credits:** (5)
- RELS 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 2 credits) (required only for the 62 credit major)

History of religions required courses - Credits: (10)

- RELS 351 - Religions of China and Japan **Credits:** (5)
- **OR** RELS 352 - Religions of India **Credits:** (5)
- RELS 353 - Judaism **Credits:** (5)
- **OR** RELS 354 - Christianity **Credits:** (5)
- **OR** RELS 355 - Islam **Credits:** (5)

Department-approved electives - Credits: 5-15

Any RELS upper-division courses (at least 5 credits at the 400-level) and department-approved courses.

Total Credits: 50 or 62

Ethics Minor

A minor in ethics enables students to develop a strong sense of moral responsibility and critical skills for moral reflection. It consists of required courses in global ethics or current ethical issues, coursework in philosophical ethics, as well as interdisciplinary electives. It also includes a capstone project to help students develop their ethical ability and awareness through service learning, a research or creative project. Such a minor can be combined with, and serve as enrichment to, any major program. As a result of completing the minor, students will be able to:

- Identify and implement major moral theories from diverse traditions
- Demonstrate an understanding of the cultural and historical embeddedness of ethical theories
- Evaluate moral issues from a plurality of perspectives
- Develop a capacity for critical moral reasoning
- Analyze and evaluate the effectiveness of given moral theories in dealing with contemporary ethical problems
- Learn to account for one's conduct within a larger community
- Develop a sensitivity to the central moral issues in a given discipline and the capacity to act in a morally responsible manner

Required Courses Credits: (7)

- PHIL 202 - Global Ethics **Credits:** (5)
- **OR** PHIL 210 - Current Ethical Issues **Credits:** (5)
- PHIL 485 - Capstone Project **Credits:** (2)
- **OR** PHIL 490 - Cooperative Education **Credits:** (1-12)

Courses in Philosophical Ethics Credits: (10)

Choose two courses from the following:

- PHIL 302 - Ethical Theory **Credits:** (5)
- PHIL 304 - Business Ethics **Credits:** (5)
- PHIL 306 - Environmental Ethics **Credits:** (5)
- PHIL 308 - Medical Ethics **Credits:** (5)
- PHIL 309 - Ethics through Film **Credits:** (5)
- PHIL 465 - Advanced Ethics **Credits:** (5)

Electives Credits: (8-10)

No more than 5 credits can be taken from one discipline.

- COM 202 - Communication Ethics and the First Amendment **Credits:** (5)
- COM 333 - Communication Ethics **Credits:** (4) (for COM majors only)
- IT 301 - Information Technology Security, Privacy, and Ethics **Credits:** (3)
- LAJ 401 - Ethics, Diversity, and Conflict in Criminal Justice **Credits:** (4) (For LAJ majors only)
- MSL 302 - Leadership and Ethics **Credits:** (3) (For military science majors only)
- PHIL 325 - Women and Philosophy **Credits:** (5)
- PHIL 345 - Chinese Philosophy **Credits:** (5)
- PHIL 357 - Philosophy of Race **Credits:** (5)

- PHIL 309 - Ethics through Film **Credits:** (5)
- POSC 452 - The Constitution and Human Rights **Credits:** (5)
- POSC 475 - International Human Rights **Credits:** (5)
- RELS 353 - Judaism **Credits:** (5)
- RELS 354 - Christianity **Credits:** (5)
- RELS 355 - Islam **Credits:** (5)
- RELS 376 - Contemporary Religious Thought **Credits:** (5)
- RELS 401 - The Daoist Tradition **Credits:** (5)
- RELS 403 - Buddhist Thought and Practice **Credits:** (5)
- SOC 320 - Death and Dying **Credits:** (5)
- SOC 354 - Minority Experience **Credits:** (5)
  OR other ethics-related courses as approved by minor advisor.
  Special topics courses, cooperative education credit, and independent study courses may also count towards elective credit.

Total Credits: 25-27

Philosophy Minor

Required Courses

- PHIL 101 - Philosophical Inquiry **Credits:** (5)
  Select either:
- PHIL 150 - Critical Thinking **Credits:** (5)
- **OR** PHIL 307 - Introduction to Formal Logic **Credits:** (5)

Philosophy electives Credits: 10-18

Select from PHIL courses; at least 10 credits at 300 level or above.

Total Credits: 20-28

Religious Studies Minor

Required Courses

- RELS 101 - World Religions **Credits:** (5)

Select from the following - Credits: 5

- PHIL 305 - Philosophy of Religion **Credits:** (5)
- RELS 201 - Sacred Books of the World **Credits:** (5)
- RELS 376 - Contemporary Religious Thought **Credits:** (5)

Select from the following - Credits: 5

- RELS 351 - Religions of China and Japan **Credits:** (5)
- RELS 352 - Religions of India **Credits:** (5)
- RELS 353 - Judaism **Credits:** (5)
- RELS 354 - Christianity **Credits:** (5)
- RELS 355 - Islam **Credits:** (5)

Select Either - Credits: 5

- RELS Upper Division Electives OR
  PHIL courses cannot be used here if used to fulfill requirements for the major or minor in Philosophy.
- PHIL 305 - Philosophy of Religion **Credits:** (5)
- PHIL 378 - Philosophy of Love **Credits:** (5)

Total Credits: 20

Physical Education, School and Public Health Department

College of Education and Professional Studies
Ellensburg
Dorothy Purser Hall, room 101
Mail Stop 7572
509-963-1911
Fax: 509-963-1848
www.cwu.edu/pe-health
See website for how these programs may be used for educational and career purposes.

Faculty and Staff
Chair
Heidi Henschel-Pellett, EdD

Professors
Kirk Mathias, EdD, physical education, pedagogy, graduate program director

Associate Professors
Heidi Henschel Pellett, EdD, physical education, pedagogy
Rebecca Pearson, PhD, MPH, public health, health education
Mark Perez, PhD, school health, pedagogy
P. Stefan Ward, PhD, physical education, pedagogy
Therese Young, MA, dance, physical education

Assistant Professors
Tishra Beeson, PhD, MPH, public health education

Casey Mace, PhD, MPH, public health education
Rory Weishaar, EdD, athletic administration

Senior Lecturer
Kristine Espinoza, MS, health education, pedagogy

Lecturer
Crystal Fullmer, MFA, dance

Staff
Joy Chrismer, NPAV building and equipment coordinator
Debra D'Acquisto, activity program coordinator
Edith Fowler, assistant to the chair
Debbie Nethery, aquatic center manager

Department Information
The mission of the Department of Physical Education, School, and Public Health (PESPH) is to promote health and active lifestyles. The vision of the Department is to create highly recognized and respected academic programs in which students gain the knowledge, skills, and dispositions to be successful in their profession. This mission and vision and the following core values help to guide program decisions within the department:

- Professional environment based on ethical behavior, respect, and integrity
- Quality of life through health promotion, healthy communities, and active lifestyles
- Student focused learning environment based on respect, relevance, and rigor
- Social justice and diversity

Proudly, graduates of each major program in the department are highly qualified to enter careers in physical education and school health or public health.

Departmental Programs
Physical Education and School Health (PESH) Major
Physical Education - Coaching Minor
Physical Education - Dance Minor
Physical Education - Dance: Teaching Minor
Physical Education - Activity Program
Public Health Major - Community Health Specialization
Public Health Major - Pre-nursing in Public Health Specialization
Public Health - Community Health Education Minor

Physical Education and School Health Major, BS

Program Director
Heidi Henschel Pellett, EdD

Program Advisors
Heidi Henschel Pellett, EdD, physical education, pedagogy
Kirk Mathias, EdD, physical education, pedagogy
Mark Perez, EdD, health education, pedagogy
P. Stefan Ward, PhD, physical education, pedagogy

This major satisfies the Washington State endorsement for K-12 health/fitness.

Admission Description and Requirements
This major is designed for students interested in teaching physical education and school health education for grades K-12. Students will receive experiences in physical education and health education content, pedagogy, movement applications, and practicums in the major. Students taking this major for teaching are required to apply to the Teacher Certification Program and complete the Professional Education Program requirements offered through the Department of Educational Foundations and Curriculum. The following additional requirements also apply:

1. Classes in this major are organized over six consecutive quarters and must be taken in sequence.
2. Students must receive a letter grade of "C" or higher for all courses in the major and students who receive less than a "C" grade in any class that is a prerequisite for others will not be permitted to continue in the major.
3. Students must pass the WEST E exam in health and fitness to receive a K-12 WA endorsement.
4. All students completing this program are required to demonstrate knowledge, skill, and disposition proficiencies through a program portfolio prior to student teaching.
5. Students may also graduate with a non-teaching BS degree in physical education and school health.
6. Professional dress requirements apply to many classes in this major. Students must comply with these requirements to participate in the program.

See the physical education, school, and public health website for more information: www.cwu.edu/~pesph.

For the major application procedure, contact the physical education and school health program director.

Required Courses

- EMS 245 - First Aid **Credits:** (3)
- EXSC 350 - Gross Anatomy **Credits:** (3)
- EXSC 350LAB - Gross Anatomy Laboratory **Credits:** (2)
- HED 210 - Drugs and Health **Credits:** (3)

- HED 387 - Principles of Fitness and Stress Management **Credits:** (3)
- HED 422 - Methods for Health Promotion **Credits:** (4)
- HED 431 - Principles of Sexuality Education **Credits:** (3)
- NUTR 101 - Introduction to Human Nutrition **Credits:** (5)
- PED 309 - Teaching Methods: Recreational Dance **Credits:** (3)
- PESH 280 - Foundations of Physical Education and School Health **Credits:** (4)
- PESH 300 - Comprehensive School Health Education **Credits:** (3)
- PESH 326 - Human Diseases **Credits:** (3)
- PESH 336 - Practicum 1 **Credits:** (2)
- PESH 341 - Characteristics of Effective Physical Education Teaching **Credits:** (3)
- PESH 342 - Developmental Movement **Credits:** (4)
- PESH 343 - Pedagogical Application of Teaching Styles and Systematic Reflection **Credits:** (3)
- PESH 344 - Applications of Technology in Teaching Fitness and Physical Activity **Credits:** (3)
- PESH 345 - School Health Curriculum **Credits:** (3)
- PESH 348 - Tactics and Skills of Striking and Net/Wall Games **Credits:** (3)
- PESH 350 - Utilizing Tactics and Skills for Invasion Games **Credits:** (3)
- PESH 356 - Teaching Lifelong Physical Activity Pursuits **Credits:** (3)
- PESH 358 - Applications of Resistance, Core, and Cardiovascular Training **Credits:** (3)
- PESH 437 - Practicum 2 **Credits:** (3)
- PESH 438 - Practicum 3 **Credits:** (3)
- PESH 439 - Practicum 4 **Credits:** (1)
- PESH 445 - Curriculum Development and Assessment in Physical Education **Credits:** (3)
- PESH 447 - Inclusive Strategies and Activities for Diverse Learners **Credits:** (3)
- PESH 458 - Diagnosis and Analysis of Human Movement **Credits:** (3)

Total Credits: 85

Public Health BS, Population Health Specialization

Public Health Core

Program Director
Rebecca Pearson, PhD, MPH

Program Information
The public health profession focuses on preventing disease, addressing inequities and developing policies and programs that help communities achieve optimal health and well-being. Our program aims to educate and empower the emerging generation of public health leaders. The Bachelor of Science in Public Health prepares students for graduate work or careers in the field and exposes them to evidence-based research and practice experiences. Public health majors will complete the core coursework and select a specialization in wither Population Health or Pre-Nursing. All majors are also required to complete a 400-hour internship experience.

Public Health Major
Admission to the Public Health major requires a minimum cumulative CWU/combined GPA of 2.5; students who do not meet the GPA requirement or other pre-admission requirements may apply for admission on a provisional basis. Students wishing to enroll in the major must first meet with the program director.

Additional Graduation Requirements
Students seeking the Bachelor of Science in Public Health must earn a minimum cumulative GPA of 2.5.

Special requirements other than departmental:
ENG 101 and ENG 102 must be completed prior to enrollment in HED 240. Majors must earn a C or higher in HED 230 and HED 240 in order to enroll in most other required core courses. HED 375 may be taken concurrently with HED 230.

Public Health Core Requirements

- HED 101 - Health Essentials **Credits:** (4)
- HED 230 - Foundations of Public Health **Credits:** (3)
- HED 240 - Writing in Public Health **Credits:** (3)
- HED 250 - Introduction to Health Policy and Systems **Credits:** (3)
- HED 310 - Community Health **Credits:** (3)
- HED 311 - Cross Cultural Practice in Public Health **Credits:** (3)
- HED 317 - Global Health **Credits:** (3)

- HED 320 - Environmental Health **Credits:** (3)
- HED 324 - Infectious and Non-infectious Disease **Credits:** (4)
- HED 375 - Theories of Health Behavior **Credits:** (3)
- HED 380 - Epidemiology **Credits:** (3)
- HED 422 - Methods for Health Promotion **Credits:** (4)
- HED 445 - Professionalism in Public Health **Credits:** (1)
- HED 460 - Public Health Ethics **Credits:** (3)
- HED 470 - Population Health Assessment and Research **Credits:** (4)
- HED 471 - Program Planning **Credits:** (4)
- HED 472 - Program Implementation and Evaluation **Credits:** (4)
- HED 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 10 credits)

Total Core Credits: 66

Population Health Specialization

Population health represents the area of study and practice focusing on the determinants and distribution of health across different groups of individuals. Understanding issues and situations that harm people's potential for health, well-being, and quality of life enables public health professionals to develop effective strategies to improve outcomes. The population health specialization prepares students for graduate study or career work with a variety of populations through diverse course offerings.

Specialization Required Courses

Students must complete a minimum of 24 credits from the following courses:

- HED 209 - Consumer Health **Credits:** (3)
- HED 210 - Drugs and Health **Credits:** (3)
- HED 318 - The Politics of Food and Health **Credits:** (2)
- HED 351 - Community Building Strategies for Public Health **Credits:** (3)
- HED 370 - Contemporary Issues in Public Health **Credits:** (3)
- HED 440 - Public Health Communication **Credits:** (3)
- HED 448 - Sexual Health **Credits:** (3)
- HED 475 - Community Health Administration **Credits:** (3)
- NUTR 101 - Introduction to Human Nutrition **Credits:** (5)

Total Required Specialization Credits: 24

Total Credits: 90

Public Health BS, Pre-Nursing Specialization

Public Health Core

Program Director
Rebecca Pearson, PhD, MPH

Program Information
The public health profession focuses on preventing disease, addressing inequities and developing policies and programs that help communities achieve optimal health and well-being. Our program aims to educate and empower the emerging generation of public health leaders. The Bachelor of Science in Public Health prepares students for graduate work or careers in the field and exposes them to evidence-based research and practice experiences. Public health majors will complete the core coursework and select a specialization in wither Population Health or Pre-Nursing. All majors are also required to complete a 400-hour internship experience.

Public Health Major
Admission to the Public Health major requires a minimum cumulative CWU/combined GPA of 2.5; students who do not meet the GPA requirement or other pre-admission requirements may apply for admission on a provisional basis. Students wishing to enroll in the major must first meet with the program director.

Additional Graduation Requirements
Students seeking the Bachelor of Science in Public Health must earn a minimum cumulative GPA of 2.5.

Special requirements other than departmental:
ENG 101 and ENG 102 must be completed prior to enrollment in HED 240. Majors must earn a C or higher in HED 230 and HED 240 in order to enroll in most other required core courses. HED 375 may be taken concurrently with HED 230.

Public Health Core Requirements

- HED 101 - Health Essentials **Credits:** (4)
- HED 230 - Foundations of Public Health **Credits:** (3)
- HED 240 - Writing in Public Health **Credits:** (3)
- HED 250 - Introduction to Health Policy and Systems **Credits:** (3)

- HED 310 - Community Health **Credits:** (3)
- HED 311 - Cross Cultural Practice in Public Health **Credits:** (3)
- HED 317 - Global Health **Credits:** (3)
- HED 320 - Environmental Health **Credits:** (3)
- HED 324 - Infectious and Non-infectious Disease **Credits:** (4)
- HED 375 - Theories of Health Behavior **Credits:** (3)
- HED 380 - Epidemiology **Credits:** (3)
- HED 422 - Methods for Health Promotion **Credits:** (4)
- HED 445 - Professionalism in Public Health **Credits:** (1)
- HED 460 - Public Health Ethics **Credits:** (3)
- HED 470 - Population Health Assessment and Research **Credits:** (4)
- HED 471 - Program Planning **Credits:** (4)
- HED 472 - Program Implementation and Evaluation **Credits:** (4)
- HED 490 - Cooperative Education **Credits:** (1-12) (Must be taken for 10 credits)

Total Core Credits: 66

Pre-Nursing Specialization

The pre-nursing specialization allows future professionals to enter nursing school with a solid background in public health theory and practice. CWU does not offer a degree program in nursing, but offers prerequisite courses suited for admission to professional nursing programs available across Washington.

IMPORTANT: Students MUST take responsibility for understanding current requirements of their chosen nursing program before applying to it. It is recommended and expected that students considering nursing careers will contact advisors at nursing programs of interest, and ensure their own readiness for admission. Please note that CHEM 111 and CHEM 111LAB are pre-requisites for CHEM 112; students must seek information from specific departments regarding scheduling of these and other science courses. Note too that PSY 101 is a prerequisite for PSY 313; students pursuing the pre-nursing specialization are responsible for understanding requirements for enrollment in specific courses. Students choosing the pre-nursing specialization should take CHEM 111 and CHEM 111LAB at their earliest opportunity; additionally, students choosing the pre-nursing specialization are advised to choose PSY 101 as a general education fulfillment, given that it is a prerequisite for PSY 313.

Specialization Required Courses

- BIOL 220 - Introductory Cell Biology **Credits:** (5)
- BIOL 322 - Introductory Microbiology **Credits:** (5)
- BIOL 355 - Human Anatomy and Physiology I **Credits:** (5)
- BIOL 356 - Human Anatomy and Physiology II **Credits:** (5)
- CHEM 112 - Introduction to Organic Chemistry **Credits:** (4)
- CHEM 112LAB - Introduction to Organic Chemistry Laboratory **Credits:** (1)
- CHEM 113 - Introduction to Biochemistry **Credits:** (4)
- CHEM 113LAB - Introduction to Biochemistry Laboratory **Credits:** (1)
- PSY 313 - Developmental Psychology **Credits:** (4)
- PSY 362 - Introductory Statistics **Credits:** (5)
  NOTE: CHEM 111 and CHEM 111LAB are prerequisites for CHEM 112; PSY 101 is a prerequisite for PSY 313; thus, 10 additional credits beyond those in the major itself are required for students pursuing this specialization.

Total Required Specialization Credits: 49

Total Credits: 115

Community Health Education Minor

The minor in community health education is an excellent supporting option for individuals interested in the health and human services fields. Students will gain insight into public health processes and settings, skills in needs assessment, program planning, and program evaluation.

Required Courses

- HED 230 - Foundations of Public Health **Credits:** (3)
- HED 310 - Community Health **Credits:** (3)
- HED 324 - Infectious and Non-infectious Disease **Credits:** (4)
- HED 422 - Methods for Health Promotion **Credits:** (4)
- HED 460 - Public Health Ethics **Credits:** (3)
- HED 471 - Program Planning **Credits:** (4)
- HED 472 - Program Implementation and Evaluation **Credits:** (4)

Total Credits: 30

Dance Performance Minor

Program Director
Therese Young

The dance performance minor is an interdisciplinary minor administered jointly by the dance and theatre arts faculty designed for students who wish to broaden their academic background and receive a well-rounded dance education, thus preparing them in the area of dance performance in a wide variety of settings. Students will develop competencies in choreography, rhythmic concepts, and dance production.

Requirement: Minimum of one year active membership in *Orchesis Dance Company* and PED 112.

Dance Performance Minor

Required Courses

- PED 102 - Modern Dance II **Credits:** (2)
- PED 103 - Modern Dance III **Credits:** (2)
- PED 112 - Dance Rehearsal and Performance **Credits:** (1)
- PED 142 - Jazz Dance II **Credits:** (1)
- PED 143 - Jazz Dance III **Credits:** (1)
- PED 161 - Cultural History of Dance **Credits:** (4)
- PED 204 - Ballet II (Level 1) **Credits:** (2)
- PED 205 - Ballet II (Level 2) **Credits:** (2)
- PED 206 - Ballet II (Level 3) **Credits:** (2)
- PED 211 - Music for Dance - Rhythms and Resources **Credits:** (2)
- PED 301 - Choreography **Credits:** (3)
- PED 302 - Dance Production **Credits:** (3)
- **OR** TH 301 - Production Application **Credits:** (3)

Choose any of the following for a minimum of 10 credits:

- PED 116 - Beginning Folk Dance **Credits:** (1)
- PED 121 - Tap Dance I **Credits:** (1)
- PED 122 - Tap Dance II **Credits:** (1)
- PED 135 - Ballroom Dance I **Credits:** (1)
- PED 136 - Ballroom Dance II **Credits:** (1)
- PED 138 - Swing Dance I **Credits:** (1)
- PED 139 - Swing Dance II **Credits:** (1)
- TH 252 - Stage Dance **Credits:** (2)
- TH 352 - Stage Dance II **Credits:** (3)

Total Credits: 37

Physical Activity and Recreation Programming Minor

Physical Activity and Recreation Programming Minor Core

Program Directors
Heidi Henschel Pellett, EdD, physical education and school health
Barbara Masberg, PhD, recreation and tourism

Program Advisors
Debra D'Acquisto, MA, physical activity
Robert Perkins, EdD, recreation and tourism

This interdisciplinary physical activity and recreation programming minor is designed for students who want to instruct and direct activities in various settings, such as, parks and recreation, nonprofit organizations, cruise lines, resorts, and other active lifestyle organizations.

Admission Requirements
Applications are accepted throughout the academic year. To be admitted to the minor, all students must have a cumulative grade point average of a 2.75. For the application procedure, contact a program director in Physical Education and School Health or Recreation and Tourism to complete a specific application form. All courses in the minor require a grade of a C or higher.

Required Courses

- PESH 341 - Characteristics of Effective Physical Education Teaching **Credits:** (3)
- PESH 343 - Pedagogical Application of Teaching Styles and Systematic Reflection **Credits:** (3)
- PESH 356 - Teaching Lifelong Physical Activity Pursuits **Credits:** (3)
- PESH 456 - Facilitating and Leading Adventure Activities in the Schools **Credits:** (2)
- RT 484 - Legal Liability and Risk Management **Credits:** (4)

Select from one of the following Credits: (3)

- RT 222 - Recreation Programming and Activities **Credits:** (3)
- **OR** Choose three (3) Physical Activity Courses from the following categories:
  PEID (1), PEF (1), PEAQ (1) PETS (1), PED (1)

Select from one of the following Credits: (3-4)

- FCSG 220 - Leadership in Human Development **Credits:** (4)
- PESH 330 - Positive Youth Development in Physical Activity **Credits:** (3)

Select from one of the following Credits: (2-4)

- RT 293 - Outdoor Leadership Training **Credits:** (2)
- RT 300 - Challenge Course Leadership **Credits:** (4)
- RT 360 - Outdoor Survival **Credits:** (3)
- RT 431 - Recreation Administration of Retreats and Camps **Credits:** (3)

Select from one the following Credits: (3-5)

- RT 381 - Recreational Sports Management **Credits:** (3)
- RT 382 - Community Recreation **Credits:** (3)
- RT 487 - Outdoor Recreation Issues **Credits:** (3)

Choose certifications totaling Credits: (3)

- EMS 245 - First Aid **Credits:** (3)
- PE 115 - Beginning Climbing **Credits:** (1)
- PE 116 - Intermediate Climbing **Credits:** (1)
- PE 220 - Climbing Wall Instructor **Credits:** (2)
- PEAQ 221 - Lifeguard Training **Credits:** (3)
- PEAQ 320 - Water Safety Instructor **Credits:** (3)

Total Credits: 29-34

Physical Education - Coaching Minor

Program Coordinator
Heidi Henschel Pellett, EdD

It is recommended for students to obtain state teaching certification for permanent employment coaching opportunities.

The coaching minor meets the standards of the Washington Interscholastic Athletic Association (WIAA) regarding recommended standards for employment at the Preferred Coach Level. Requirements (Item 23.4.1, WIAA Handbook) for all levels listed below.

These levels are:
Beginning Coach
Experienced Coach
Preferred Coach

Required Courses

- EMS 245 - First Aid **Credits:** (3)
- EXSC 352 - Assessment and Treatment of Athletic Injuries **Credits:** (4)
- EXSC 350 - Gross Anatomy **Credits:** (3)
- EXSC 350LAB - Gross Anatomy Laboratory **Credits:** (2)
- EXSC 351 - Physiology **Credits:** (4)
- EXSC 351LAB - Physiology Laboratory **Credits:** (1)
- HED 205 - Drugs and Sport **Credits:** (2)
- PE 346 - Administration of Athletes **Credits:** (3)
- PE 365 - Foundations of Coaching **Credits:** (3)
- PE 448 - Coaching and Competitive Ethics **Credits:** (3)
- PE 453 - Psychological and Sociological Foundations of Coaching **Credits:** (3)

Electives

Select a minimum of 6 credits from the following:

- PE 321 - Football Coaching **Credits:** (3)
- PE 323 - Basketball Coaching **Credits:** (3)
- PE 324 - Track Coaching **Credits:** (3)
- PE 325 - Baseball Coaching **Credits:** (3)
- PE 326 - Theory of Coaching Soccer **Credits:** (3)
- PE 330 - Volleyball Coach **Credits:** (3)
- PE 442 - Field Work in Physical Education **Credits:** (1-6)
- PE 521 - Advanced Football Coaching (3)
- PE 523 - Advanced Basketball Coaching (3)
- PE 524 - Advanced Track Coaching (3)
- PE 525 - Advanced Baseball Coaching (3)

Total Credits: 37

Physical Education - Dance Minor

Program Director
Therese Young, MA

The dance minor is designed for students who wish to broaden their academic background and receive a well-rounded dance education, thus preparing them to teach dance and/or dance activities in a wide variety of settings.

Requirement: minimum of one-year active membership in Orchesis Dance Company. Membership (by audition). See the department web page for audition information at www.cwu.edu/dance.

Required Courses

- PED 101 - Modern Dance I **Credits:** (2)
- PED 102 - Modern Dance II **Credits:** (2)
- PED 103 - Modern Dance III **Credits:** (2)
- PED 104 - Ballet I (Level 1) **Credits:** (2)
- PED 105 - Ballet I (Level 2) **Credits:** (2)
- PED 106 - Ballet I (Level 3) **Credits:** (2)
- PED 116 - Beginning Folk Dance **Credits:** (1)
- PED 135 - Ballroom Dance I **Credits:** (1)
- PED 161 - Cultural History of Dance **Credits:** (4)
- PED 211 - Music for Dance - Rhythms and Resources **Credits:** (2)
- PED 301 - Choreography **Credits:** (3)
- PED 302 - Dance Production **Credits:** (3)
- PED 309 - Teaching Methods: Recreational Dance **Credits:** (3)
- PED 314 - Dance for Children **Credits:** (3)

Total Credits: 32

Physical Education - Dance: Teaching Minor

Program Director
Therese Young, MA

This minor is designed for students in the Education Program. It satisfies the endorsement requirements for Dance in WA State.

Students will be required to complete both coursework and technique classes in those areas of dance frequently taught in a K-12 setting. Additionally, students will develop competencies in choreography, rhythmic concepts, dance production, and teaching.

Requirement: minimum of one-year active membership in Orchesis Dance Company (by audition). See the department web page for audition information.

Required Courses

- EXSC 350 - Gross Anatomy **Credits:** (3)
- PED 101 - Modern Dance I **Credits:** (2)
- PED 102 - Modern Dance II **Credits:** (2)
- PED 103 - Modern Dance III **Credits:** (2)
- PED 104 - Ballet I (Level 1) **Credits:** (2)
- PED 105 - Ballet I (Level 2) **Credits:** (2)
- PED 106 - Ballet I (Level 3) **Credits:** (2)
- PED 116 - Beginning Folk Dance **Credits:** (1)
- PED 135 - Ballroom Dance I **Credits:** (1)
- PED 161 - Cultural History of Dance **Credits:** (4)
- PED 211 - Music for Dance - Rhythms and Resources **Credits:** (2)
- PED 301 - Choreography **Credits:** (3)
- PED 302 - Dance Production **Credits:** (3)
- PED 309 - Teaching Methods: Recreational Dance **Credits:** (3)
- PED 314 - Dance for Children **Credits:** (3)
- PED 315 - Teaching Methods: Modern and Ballet Dance **Credits:** (3)

Total Credits: 38

Physics Department

College of the Sciences
Ellensburg
Lind Hall, room 201
Mail Stop 7422
509-963-2727
Fax 509-963-2728
www.cwu.edu/physics
See website for how these programs may be used for educational and career purposes.

Faculty and Staff
Chair
Andy Piacsek, PhD

Professors
Michael Jackson, PhD, optics, spectroscopy
Bruce Palmquist, PhD, science education

Associate Professors
Michael Braunstein, PhD, nuclear physics, astronomy
Andrew A. Piacsek, PhD, acoustics, computational physics

Assistant Professors
Darci Snowden, PhD, atmospheric physics
Erin Craig, PhD, computational biophysics

Staff
Rachel Foss, secretary
Peter Zencak, instructional and classroom technician IIII

Department Information
Overview
Physics is the study of the universe and its elements-from the interaction of subatomic particles and investigations in nanoscale science, to the motion of everyday objects, to the evolution of galaxies. Physics involves discovering the fundamental rules that describe matter and energy on every scale, hence it is the basic science that underlies all the natural sciences.
Most businesses want people who can analyze complex situations and solve problems. CWU physics majors learn

these skills along with computational and electronics skills. The physics curriculum includes theoretical courses as well as laboratory classes and hands-on research that provide the practical training relevant to both graduate school and professional work in science and engineering. Recent acquisitions of state-of-the-art instrumentation in astronomy, acoustical physics, and lasers enrich students' experience in the laboratory and research setting. Students also have the opportunity to participate in programs outside the formal courses offered by participating in the department's award-winning Physics Club and Astronomy Club. The CWU physics program offers a BS degree, a BA degree (which doubles as our teaching degree), and engineering opportunities through our dual-degree physics/engineering program.

Department Standards
All students must meet with the physics chair to map out a four-year plan. The student can then select a faculty advisor. All faculty members are physics major advisors. Most upper-level physics courses are offered every other year. Thus, students who wait too long to meet with an advisor may have their graduation delayed. All physics majors must complete a physics major portfolio.

Honors Designation
The honors designation in physics recognizes the academic excellence of its majors. Students in the department's BA and BS programs are eligible for this designation and all physics majors are urged to consider applying. The honors designation in physics is offered in collaboration with Sigma Pi Sigma, the National Physics Honors Society. Please contact the physics department chair for more information.

Dual-degree Physics/Engineering Program
This dual-degree program enables a student to receive a baccalaureate degree in physics from CWU and a bachelor of science from an appropriate engineering institution in a respective engineering discipline. The total length of time for both degrees is expected to be about five years, with approximately three years at CWU (dating from enrollment in MATH 172) and approximately two years at the engineering institution. At CWU, students must complete a minimum of 135 credits, including all general education requirements. Additional courses may be required depending on the specific engineering discipline. Be sure to consult the appropriate dual-degree engineering advisor for details.

In order to receive the baccalaureate degree from CWU, dual-degree students must also complete the remaining credits (to total a minimum of 180 credits) in engineering at the Engineering Institution and transfer these credits to CWU. The remaining credits must include the appropriate number of 300-level or above from the Engineering Institution to satisfy CWU graduation requirements. This transfer of credits and awarding of the baccalaureate degree by CWU can take place as soon as the student earns the necessary credits.

Special Requirements:
Early consultation with the physics department chair is mandatory to ensure that specific additional requirements of particular engineering curricula are also satisfied. It is solely the student's responsibility to apply and gain admission to the Engineering Institution. It is also the individual student's responsibility to submit an official transcript of the work completed after leaving CWU and to request awarding of the baccalaureate degree in physics.

Dual-degree Physics/Engineering Program

This dual-degree program enables a student to receive a baccalaureate degree in physics from CWU and a bachelor of science from an appropriate engineering institution in a respective engineering discipline. The total length of time for both degrees is expected to be about five years, with approximately three years at CWU (dating from enrollment in MATH 172) and approximately two years at the engineering institution. At CWU, students must complete a minimum of 135 credits, including all general education requirements. Additional courses may be required depending on the specific engineering discipline. Be sure to consult the appropriate dual-degree engineering advisor for details.

In order to receive the baccalaureate degree from CWU, dual-degree students must also complete the remaining credits (to total a minimum of 180 credits) in engineering at the Engineering Institution and transfer these credits to CWU. The remaining credits must include the appropriate number of 300-level or above from the Engineering Institution to satisfy CWU graduation requirements. This transfer of credits and awarding of the baccalaureate degree by CWU can take place as soon as the student earns the necessary credits.

Special Requirements:
Early consultation with the physics department chair is mandatory to ensure that specific additional requirements of particular engineering curricula are also satisfied. It is solely the student’s responsibility to apply and gain admission to the Engineering Institution. It is also the individual student’s responsibility to submit an official transcript of the work completed after leaving CWU and to request awarding of the baccalaureate degree in physics.

Physics Major, BA

(NOTE: Students seeking a B.A. degree must complete one year college/university study or two years high school study of a single world language.)

The BA program is for students wanting a broad liberal arts education with an emphasis in physics. It may be a suitable foundation for students who are planning a career not usually regarded as physics, such as business education, law, medicine, writing, environmental concerns, public safety, or computer programming.

Teaching Endorsement Requirements:

This major satisfies the criteria for an endorsement in physics and qualifies students to teach physics at the high school, middle, or junior high levels. Students taking this major for endorsement are required to complete the Professional Education Program requirements offered through the Department of Educational Foundations and Curriculum. Students completing this program are required to demonstrate proficiency of student learning outcomes through a program portfolio prior to student teaching. In addition to the above requirements, students must pass the WEST-E exam for physics to receive a physics endorsement. Students seeking an endorsement in physics must take SCED 301, SCED 324, SCED 325, and SCED 487 to meet Science Teaching Program competencies. Students should seriously consider working toward endorsement in a second area, such as biology, chemistry, Earth science, middle-level science, middle-level mathematics, mathematics or science.

Required Courses

- MATH 265 - Linear Algebra I **Credits:** (4)
- PHYS 317 - Modern Physics I **Credits:** (4)
- PHYS 318 - Modern Physics II **Credits:** (4)
- PHYS 331 - Laboratory Practices and Techniques **Credits:** (3)
- PHYS 333 - Experimental Physics I **Credits:** (3)
- PHYS 361 - Computational Physics **Credits:** (4)
- PHYS 363 - Optics **Credits:** (4)
- PHYS 489 - Senior Assessment **Credits:** (1)
- PHYS 495 - Undergraduate Research **Credits:** (2)

General Physics - Credits: 15

- PHYS 181 - General Physics **Credits:** (4)
- PHYS 181LAB - General Physics Laboratory **Credits:** (1)
- PHYS 182 - General Physics II **Credits:** (4)
- PHYS 182LAB - General Physics Laboratory II **Credits:** (1)
- PHYS 183 - General Physics III **Credits:** (4)
- PHYS 183LAB - General Physics Laboratory III **Credits:** (1)

General Chemistry - Credits: 10

- CHEM 181 - General Chemistry I **Credits:** (4)
- CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)
- CHEM 182 - General Chemistry II **Credits:** (4)
- CHEM 182LAB - General Chemistry Laboratory II **Credits:** (1)

Calculus - Credits: 20

- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)
- MATH 272 - Multivariable Calculus I **Credits:** (5)
- MATH 273 - Multivariable Calculus II **Credits:** (5)

Department-approved electives - Credits: 9

- Must include a department-approved course sequence (such as PHYS 351/352, PHYS 381/382, PHYS 334/463, PHYS 292 and SCED 324/325, PHYS 474/475 - see your Physics major advisor for details.

Total Credits: 83-96

Physics Major, BS

Those interested in receiving an advanced degree in physics or engineering may choose the Bachelor of Science degree in physics. The Bachelor of Science degree is designed for individuals planning careers in physics and related technical fields or in areas where knowledge of basic scientific principles is necessary. Depending on math preparation, these students should be able to complete the Bachelor of Science degree in four years at CWU.

Required Courses

- MATH 265 - Linear Algebra I **Credits:** (4)
- MATH 376 - Differential Equations I **Credits:** (3)
- PHYS 317 - Modern Physics I **Credits:** (4)
- PHYS 318 - Modern Physics II **Credits:** (4)
- PHYS 331 - Laboratory Practices and Techniques **Credits:** (3)

- PHYS 333 - Experimental Physics I **Credits:** (3)
- PHYS 342 - Thermodynamics **Credits:** (4)
- PHYS 351 - Analytical Mechanics I **Credits:** (3)
- PHYS 352 - Analytical Mechanics II **Credits:** (3)
- PHYS 361 - Computational Physics **Credits:** (4)
- PHYS 363 - Optics **Credits:** (4)
- PHYS 381 - Electromagnetic Theory I **Credits:** (4)
- PHYS 382 - Electromagnetic Theory II **Credits:** (4)
- PHYS 383 - Electromagnetic Theory III **Credits:** (4)
- PHYS 474 - Quantum Mechanics I **Credits:** (4)
- PHYS 489 - Senior Assessment **Credits:** (1)
- PHYS 495 - Undergraduate Research **Credits:** (2) (Must be taken for a total of 4 credits)

General Chemistry - Credits: 10

- CHEM 181 - General Chemistry I **Credits:** (4)
- CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)
- CHEM 182 - General Chemistry II **Credits:** (4)
- CHEM 182LAB - General Chemistry Laboratory II **Credits:** (1)

Calculus - Credits: 20

- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)
- MATH 272 - Multivariable Calculus I **Credits:** (5)
- MATH 273 - Multivariable Calculus II **Credits:** (5)

General Physics - Credits: 15

- PHYS 181 - General Physics **Credits:** (4)
- PHYS 181LAB - General Physics Laboratory **Credits:** (1)
- PHYS 182 - General Physics II **Credits:** (4)
- PHYS 182LAB - General Physics Laboratory II **Credits:** (1)
- PHYS 183 - General Physics III **Credits:** (4)
- PHYS 183LAB - General Physics Laboratory III **Credits:** (1)

Department-approved electives - Credits: 5

Total Credits: 110

Astronomy Minor

The astronomy minor is an excellent complement to a variety of other science majors. It is also ideal for students who want to reinforce a liberal arts major with a science background. Astronomy minors may not use any courses in this minor as physics major electives.

Required Courses

- PHYS 201 - Operation and Research Techniques for Small Observatories **Credits:** (3)
- PHYS 301 - Stellar Astrophysics I **Credits:** (3)
- PHYS 302 - Stellar Astrophysics II **Credits:** (2)
- PHYS 317 - Modern Physics I **Credits:** (4)

Introductory Astronomy - Credits: 5

- PHYS 101 - Introductory Astronomy I **Credits:** (5)

Introductory or General Physics - Credits: 15

- PHYS 111 - Introductory Physics **Credits:** (4)
- PHYS 111LAB - Introductory Physics Laboratory **Credits:** (1)
- PHYS 112 - Introductory Physics II **Credits:** (4)
- PHYS 112LAB - Introductory Physics Laboratory II **Credits:** (1)
- PHYS 113 - Introductory Physics III **Credits:** (4)
- PHYS 113LAB - Introductory Physics Laboratory III **Credits:** (1)

OR

- PHYS 181 - General Physics **Credits:** (4)
- PHYS 181LAB - General Physics Laboratory **Credits:** (1)
- PHYS 182 - General Physics II **Credits:** (4)
- PHYS 182LAB - General Physics Laboratory II **Credits:** (1)
- PHYS 183 - General Physics III **Credits:** (4)
- PHYS 183LAB - General Physics Laboratory III **Credits:** (1)

Select either: Credits 2

- PHYS 492 - Laboratory Experience in Teaching Physics **Credits:** (2)
- **OR** PHYS 495 - Undergraduate Research **Credits:** (2)

Calculus - Credits: 10

- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)

Total Credits: 44

Physics Minor

The physics minor is an excellent complement to a variety of other science majors. It is also ideal for students who want to reinforce a liberal arts major with a technical background.

Special Requirements:

Students taking this minor to obtain a teaching endorsement can receive a teaching endorsement in physics only if the following requirements are met:

- The student is working on an endorsement in biology, chemistry, Earth science, or secondary mathematics.
- The student passes the WEST-E exam for physics to receive a physics endorsement.
- The student successfully completes SCED 324 and PHYS 492. SCED 324 requires admission to the Teacher Certification Program.
- The student demonstrates proficiency of student learning outcomes through a program portfolio prior to student teaching.

Required Courses

- PHYS 317 - Modern Physics I **Credits:** (4)
- PHYS 318 - Modern Physics II **Credits:** (4)
- PHYS 333 - Experimental Physics I **Credits:** (3)

General Physics - Credits: 15

- PHYS 181 - General Physics **Credits:** (4)
- PHYS 181LAB - General Physics Laboratory **Credits:** (1)
- PHYS 182 - General Physics II **Credits:** (4)
- PHYS 182LAB - General Physics Laboratory II **Credits:** (1)
- PHYS 183 - General Physics III **Credits:** (4)
- PHYS 183LAB - General Physics Laboratory III **Credits:** (1)

Calculus - Credits: 10

- MATH 172 - Calculus I **Credits:** (5)
- MATH 173 - Calculus II **Credits:** (5)

Select one of the following - Credits: 3-6

- CHEM 381 - Physical Chemistry (Thermodynamics) **Credits:** (5)
- EET 312 - Basic Electronics **Credits:** (4)
- PHYS 331 - Laboratory Practices and Techniques **Credits:** (3)
- PHYS 342 - Thermodynamics **Credits:** (4)
- PHYS 363 - Optics **Credits:** (4)
- PHYS 492 - Laboratory Experience in Teaching Physics **Credits:** (2)
- SCED 324 - Science Education in Middle and Secondary Schools I **Credits:** (3)

Total Credits: 39-43

Political Science Department

College of the Sciences
Ellensburg
Psychology Bldg., room 414
Mail Stop 7578
Phone: 509-963-2408
FAX: 509-963-1134

www.cwu.edu/political-science
See the website for how these programs may be used for educational and career purposes.

Faculty and Staff
Chair
Todd M. Schaefer, PhD

Professors
Michael A. Launius, PhD, comparative politics, Asian politics, international political economy, international politics
Mathew Manweller, PhD, constitutional law, American political thought, American political economy, direct democracy
Todd M. Schaefer, PhD, American politics, public opinion, congress, campaigns and elections, African politics, American presidency
Rex Wirth, PhD, public administration and public policy, international politics, Western Europe
Bang-Soon Yoon, PhD, comparative politics, public policy, women and politics, Korean politics, East Asia politics, globalization studies

Associate Professors
Gilberto Garcia, PhD, Latino politics and studies, Latin American politics, comparative politics, and U.S.-Mexico border relations

Barb Rieffer-Flanagan, PhD, political theory, comparative politics, politics of the Middle East, international human rights, religion and politics

Visiting Assistant Professor
Eugen Nagy, PhD, comparative politics, international relations, European politics, nationalism, Western political thought

Emeritus Professor
Robert C. Jacobs, PhD, American law and politics

Staff
Emily Veitia, secretary senior

Department Information
The department provides an opportunity for students to become knowledgeable about the general subject matter of political science, while also offering a variety of courses that can provide depth in an area of the student's interest. Flexibility in the selection of courses is stressed.
The department requires all political science majors to participate in the end-of-major assessment exercise at the conclusion of their senior year. Information on the assessment requirement may be obtained from the department's main office.
Students must earn a grade of C- or better in order for that course to count in their political science major.

Political Science Honors
Political science majors will qualify for honors at graduation with an overall GPA of 3.00 and a GPA of 3.50 in all political science courses.
Students may choose either a 47-credit major or a 62-credit major. Those who have a second major or who have a minor in another discipline may opt for the 47-credit major.

Political Science Core Requirements
POSC 101 - Introduction to Politics 5
POSC 210 - American Politics 5
POSC 260 - Comparative Politics 5
POSC 270 - International Politics 5
Political Science Core Total Credits: 20

Political Science Major, BA (47 credits) (62 credits)

(NOTE: Students seeking a B.A. degree must complete one year college/university study or two years high school study of a single world language.)

Students may choose either a 47 credit major or a 62 credit major. Those who have a second major or who have a minor in another discipline may opt for the 47 credit major.

Required Courses

Political Science Core Requirements

- POSC 101 - Introduction to Politics **Credits:** (5)
- POSC 210 - American Politics **Credits:** (5)
- POSC 260 - Comparative Politics **Credits:** (5)
- POSC 270 - International Politics **Credits:** (5)

Political Science Core Total Credits: 20

Additional Required Courses

- POSC 489 - Senior Assessment **Credits:** (2)

Select from the following: 5 Credits

- POSC 481 - Early Political Thought **Credits:** (5)
- POSC 482 - Early Modern Political Thought **Credits:** (5)
- POSC 483 - Recent Political Thought **Credits:** (5)
- POSC 485 - American Political Thought and Culture **Credits:** (5)

Electives Credits: 20-35

Select from any other courses in this department. (Any transfer political science electives must be approved by the department.)

- 47 credit major (20)
- 62 credit major (35)

Total Credits: 47-62

Political Science Minor

Required Courses

Political Science Core Requirements

- POSC 101 - Introduction to Politics **Credits:** (5)
- POSC 210 - American Politics **Credits:** (5)
- POSC 260 - Comparative Politics **Credits:** (5)
- POSC 270 - International Politics **Credits:** (5)

Political Science Core Total Credits: 20

Additional Required Courses

- Electives **Credits:** 10
  Select from any other courses in this department. (Any transfer political science electives must be approved by the department.)

Total Credits: 30

Pre-Professional Programs

These programs are planned for two groups of students—those who want one or two years of college work prior to entering an occupation, and those who want to do pre-professional work for one, two, three, or four years before entering a professional school, university, or college.

The programs described are not to be considered unalterable. They represent patterns that generally agree with the requirements of many professional schools. Since there are many variations in the requirements of the professional schools, students should, after consulting the CWU catalog, select courses required by the institution from which they expect to earn a degree.

The following pre-professional programs are offered: pre-chiropractic, pre-dentistry, pre-dietetics, pre-engineering, pre-law, pre-medical technology, pre-medicine, pre-nursing in public health, pre-occupational therapy, pre-optometry, pre-pharmacy, pre-physical therapy, and pre-veterinary.

Pre-Chiropractic

Advisor
Daminion Garza, MA
Bouillon Hall, room 205
509-963-3423

Pre- Chiropractic is a non-degree advising program through which a student can prepare for admission to a professional Chiropractic Medicine program at another institution. CWU does offer all prerequisite courses necessary for successful admission to such a program.

For information regarding the Pre-Chiropractic program, please go to: www.cwu.edu/health-career/pre-chiropractic-home.

Pre-Dentistry

Advisor
Daminon Garza
Bouillon Hall, room 205
509-963-3423

Blaise Dondji, PhD
Department of Biological Sciences
Science Building 338H
509-963-2715

Most students enter dental school with a bachelor's degree. A pre-dentistry major is not offered. Any major is acceptable provided the dental school admission requirements are met. Most students major in biology or chemistry. Schools vary in which science classes are required. A background in the social sciences and humanities is also expected; however, there are no firm expectations for coursework in these subjects beyond English. The American Dental Association (ADA) website, www.ada.org/en provides links to individual dental schools. Pre-dental students are encouraged to learn the specific requirements for their potential schools. Students applying to dental school must have taken the Dental Aptitude Test (DAT). Information on the DAT is also available on the ADA website. General biology, general chemistry, and organic chemistry courses should be completed prior to attempting the DAT. Completing additional coursework in biology should also improve DAT performance.

For detailed information on this program, please go to: www.cwu.edu/health-career/pre-dentistry-home.

Pre-Dietetics

Advisors
David Gee, PhD
Nutrition, Exercise, and Health Sciences Department
Dietetics specialization, Nutrition Sciences specialization
Purser Hall, room 109
geed@cwu.edu
509-963-2772

Susan Hawk, PhD, RD
Nutrition, Exercise, and Health Sciences Department
Dietetics specialization, Foods and Nutrition specialization
PE Building, room 136
woodys@cwu.edu
509-963-1041

Tracee Watkins, MBA
Nutrition, Exercise, and Health Sciences Department
Food Service Management
Purser Hall, room 134
watkinst@cwu.edu
509-963-2454

A registered dietitian (RD) is an expert on foods and how they affect human health. An RD is registered by the Academy of Nutrition and Dietetics (AND) as an individual who has completed an accredited four-year undergraduate program. The BS in food science and nutrition (with a specialization in nutrition and dietetics) is an accredited program with the Commission on Accreditation Council for Education in Nutrition and Dietetics. In addition, the individual must complete a 1,200-hour accredited supervised practice experience at one of over 200 dietetic internship sites. Finally, individuals must then pass the registration examination to attain the RD credential. Please see an advisor for more information. Dietitians may work in hospitals, clinics, and nursing homes as clinical dietitians; for government and public health agencies as community dietitians, and in food service departments of hospitals, schools, nursing homes, and restaurants as management dietitians. In addition, dietitians also are employed as researchers, educators, and as consultants in a variety of settings.

For more information, please contact an advisor in the Nutrition, Exercise, and Health Science Department.

Pre-Engineering

Advisors
Michael Braunstein, PhD
Lind Hall, room 203D
509-963-2761

Most colleges of engineering accept students into their programs only after they have successfully completed a pre-engineering course of study. This usually takes the first two or three years of a student's college career, and can be done at CWU. Then the student must transfer to the engineering school of his or her choice and apply for admission to the particular engineering program wanted. She or he will graduate from that college and therefore must satisfy its requirements.

The course requirements in engineering vary considerably for different fields of engineering and for various colleges of engineering. The most important step a pre-engineering student can take is to consult the catalog of the particular college of engineering the student hopes to attend and then to plan a program at CWU to satisfy as many specific requirements of that college as possible. Students whose plans are not definite are advised to follow the typical first-year program outlined below and have a firm choice of an engineering program by the beginning of their second year. The pre-engineering advisor can assist you in these matters.

Students selecting this program must have completed a full year of high school calculus, or have a satisfactory score on the Math Placement Test Form PC, which is given by the mathematics department, or MATH 154. These are prerequisites to MATH 172.

The Department of Physics also offers a bachelor of science, physics major-engineering, in which the student receives degrees in physics and engineering. Consult the physics department chair, or pre-engineering advisor for additional information about this program.

For more information please check out the Physics website: www.cwu.edu/physics.

Dual-degree Physics/Engineering Program information.

Pre-Law

Advisor
Teresa Francis, JD, LLM
Department of Law and Justice
CWU-Pierce County
253-964-6260

The attainment of a law degree ordinarily involves a seven-year program—the completion of an undergraduate degree (four years), followed by three years at law school. Before winter quarter of one's senior year, a future law student should take the Law School Admission Test (LSAT) and apply to law schools.

Law schools do not require a particular major or courses as a condition for admission. Common undergraduate majors found in the law school population are history, English, economics, business, political science, and philosophy. No specific major will ensure admittance to law school. The most important criteria are your GPA and your score on the Law School Admissions Test (LSAT). The pre-law student should seek a course of study, which enhances his or her verbal comprehension and analytical

thinking. Critical understanding of the human institutions and values with which the law deals is also very helpful.

The law and justice department offers an advisory program designed to assist students in choosing and gaining admission to law schools, with several advisors having law degrees. The pre-law student should carefully plan his or her program in close consultation with an advisor.

For more information on this program, please go to: www.cwu.edu/law. Also, visit www.lsac.org for more information.

Pre-Medical Technology

Advisor
Holly Pinkart, PhD
Department of Biological Sciences
Science Building 236D
509-963-2710

A medical technologist performs a full range of laboratory tests from simple blood tests and urinalysis, to identification of microorganisms, and includes phlebotomy (blood-drawing). Medical technologists perform complex chemical, biological, hematological, immunologic, microscopic, and bacteriological tests, and type and cross match blood samples for transfusions. Additionally, medical technologists rigorously maintain clinical laboratory quality control programs to ensure the accuracy of tests, and may supervise medical and clinical laboratory technicians.

Medical technologists are certified by the American Society for Clinical Pathology. Eligibility for the certification exam requires a bachelor's degree and completion of a one year clinical internship in an accredited program. CWU offers all the appropriate coursework required for entry into clinical internship programs.

For more information on this program, please go to: www.cwu.edu/biology/pre-professional-programs-pre-medical-technology.

Pre-Medicine

Advisors
Daminon Garza, MA
Bouillon Hall, room 205
509-963-3423

Levente Fabry-Asztalos, PhD
Department of Chemistry
Science Building, room 302F
509-963-2887

Blaise Dondji, PhD
Department of Biological Sciences
Science Building, room 338H
509-963-2715

Ralf Greenwald, PhD
Department of Psychology
Psychology Building, room 428
509-963-3630

This program prepares students for entering professional schools of medicine (MD or DO). In addition to the required science courses, a broad humanities and liberal arts background is encouraged. Although pre-medical students usually major in the sciences (85 percent), any arts or science major is acceptable. Regardless of their academic major, pre-medicine students must work closely with the pre-medicine advisor in order to insure their proper preparation for medical school. The university's pre-medicine program is supported by approximately 10 full tuition and books scholarships, which are based on academic excellence, not need. See also the CWU Health Career Resources website at www.cwu.edu/health-career/pre-medicine-home.

Pre-Nursing in Public Health

Advisors
Deb Paradis, MS
Bouillon Hall, room 205
509-963-3423

James Johnson, PhD
Biology Department
Science Building, room 338J
509-963-2876

Rebecca Pearson, PhD, MPH
Physical Education, School, and Public Health Department
Purser Hall, room 124
509-963-2493

The pre-nursing in public health specialization within the public health major prepares students to meet entrance requirements to bachelor of science in nursing (BSN) programs throughout Washington. Armed with leading-edge scientific knowledge and liberal arts content, combined with an extensive public health internship, the pre-public health nursing specialization allows future professionals to enter nursing school with a solid background in public health theory and practice. CWU

does not offer a degree program in nursing, but offers all prerequisite courses necessary for successful admission to professional nursing programs available across Washington.

For more information, link to our public health program at: www.cwu.edu/health-career/pre-nursing-home.

Pre-Occupational Therapy

Advisor
Susan Lonborg, PhD
Department of Psychology
Psychology Bldg., room 480
509-963-2397

The pre-occupational therapy program is an advising program through which a student can prepare for admission to a professional occupational therapy program at another institution. CWU does not offer a degree program in occupational therapy or pre-occupational therapy, but does offer all prerequisite courses necessary for successful admission to the professional phase at another university.

Most pre-occupational therapy students will complete their undergraduate degree at CWU and then apply to the program(s) of their choice. Detailed information concerning appropriate undergraduate coursework and professional occupational therapy programs in the Pacific Northwest is available in the Department of Psychology or by visiting www.cwu.edu/biology/pre-professional-programs-pre-occupational-therapy.

Pre-Optometry

Advisor
Linda Raubeson, PhD
Department of Biological Sciences
Science Bldg., room 338L
509-963-2734

Optometrists are primarily involved in testing eyesight for the purpose of prescribing corrective lenses. Students interested in optometry usually obtain a four-year degree prior to entering optometry school. Alternatively, students may take a three-year pre-optometry program at Central and then transfer to the optometry school of their choice where they will complete a two- or three-year program. The 19 schools in the U.S. and Canada offering professional optometry degree programs vary in their entrance requirements. Therefore, students interested in pre-optometry should determine the specific requirements of the optometry school to which they wish to transfer. Most schools require some experience (observation) with optometry prior to application. Social science, humanities, and writing courses are usually required in addition to the science courses listed below. The OAT (Optometric Aptitude Test) scores are required to apply to most schools. For links to optometry schools, information about the OAT, application procedures, and other useful information, see the Association of Schools and Colleges of Optometry (ASCO) website at www.opted.org.

For more information on this program, please go to: www.cwu.edu/biology/pre-professional-programs-pre-optometry.

Pre-Pharmacy

Advisor
Daminon Garza, MA
Bouillon Hall, room 205
509-963-3423

Gil Belofsky, PhD
Department of Chemistry
Science Bldg., room 302J
509-963-2882

A pre-pharmacy program of study may be developed that prepares students for admission into professional programs at any university granting a pharmacy doctoral degree (Pharm-D). Central does not offer a degree program in pharmacy, but does offer all prerequisite courses necessary for admission to pharmacy programs at other universities.

Contact the pre-pharmacy advisor, Professor Gil Belofsky in the Department of Chemistry for help in determining a program of study, for advice on scheduling, or for more details on any aspect of the pre-pharmacy program. See also the CWU Health Career Resources website at www.cwu.edu/health-career/pre-pharmacy-home.

Pre-Physical Therapy

Advisor
Daminon Garza, MA
Bouillon Hall, room205
509-963-3423

Vince Nethery, PhD

Nutrition, Exercise, and Health Sciences
Purser Hall, room 107
509-963-1940

David Darda, PhD
Department of Biological Sciences
Science Building, room 236N
509-963-2881

The pre-physical therapy program is an advising program through which a student can prepare for admission to a professional physical therapy program at another institution. CWU does not offer a degree program in physical therapy or pre-physical therapy, but does offer all prerequisite courses necessary for successful admission to the professional phase at another university.

Most pre-physical therapy students will complete their undergraduate degree at CWU and then apply to the program(s) of their choice. Detailed information concerning appropriate undergraduate coursework and professional physical therapy programs in the Pacific Northwest is available in the Department of Biological Sciences or by visiting www.cwu.edu/health-career/pre-physical-therapy-home-0.

Pre-Veterinary

Advisor
Daminon Garza, MA
Bouillon Hall, room 205
509-963-3423

Jason Irwin, PhD
Department of Biological Sciences
Science Bldg., room 338D
509-963-2884

While not offering a degree in veterinary medicine, CWU does provide the necessary prerequisite courses and an environment that promotes successful admission to veterinary medicine programs both in the USA and abroad. Although some veterinary medicine programs do not require an undergraduate degree for admission, most CWU students do complete their degree before moving into a veterinary medicine program. Below is a list of suggested courses that will fulfill the prerequisites of many veterinary programs. However, each of the 28 veterinary schools in the United States has its own requirements. You must check to be sure that these courses will meet the admission requirements for each veterinary school to which you will apply. For more information on this program, please go to: www.cwu.edu/health-career/pre-veterinary-medicine-home.

Primate Behavior and Ecology Program

College of the Sciences
Ellensburg
Dean Hall, room 357A

509-963-3201
Fax: 509-963-3215
www.cwu.edu/primate
See website for how this program may be used for educational and career purposes.

Program Director
Lori K. Sheeran, PhD, anthropology, Dean Hall, room 335

Professors
Daniel Beck, PhD, biology, habitat selection, physiological ecology, foraging behavior, rattlesnake ecology, biology of helodermatid lizards
Lori K. Sheeran, PhD, anthropology, primate behavior, primate conservation, biological anthropology
Lixing Sun, PhD, biology, ecology and evolution of animal behavior (especially communication systems), chemical ecology
R. Steven Wagner, PhD, biology, conservation population genetics, herpetology, molecular evolution

Associate Professors
Matthew Altman, PhD, Kant, applied ethics (including environmental ethics and ethics & animals), 19th century philosophy, ethics, social and political philosophy, philosophy of art, philosophy of law
Mark Auslander, PhD, human-nonhuman interactions, environmental education, community-based conservation
Mary Lee Jensvold, PhD, anthropology, chimpanzee sign language studies, ape behavior, communication and culture, chimpanzee care and enrichment, non-verbal behavior
Joseph G. Lorenz, PhD, anthropology, intraspecific genetic variation, molecular phylogenetics, ancient DNA, genotype-phenotype associations, evolutionary anthropology

Assistant Professor
Ralf Greenwald, PhD, psychology, general cognition, human neurophysiology, working memory, attention, language, psychology of computer gaming

Staff
Penelope Anderson, secretary senior, anthropology

Program Information
This program provides majors with interdisciplinary

perspectives on the behavior and ecology of nonhuman primates in both captive and free-living settings. It serves as background for graduate study in the behavior, ecology, or phylogeny of primates, as well as for care-giving careers with primates living in laboratories, zoos, or other captive facilities. Lab fees required for PRIM 220, PRIM 320, and ANTH 416.

A double major is REQUIRED with the PBE degree. Students must complete the requirements for the PBE major as well as the requirements for a 45-plus-credit major in anthropology, biology, or psychology. Students interested in the major should contact the program office as soon as possible for further information, application forms, and assignment of an advisor. PBE majors are expected to meet with their advisor at least once a quarter.

Special Programs
The program sponsors and is affiliated with a wide range of on- and off-campus activities that provide students with opportunities to conduct faculty-mentored scientific projects or internships.

The PBE library in room 204 Dean Hall houses several hundred books, articles, and DVDs/videotapes related to primatology. The room includes a TV, DVD player, and four computer work stations.

The PBE program has available for student use one video camera, two digital cameras, two DVD players, one television, observational software (The Observer), and two PDAs for using this software at remote locations. The Observer software can also be used on two desktop computers.

Students and faculty who have been approved to conduct research at CHCI may have access to resources housed there. These include an extensive library of articles, books, videos, and DVDs, and more than 20 years of archived video footage collected from the chimpanzees living there. CHCI also houses several VCRs, TVs, DVD players, video cameras, and computers that students can use in research projects conducted at CHCI. Access is considered on a case-by-case basis in consultation with the director and associate director of CHCI.

The Anthropological Genetics Laboratory in room 232A Dean Hall is equipped for performing DNA extractions, PCR (Polymerase Chain Reaction) amplification, genotyping, and DNA sequencing. Software for analyzing genetic data and performing phylogenetic analysis is also available.

The anthropology department owns casts of fossil and living nonhuman primates. These span a variety of taxa including prosimians, monkeys, and apes. Access is considered on a case-by-case basis in consultation with the anthropology faculty.

The PBE program is affiliated with the Conservation and Biodiversity Field School in China, which is coordinated through the CWU Office of International Study and Programs.

Students can develop faculty-mentored internship experiences based at CHCI, the Woodland Park Zoo, and other sites.

Primate Behavior and Ecology Major, BS

This program provides majors with interdisciplinary perspectives on the behavior and ecology of nonhuman primates in both captive and free-living settings. It serves as background for graduate study in the behavior, ecology, or phylogeny of primates, as well as for care-giving careers with primates living in laboratories, zoos, or other captive facilities.

A double major is REQUIRED with the PBE degree. Students must complete the requirements for the PBE major as well as the requirements for a 45-plus-credit major in anthropology, biology, or psychology. Students interested in the major should contact the program office as soon as possible for further information, application forms, and assignment of an advisor. PBE majors are expected to meet with their advisor at least once a quarter.

Required Courses

Introductory Level: Credits: 10

- ANTH 110 - Introduction to Biological Anthropology Credits: (5)
- PSY 101 - General Psychology Credits: (5)

Choose one of the following: Credits: 5

*Course selection by advisement depending upon second major.

- BIOL 101 - Fundamentals of Biology Credits: (5)
- BIOL 181 - General Biology I Credits: (5)

Choose one of the following: Credits: 5

*Course selection by advisement depending upon second major.

- BIOL 182 - General Biology II Credits: (5)
- BIOL 200 - Plants in the Modern World Credits: (5)

Choose one of the following: Credits: 5

*Course selection by advisement depending upon second major.

- BIOL 183 - General Biology III Credits: (5)
- BIOL 201 - Human Physiology Credits: (5)

Core Requirements

*Course selection by advisement depending upon second major.

- ANTH 313 - Primate Social Behavior Credits: (4)
- ANTH 380 - Non-verbal Communication Credits: (4)
- PHIL 306 - Environmental Ethics Credits: (5)
- OR ANTH 411 - Primate Conservation Credits: (4)
- PRIM 450 - Primate Behavior and Ecology Capstone Credits: (1)
- PSY 300 - Research Methods in Psychology Credits: (5)
- OR ANTH 413 - Research Methods in Primatology Credits: (5)

Select one from the following: Credits: 4

- ANTH 410 - Biological Anthropology: Theoretical and Research Issues Credits: (4)
- ANTH 411 - Primate Conservation Credits: (4)
- ANTH 499 - Seminar Credits: (1-5)
- BIOL 499 - Seminar Credits: (1-5)
- PSY 442 - Evolutionary Psychology Credits: (4)
- PSY 499 - Seminar Credits: (1-5)

Choose one of the following: Credits: 4-5

*Course selection by advisement depending upon second major.

- ANTH 352 - Anthropology of Environmental Issues Credits: (4)
- ANTH 440 - Ecology and Culture Credits: (4)
- BIOL 302 - Sustainability and Environmental Change Credits: (5)
- BIOL 360 - General Ecology Credits: (5)

Choose one of the following: Credits: 4-5

*Course selection by advisement depending upon second major.

- BIOL 213 - Introductory Biostatistics Credits: (4)
- PSY 362 - Introductory Statistics Credits: (5)

Choose one of the following: Credits: 4-5

*Course selection by advisement depending upon second major.

- BIOL 465 - Biology of Animal Behavior Credits: (4)
- PSY 301 - Learning Credits: (5)

Choose one of the following: Credits: 3-5

- ANTH 309LAB - Skeletal Analysis and Comparison Credits: (2)
- ANTH 493 - Anthropological Field Experience Credits: (1-8)
- BIOL 493 - Biological Field Practicum Credits: (1-15)
- PRIM 220 - Procedures in Captive Primate Care Credits: (1)
- PRIM 490 - Cooperative Education Credits: (1-12)
- PRIM 495A - Directed Research in Primatology Credits: (1-5)
- PRIM 495C - CHCI Directed Research Credits: (1-10)
- PSY 493 - Field Research Credits: (1-12) or other research.

Choose two of the following: Credits: 8

- ANTH 412 - Long-term Primate Studies Credits: (4)
- ANTH 416 - Pongid Behavior Credits: (4)
- ANTH 418 - Primate Evolution Credits: (4)

Total Credits: 70-76

Psychology Department

College of the Sciences
Ellensburg
Psychology Bldg., room 421
Mail Stop 7575
509-963-2381
Fax: 509-963-2307
www.cwu.edu/psychology

See the department website for how this major may be used for educational and career purposes (see the Career Guide under Prospective Students tab).

Faculty and Staff
Chair
Stephanie Stein, PhD

Assistant Chair
Stephen B. Schepman, PhD

Professors
Terry L. DeVietti, PhD, physiological and experimental psychology
Susan D. Lonborg, PhD, health psychology, substance abuse, clinical and research ethics, career development, gender, psychotherapy research
Megan D. Matheson, PhD, general experimental and comparative psychology, nonhuman primate social behavior, stress and coping, post-conflict behavior
Stephen B. Schepman, PhD, organization development, work motivation, personality theories, social psychology, statistics
Anthony J. Stahelski, PhD, industrial/organizational psychology, social psychology, small group interaction, leadership, cults and extremist groups, aggression and violence, terrorism
Stephanie Stein, PhD, school psychology, curriculum-based measurement, behavior disorders in children, lifespan development, psychopathology

Associate Professors
Marte Fallshore, PhD, environmental decision-making, psychology of law, learning, memory, statistics, cognition
Kara I. Gabriel, PhD, general experimental psychology, spatial skills, risk-taking, biopsychology
Ralf Greenwald, PhD, cognitive brain dynamics, event-related potentials, critical thinking, psychology of video gaming, general cognitive psychology
Heath Marrs, EdD, school psychology, educational psychology, response to intervention, gender issues in education
Jeffrey M. Penick, PhD, mental health counseling, group counseling, counseling supervision, adult aging and development, health psychology
Danielle Polage, PhD, cognitive psychology, psychology and law, memory, eyewitness testimony, lying and jury deliberation
Terrence J. Schwartz, PhD, educational psychology, counseling psychology, statistical analysis
Wendy A. Williams, PhD, applied behavior analysis, animal behavior, general experimental psychology, human cognition and decision-making

Assistant Professors
Sara Bender, PhD, psychotic disorders, clinical expectations related to recovery, efficacy of online learning, cyber-supervision
Heidi Bogue, PhD, school psychology, efficacy of school-based interventions, graduate student success, social-emotional functioning and behavior in children
Sadie Lovett, PhD, applied behavior analysis, derived stimulus relations, verbal behavior, instructional design, rehabilitation
Meaghan Nolte, PhD, mindfulness, addictions treatment, counselor training, identity, epistemological development
Liane Pereira, PhD, youth mental health, human development, social determinants of health, educational psychology
Mary Radeke, PhD, use of facial cues in personality assessment, conversation development in young children, personality traits, technology in the classroom, primate communication

Senior Lecturers
Mark Soelling, PhD, counseling psychology, psychology and the law, psychopharmacology

Lecturers
Cristina Bistricean, MS, high-functioning autism, behavior in rehab/nursing facilities, anxiety, intrusive thoughts
Elizabeth Haviland, PhD, counseling psychology, counseling supervision, multicultural counseling
Jesse James, PhD, cognitive neuroscience, sleep and memory, psychology of spirituality and religion

Staff
Debbie Thomas, secretary supervisor
Loretta Ney, secretary lead
Chris Buchanan, engineering technician III

Department Information
The psychology department offers an important behavioral science component of the university's liberal arts curriculum. As part of the General Education program, courses in psychology broaden the student's knowledge about behavior, cognition, and emotion. Through our major and minor programs, students can develop an understanding of the perspectives, content, and methods of the science and practice of psychology and prepare for graduate study.

Admission Requirements
Prior to admission to the psychology major, students must meet the following requirements:

Completion of PSY 101 with a grade of C or higher
GPA of 2.25 or higher in college coursework

Students wishing to apply for admission to the psychology major or minor are required to register with the department and be advised by a member of the department faculty. Students may register as pre-majors in psychology if they wish to join the major but have not yet

met the admission requirements. The department reserves the right to change requirements as circumstances warrant. Application forms may be obtained from the department office or on the department website.

Exit Requirements
Students are required to have a 2.5 GPA within the major area to receive the degree.
Senior psychology majors are required to complete the department's end-of-major examination in the quarter before graduating. Students should register for the examination in the department office. The purpose of this requirement is to enable us to assess whether the department has fulfilled its instructional objectives and to provide us with information that will enable us continuously to improve our programs and courses. In PSY 200 Introduction to the Major (taken after applying to the psychology major), students will learn about the portfolio requirements that will be due in PSY 489 Senior Assessment. One of the PSY 489 portfolio requirements is a minimum of ten hours of service learning and/or research assistant experience. This requirement can be met any time prior to the end of PSY 489.

Departmental Honors
The eligibility requirements for admission to the Department of Psychology honors program include the following:

1. Admission to the program: The student must be a psychology major, at least a junior but not more than a first quarter senior, and have completed core courses with a GPA of at least 3.25 in those courses and have an overall cumulative GPA of 3.0. The student must apply in writing to the department chair, with a supporting letter of recommendation from a member of the faculty who agrees to supervise the student's work to completion.
2. Requirements and Procedures: The student will register for 4-6 credits in PSY 497, Undergraduate Honors Thesis. In consultation with the supervising faculty member, the student chooses a three-person faculty committee. Plans for the honors project, generally an empirical research study, must be approved by the entire committee. The project will culminate in a written research report and a formal defense of the thesis.

Psychology Major, BA (45 credits) (60 credits)

Students seeking a BA degree must complete one year of college/university study or two years of high school study of a single world language.

The 60-credit major is intended to provide a foundation for professional careers and/or graduate training in psychology. It requires substantial coursework in the methodological, statistical, and content areas of psychology, while still allowing for individualized student interests and choice. Students enrolled in the 60-credit major also have the opportunity to receive credit toward their degree for participation in professional development and research experiences.

Required Courses for the 60-credit major

- PSY 101 - General Psychology **Credits:** (5)
- PSY 200 - Introduction to the Major **Credits:** (1)
- PSY 300 - Research Methods in Psychology **Credits:** (5)
- PSY 362 - Introductory Statistics **Credits:** (5)
- PSY 363 - Intermediate Statistics and Research Methods **Credits:** (5)
- PSY 489 - Senior Assessment **Credits:** (2)

Select at least one course from each of the following groups:

Group I

- PSY 301 - Learning **Credits:** (5)
- PSY 303 - Analysis of Everyday Behavior **Credits:** (4)

Group II

- PSY 310 - Multicultural Issues in Psychology **Credits:** (4)
- PSY 313 - Developmental Psychology **Credits:** (4)
- PSY 346 - Social Psychology **Credits:** (4)

Group III

- PSY 445 - Clinical, Counseling, and Community Psychology **Credits:** (5)
- PSY 449 - Abnormal Psychology **Credits:** (4)
- PSY 453 - Theories of Personality **Credits:** (5)

Group IV

- PSY 420 - Psychology of Language **Credits:** (4)
- PSY 460 - Cognitive Psychology **Credits:** (5)

Group V

- PSY 450 - Sensation and Perception **Credits:** (4)
- PSY 478 - Behavioral Neuroscience **Credits:** (4)

Electives Credits: 14-17

May include a maximum of five lower division credits. In addition to the classes listed above, other 300 and 400-level psychology classes may also qualify for elective credits.

**Not more than 10 hours of PSY 295 and PSY 495 combined may be applied to a psychology major.

Total Credits: 60

45-credit Major

The 45-credit major is intended for students who are interested in careers that would combine a background in psychology with work in fields such as social work, family studies, business, forensics, primate behavior, and other fields for which training in behavioral science would be useful. Students in the 45-credit major are required to complete either a minor or a double major. This major would also be useful for students who intend to go directly into the work force following graduation. If a student decided later to pursue graduate school, the core courses in the 45-credit major may transfer into the 60-credit major.

Required Courses for the 45-credit major

- PSY 101 - General Psychology **Credits:** (5)
- PSY 200 - Introduction to the Major **Credits:** (1)
- PSY 300 - Research Methods in Psychology **Credits:** (5)
- PSY 362 - Introductory Statistics **Credits:** (5)
- PSY 489 - Senior Assessment **Credits:** (2)

Select at least one course from each of the following groups:

Group I

- PSY 301 - Learning **Credits:** (5)
- PSY 303 - Analysis of Everyday Behavior **Credits:** (4)

Group II

- PSY 310 - Multicultural Issues in Psychology **Credits:** (4)
- PSY 313 - Developmental Psychology **Credits:** (4)
- PSY 346 - Social Psychology **Credits:** (4)

Group III

- PSY 445 - Clinical, Counseling, and Community Psychology **Credits:** (5)
- PSY 449 - Abnormal Psychology **Credits:** (4)
- PSY 453 - Theories of Personality **Credits:** (5)

Group IV

- PSY 420 - Psychology of Language **Credits:** (4)
- PSY 460 - Cognitive Psychology **Credits:** (5)

Group V

- PSY 450 - Sensation and Perception **Credits:** (4)
- PSY 478 - Behavioral Neuroscience **Credits:** (4)

Electives Credits: 4-7

May include a maximum of five lower division credits.

In addition to the classes listed above, other 300 and 400-level psychology classes may also qualify for elective credits.

Total Credits: 45

Psychology Minor

Core Courses Credits: (10)

- PSY 101 - General Psychology **Credits:** (5)
- PSY 300 - Research Methods in Psychology **Credits:** (5)
- Students who have taken the research methods course required for their major in law and justice, sociology, or social service can substitute any upper-division psychology course for PSY 300.

Choose two courses from the following list: Credits (8-10)

- PSY 301 - Learning **Credits:** (5)

- **OR** PSY 303 - Analysis of Everyday Behavior **Credits:** (4)
- PSY 313 - Developmental Psychology **Credits:** (4)
- **OR** PSY 314 - Human Development and the Learner **Credits:** (4)
- PSY 346 - Social Psychology **Credits:** (4)
- PSY 420 - Psychology of Language **Credits:** (4)
- PSY 445 - Clinical, Counseling, and Community Psychology **Credits:** (5)
- PSY 449 - Abnormal Psychology **Credits:** (4)
- PSY 450 - Sensation and Perception **Credits:** (4)
- PSY 453 - Theories of Personality **Credits:** (5)
- PSY 456 - Industrial and Organizational Psychology **Credits:** (4)
- PSY 460 - Cognitive Psychology **Credits:** (5)
- PSY 478 - Behavioral Neuroscience **Credits:** (4)

Any upper-division psychology course can be used as an elective. Credits: (10-12)

In addition to the classes listed above, other 300- and 400-level psychology classes may also qualify for elective credit.

Total Credits: 30

Science Education Department

College of the Sciences
Ellensburg
Science Bldg., room 107
Mail Stop 7540
509-963-2929
www.cwu.edu/science-education
See the website for how these programs may be used for educational and career purposes.

Faculty
Chair
Bruce Palmquist, PhD

Professors
Martha J. Kurtz, PhD, chemistry and science education
Bruce Palmquist, PhD, physics and science education
Ian J. Quitadamo, PhD, biological sciences and science education

Associate Professor
Vanessa Hunt, PhD, science education
Tim Sorey, PhD, chemistry and science education

Assistant Professors
Jennifer Dechaine, PhD, biological sciences and science education
Anne Egger, PhD, geological sciences and science education

Staff
Nicole Ciraulo, secretary senior

Department Information
The primary function of the science education department is preparing people to teach science. Coursework in science pedagogy is offered for students in the Teacher Certification Programs as well as for teachers in the schools. The science education department works with science departments in the design and operation of degree programs for students who are preparing to teach in the secondary schools. We believe that students learn via the active construction of knowledge. To facilitate that process, all of our instruction follows the learning cycle model.

Our program seeks to help students become facilitators of learning in a diverse world. To that end, the science education department has the following goals for an effective science teacher:

- Demonstrate an ability to individually and collaboratively engage in inquiry and integrate the nature of science
- Explain and apply fundamental science content concepts, principles, and methods
- Demonstrate an ability to effectively facilitate learning for all students
- Create safe, effective learning environments that support inquiry, collaboration, intellectual risk-taking, ethical decision-making, and student construction of knowledge
- Demonstrate an ability to assess teaching and learning outcomes using multiple methods, effectively evaluate teaching and learning effectiveness, and improve practice based on reflection and data
- Demonstrate an ability to make science personally and socially relevant to individual and community by incorporating current events within collaborative and social networks

Students seeking endorsement for certification to teach a specialized science at the high school level must satisfactorily complete the teaching major within the specific science department. Students desiring to become middle or junior high school specialized teachers of science are encouraged to obtain a teaching major in one or more of the following areas: biology, chemistry, Earth sciences, general science, or physics. All students are advised to work toward a second major or minor

endorsement.

All students enrolled in science majors leading to certification are required to have an approved schedule on file with a science education advisor as early as possible and before endorsement for student teaching.

Middle-level Science Teaching Major, BS

The middle-level science teaching major prepares students to teach science at the middle school, or junior high school levels. The program meets the Washington State endorsement competencies for middle-level science and may be combines with a K-8 or middle-level math endorsement. Students wishing to apply for this major must demonstrate mathematical competency equivalent to MATH 153. Students must pass the National Evaluation Series (NES) exam in middle grades general science to receive the middle-level science teaching endorsement. Students in this major must be admitted to Teacher Preparation Program and are required to complete the Professional Education Program (PEP) offered through the educational foundations and curriculum department, *with the exception of EFC 416 and EFC 350*. Students completing this program are required to demonstrate knowledge, skills, and dispositions proficiency through a program portfolio prior to student teaching.

Required Courses

- BIOL 106 - Life Science Inquiry **Credits:** (5)
- BIOL 220 - Introductory Cell Biology **Credits:** (5)
- CHEM 106 - Chemistry Inquiry **Credits:** (5)
- EDEL 477 - Middle School Students and Their Environment **Credits:** (4)
- EDEL 478 - Developmentally Responsive Curriculum in the Middle Grades **Credits:** (3)
- GEOL 106 - Earth Science Inquiry **Credits:** (5)
- PHYS 101 - Introductory Astronomy I **Credits:** (5)
- **OR** PHYS 102 - Introductory Astronomy of the Solar System **Credits:** (4)
- PHYS 106 - Physics Inquiry **Credits:** (5)
- SCED 301 - Interdisciplinary Science and Engineering Inquiry **Credits:** (5)
- SCED 311 - Science Concepts for Teachers **Credits:** (5)
- SCED 324 - Science Education in Middle and Secondary Schools I **Credits:** (3)
- SCED 325 - Science Education in Middle and Secondary Schools II **Credits:** (3)
- SCED 354 - Science, Society and the Teaching Community **Credits:** (3)
- SCED 487 - Teaching Middle and Secondary Science Seminar **Credits:** (2)

Total Required Courses Credits: 57-58

Science Content Electives Credits: 7-10

- Electives (approved by the Science Education Department) at the 200-level or higher.

Total Credits: 64-68

Science Education - Broad Area Science Teaching Minor

This minor is restricted to students working on a teaching major in biology, chemistry, Earth science, or physics. Science teaching majors must complete the appropriate courses in the three disciplines shown below that are outside their major. For example, a biology teaching major would need to fulfill the chemistry, Earth science and physics requirements. Students interested in this minor need to see a science education advisor as soon as possible. This program may result in students taking more than four years to complete their degree. Students completing this minor are required to demonstrate knowledge, skill, and disposition proficiency of student learning outcomes through a program portfolio prior to student teaching. Students must pass the WEST-E exam for science to receive the science endorsement.

Required Courses

(Complete all three areas not covered in major program)

Biology Credits: 15

- BIOL 181 - General Biology I **Credits:** (5)
- BIOL 182 - General Biology II **Credits:** (5)
- BIOL 183 - General Biology III **Credits:** (5)

Chemistry Credits: 15

- CHEM 181 - General Chemistry I **Credits:** (4)
- CHEM 181LAB - General Chemistry Laboratory I **Credits:** (1)
- CHEM 182 - General Chemistry II **Credits:** (4)
- CHEM 182LAB - General Chemistry Laboratory II **Credits:** (1)
- CHEM 183 - General Chemistry III **Credits:** (4)
- CHEM 183LAB - General Chemistry Laboratory III **Credits:** (1)

Earth Science Credits: 13-14

- GEOL 101LAB - Physical Geology Laboratory **Credits:** (1)
- GEOL 302 - Oceans and Atmosphere **Credits:** (4)

Select Either:

- GEOL 101 - Physical Geology **Credits:** (4)
- GEOL 103 - Geology of Washington **Credits:** (4)

Select Either:

- PHYS 101 - Introductory Astronomy I **Credits:** (5)
- PHYS 102 - Introductory Astronomy of the Solar System **Credits:** (4)

Physics Credits: 15

- PHYS 111 - Introductory Physics **Credits:** (4)
- PHYS 111LAB - Introductory Physics Laboratory **Credits:** (1)
- PHYS 112 - Introductory Physics II **Credits:** (4)
- PHYS 112LAB - Introductory Physics Laboratory II **Credits:** (1)
- PHYS 113 - Introductory Physics III **Credits:** (4)
- PHYS 113LAB - Introductory Physics Laboratory III **Credits:** (1)

OR

- PHYS 181 - General Physics **Credits:** (4)
- PHYS 181LAB - General Physics Laboratory **Credits:** (1)
- PHYS 182 - General Physics II **Credits:** (4)
- PHYS 182LAB - General Physics Laboratory II **Credits:** (1)
- PHYS 183 - General Physics III **Credits:** (4)
- PHYS 183LAB - General Physics Laboratory III **Credits:** (1)

Total Credits: 43-45

Science Education K-8 Minor

This minor is open to students in any education major, as well as to other students as appropriate. This minor does not lead to an endorsement, but it will prepare students to be science leaders in the elementary school. In addition, students who choose to take the WEST-E in science and pass may be able to achieve status as a highly qualified teacher.

Required Courses

- BIOL 106 - Life Science Inquiry **Credits:** (5)
- CHEM 106 - Chemistry Inquiry **Credits:** (5)
- GEOL 106 - Earth Science Inquiry **Credits:** (5)
- PHYS 101 - Introductory Astronomy I **Credits:** (5)
- **OR** PHYS 102 - Introductory Astronomy of the Solar System **Credits:** (4)
- PHYS 106 - Physics Inquiry **Credits:** (5)
- SCED 215 - STEM Outreach Field Experience **Credits:** (1-2) (Must be taken for 2 credits)
- SCED 322 - Science Education in the Elementary School **Credits:** (4)
- SCED 354 - Science, Society and the Teaching Community **Credits:** (3)
- SCED 422 - Advanced Teaching Strategies in Elementary Science **Credits:** (3)

Total Credits: 36-37

Science Honors Research Program

College of the Sciences
Ellensburg
Lind Hall, room 118A

509-963-2718
www.cwu.edu/~cots/scihonors
See the website for how this program may be used for educational and career purposes.

Program Director
Audrey Huerta, PhD
huerta@geology.cwu.edu

Program Information
The two-year Science Honors Research Program is centered on a faculty-mentored student research project that culminates in an honors thesis. Applications to the program consist of a research proposal developed under the guidance of a faculty mentor. All proposals are reviewed by a faculty committee. Application deadline is in winter quarter.

Students are normally admitted to the program during their junior year and are employed for nine weeks during the summer, when they are expected to perform the bulk of their research activities. Required coursework consists of SHP 301 (2 credits), SHP 401 (2 credits), and SHP 497 (1 credit). Research continues during the senior year, concluding with a written honors thesis and an oral presentation at the CWU Symposium on University Research and Creative Expression (SOURCE).

Admission Requirements
Admission to the program is competitive, based on the quality of the research proposal submitted by the applicant and faculty mentor. Approximately 10 students are admitted each year. Application forms, criteria, and deadline are posted on the Science Honors website, www.cwu.edu/~cots/scihonors.

Exit Requirements
Satisfactory completion of SHP 497, which requires the submission of an honors thesis that is approved by faculty mentor and program director, is required for participation in honors convocation and to receive an honors designation on the transcript.

Required Extracurricular Activity
Students are expected to work full time on their proposed research project for nine weeks during the summer and to participate in group activities and weekly meetings. Students should not be working more than 15 hours per week at another job, nor be enrolled in other classes during the summer. Exceptions may be made for certain required summer courses, such as GEOL 489.

Sociology Department

College of the Sciences
Ellensburg
Farrell Hall, room 409
Mail Stop 7545
509-963-1305
Fax: 509-963-1308
www.cwu.edu/sociology
See website for how sociology may be used for educational and career purposes.

Faculty and Staff
Chair
Delores (Kandee) Cleary, PhD

Professors
Laura L. Appleton, PhD, sex and gender, death and dying, sociology of religion
Delores Cleary, PhD, criminology, the life-course, American society, minorities, ethnic studies, American Indian issues
Kirk A. Johnson, PhD, Dean, college of the sciences, criminology, delinquency, victimization, organizations, methods
Nelson Pichardo, PhD, ethnic studies, social movements

Associate Professors
Eric Cheney, PhD, deviance and social control, economic sociology, organizations, statistics and urban sociology
Judith Hennessy, PhD, social welfare and poverty, gender, sociology of work, sociology of family
Michael Harrod, PhD, social psychology, criminology theory, intimate partner violence, statistics, research methods

Assistant Professors
Tracey Hoover, PhD, gender and identity, feminist movements and theory, family and socialization, and media
Pamela McMullin-Messier, PhD, demography, aging, collective action, social justice, environmental studies, family, gender, and sexuality
Michael Mulcahy, PhD, political sociology, political economy, organizations, theory

Staff
Noella Wyatt, secretary

Department Information
The Department of Sociology provides opportunities for students to understand the conceptual and methodological tools used by sociologists to understand society. Students will be encouraged to: 1) see society as concrete day-to-day behavior of human beings; 2) grasp the relationship between history, society, and the individual's life; 3) realize that social patterns are tools for the accomplishment of human ends and not necessarily unalterable facts of life; and 4) develop the ability to critically analyze social phenomena.

Department Standards
Students who major in sociology and social services are required to register with the department, at which time an advisor will be selected. In order to develop a program of study, students are required to meet once a quarter with their advisor. Further information on specific courses, the faculty, and career opportunities are available in the department office.

Exit Requirements
Students are required to have a 2.3 cumulative grade point average for all majors.

Honors in Sociology and Social Services
1. The sociology department's honors program is designed for students who wish to explore a particular research problem in depth.

2. Admission to the program

The student must:

(a) Have a 3.50 or higher cumulative GPA in sociology

courses
(b) Be at least a junior
(c) Have a faculty member sponsorship; the faculty member would submit student's name to the department for admission

3. Requirements

The student is required to:

(a) Maintain a 3.5 or higher GPA in sociology coursework (including any approved outside electives) applied to the sociology degree
(b) Enroll in SOC 495 beginning fall quarter of the senior year (minimum of 10 credits over the course of that year)
(c) Complete a research project under the supervision of a faculty
(d) Participate in a public presentation of the research project (such as SOURCE, a professional conference, or other departmental-approved venues)

4.Those who fail to maintain a 3.5 GPA in the major, or who fail to participate in a public presentation will not receive honors.

Sociology Core Requirements
Required Courses
SOC 107 - Principles of Sociology 5
SOC 350 - Social Theory I 5
SOC 363 - Methods of Social Research 5
SOC 364 - Data Analysis in Sociology 5
SOC 489 - Senior Seminar 1
Sociology Core Total Credits: 21

Sociology Major, BA (45 credits)

Students may choose either a 45-credit major or a 60-credit major. In order to graduate, a student who completes the 45-credit major must also have a minor or second major in another discipline.
(NOTE: Students seeking a BA degree must complete one year college/university study or two years high school study of a single world language.)
(NOTE: Students admitted to the sociology major cannot also have a sociology minor; however, they may have a social services minor. Likewise, students admitted to the social services major cannot also have a social services minor, but they may have a sociology minor.)

Required Courses

Students are recommended to take SOC 363 before taking SOC 364.

- SOC 107 - Principles of Sociology **Credits:** (5)
- SOC 350 - Social Theory I **Credits:** (5)
- SOC 363 - Methods of Social Research **Credits:** (5)
- SOC 364 - Data Analysis in Sociology **Credits:** (5)
- SOC 489 - Senior Seminar **Credits:** (1)

Sociology Core Credits: 21

Select one course from each of the following categories - Credits: 15

Deviance, Law and Social Control

- SOC 343 - Child Abuse **Credits:** (5)
- SOC 344 - Juvenile Delinquency **Credits:** (5)
- SOC 345 - Deviance **Credits:** (5)
- SOC 346 - Criminology **Credits:** (5)
- SOC 348 - Women and Crime **Credits:** (5)
- SOC 349 - Law and Society **Credits:** (5)
- SOC 352 - Punishment and Corrections **Credits:** (5)
- SOC 447 - White-collar and Organization Crime **Credits:** (5)

Inequality and Social Change

- SOC 325 - Aging **Credits:** (5)
- SOC 326 - Demography of Contemporary World Populations **Credits:** (5)
- SOC 354 - Minority Experience **Credits:** (5)
- **OR** ETS 354 - Minority Experiences **Credits:** (5)
- SOC 356 - Sociology of Gender **Credits:** (5)
- SOC 358 - Sociology of Sexualities **Credits:** (5)
- SOC 359 - U.S. Feminist Movements **Credits:** (5)
- SOC 362 - Social Movements **Credits:** (5)
- SOC 365 - Minority Groups **Credits:** (5)
- SOC 366 - Sociology of American Indians **Credits:** (5)
- SOC 370 - Social Change **Credits:** (5)
- SOC 371 - Globalization **Credits:** (5)
- SOC 375 - Sociology of Conflict **Credits:** (5)
- SOC 382 - Sociology of the Future **Credits:** (5)
- SOC 386 - Seminar on Racism **Credits:** (5)
- SOC 415 - Urban Sociology **Credits:** (5)
- SOC 442 - Social Welfare Policy **Credits:** (5)
- SOC 445 - Social Inequality **Credits:** (5)
- SOC 446 - Sociology of Immigration **Credits:** (5)

Social Structure and Institutions

- SOC 307 - Individual and Society **Credits:** (5)
- SOC 320 - Death and Dying **Credits:** (5)

- SOC 327 - Sociology of Health **Credits:** (5)
- SOC 331 - Sociology of Sport **Credits:** (5)
- SOC 338 - Political Sociology **Credits:** (5)
- SOC 351 - Sociology of Work **Credits:** (5)
- SOC 357 - Sociology of Families **Credits:** (5)
- SOC 367 - Sociology of Religion **Credits:** (5)
- SOC 376 - Sociology of the Military and Veterans in U.S. Society **Credits:** (5)
- SOC 380 - Social Ecology **Credits:** (5)
- SOC 425 - Sociology of Education **Credits:** (5)
- SOC 459 - Organizations **Credits:** (5)

Sociology Total Credits: 36

Approved Electives in Sociology - Credits: 9-11

A maximum of 5 credits of 100-level electives and up to 5 credits of 200-level electives may be counted toward the major. PSY 363, Intermediate Statistics and Research Methods are an approved elective.

Total Credits: 45

In order to graduate, a student who completes the 45 credit major must also have a minor or second major in another discipline.

Sociology Major, BA (60 credits)

Students may choose either a 45-credit major or a 60-credit major. In order to graduate, a student who completes the 45-credit major must also have a minor or second major in another discipline.
(NOTE: Students seeking a BA degree must complete one year college/university study or two years high school study of a single world language.)
(NOTE: Students admitted to the sociology major cannot also have a sociology minor; however, they may have a social services minor. Likewise, students admitted to the social services major cannot also have a social services minor, but they may have a sociology minor.)

Required Courses

- SOC 107 - Principles of Sociology **Credits:** (5)
- SOC 350 - Social Theory I **Credits:** (5)
- SOC 363 - Methods of Social Research **Credits:** (5)
- SOC 364 - Data Analysis in Sociology **Credits:** (5)
- SOC 489 - Senior Seminar **Credits:** (1)

Sociology Core Credits: 21

Select at least one course from each of the following categories - Credits: 15

Deviance, Law and Social Control

- SOC 343 - Child Abuse **Credits:** (5)
- SOC 344 - Juvenile Delinquency **Credits:** (5)
- SOC 345 - Deviance **Credits:** (5)
- SOC 346 - Criminology **Credits:** (5)
- SOC 348 - Women and Crime **Credits:** (5)
- SOC 349 - Law and Society **Credits:** (5)
- SOC 352 - Punishment and Corrections **Credits:** (5)
- SOC 447 - White-collar and Organization Crime **Credits:** (5)

Inequality and Social Change

- SOC 325 - Aging **Credits:** (5)
- SOC 326 - Demography of Contemporary World Populations **Credits:** (5)
- SOC 354 - Minority Experience **Credits:** (5)
- *OR* ETS 354 - Minority Experiences **Credits:** (5)
- SOC 356 - Sociology of Gender **Credits:** (5)
- SOC 358 - Sociology of Sexualities **Credits:** (5)
- SOC 359 - U.S. Feminist Movements **Credits:** (5)
- SOC 362 - Social Movements **Credits:** (5)
- SOC 365 - Minority Groups **Credits:** (5)
- SOC 366 - Sociology of American Indians **Credits:** (5)
- SOC 370 - Social Change **Credits:** (5)
- SOC 371 - Globalization **Credits:** (5)
- SOC 375 - Sociology of Conflict **Credits:** (5)
- SOC 382 - Sociology of the Future **Credits:** (5)
- SOC 386 - Seminar on Racism **Credits:** (5)
- SOC 415 - Urban Sociology **Credits:** (5)
- SOC 442 - Social Welfare Policy **Credits:** (5)
- SOC 445 - Social Inequality **Credits:** (5)
- SOC 446 - Sociology of Immigration **Credits:** (5)

Social Structure and Institutions

- SOC 307 - Individual and Society **Credits:** (5)
- SOC 320 - Death and Dying **Credits:** (5)
- SOC 327 - Sociology of Health **Credits:** (5)
- SOC 331 - Sociology of Sport **Credits:** (5)
- SOC 338 - Political Sociology **Credits:** (5)
- SOC 351 - Sociology of Work **Credits:** (5)
- SOC 357 - Sociology of Families **Credits:** (5)
- SOC 367 - Sociology of Religion **Credits:** (5)
- SOC 376 - Sociology of the Military and Veterans in U.S. Society **Credits:** (5)
- SOC 380 - Social Ecology **Credits:** (5)

- SOC 425 - Sociology of Education **Credits:** (5)
- SOC 459 - Organizations **Credits:** (5)

Sociology Total Credits: 36

Approved Electives in Sociology - Credits: 24-26

A maximum of 5 credits of 100-level electives and up to 5 credits of 200-level electives may be counted toward the major. PSY 363, Intermediate Statistics and Research Methods are an approved elective.

Total Credits: 60

Social Services Major, BS

The social service major is designed for students interested in working in the human services delivery systems. Students are required to have a strong grounding in sociology as well as the applied field of social services. The coursework introduces students to critical issues in the field and offers students the opportunity to work within agencies in the community.

The major requirements are such that students are encouraged to organize their program of study to include a minor in an area of interest or specialization outside of sociology. Some areas that fit well with this major include psychology, ethnic studies, family studies, gerontology, women's studies, community health, and the like.

Required Courses

Core Area

- SOC 107 - Principles of Sociology **Credits:** (5)
- SOC 350 - Social Theory I **Credits:** (5)
- SOC 363 - Methods of Social Research **Credits:** (5)
- SOC 364 - Data Analysis in Sociology **Credits:** (5)
- SOC 489 - Senior Seminar **Credits:** (1)

Practice Area

- SOC 301 - Introduction and History of Social Service Agencies **Credits:** (5)
- SOC 310 - Social Service Methods and Casework **Credits:** (5)
- SOC 490 - Cooperative Education **Credits:** (1-12) Additional credits in SOC 490 may count toward graduation.

Macro Considerations in Social Services

- SOC 442 - Social Welfare Policy **Credits:** (5)
- SOC 445 - Social Inequality **Credits:** (5)

Social Organization Area

Choose one course:

- SOC 415 - Urban Sociology **Credits:** (5)
- SOC 460 - Community Structure and Organization **Credits:** (5)

Contemporary Society Area

Choose one course:

- SOC 356 - Sociology of Gender **Credits:** (5)
- SOC 365 - Minority Groups **Credits:** (5)
- SOC 386 - Seminar on Racism **Credits:** (5)

Approved Electives in Sociology - Credits: 5 (Upper Division)

*PSY 363, Intermediate Statistics and Research Methods is an approved elective.
**SOC 107 is prerequisite for SOC 350 and 445.
***Additional credits in SOC 490 may count toward graduation.

Total Credits: 60

Social Services Minor

(NOTE: Students admitted to the sociology major cannot also have a sociology minor, however, they may have a social services minor. Likewise, students admitted to the social services major cannot also have a social services minor, but they may have a sociology minor.)

Required Courses

- Electives in Sociology **Credits:** (15)
  SOC 490, Cooperative Education, and SOC 496, Individual Study, do not count toward the minor. A maximum of 5 credits of elective lower-division coursework may be counted toward the minor.
- SOC 301 - Introduction and History of Social Service Agencies **Credits:** (5)
- SOC 310 - Social Service Methods and Casework **Credits:** (5)
- SOC 442 - Social Welfare Policy **Credits:** (5)

- **OR** SOC 460 - Community Structure and Organization **Credits:** (5)

Total Credits: 30

Sociology Minor

Required Courses

- Upper-division electives in Sociology - **Credits:** 20
  SOC 490, Cooperative Education, and SOC 496, Individual Study, do not count toward the minor. With advisor approval, a maximum of 5 credits of elective lower-division coursework may be counted toward the minor.
- SOC 107 - Principles of Sociology **Credits:** (5)

Total Credits: 25

STEP (Science Talent Expansion Program)

College of the Sciences
Ellensburg

Dean Hall 130
509-963-3002
Mail Stop 7418
www.cwu.edu/step

Contact
Martha Kurtz
Associate Dean
STEP@cwu.edu

The Science Talent Expansion Program (STEP) is an innovative program designed to prepare and retain students in majors and careers in science, technology, engineering, and mathematics (STEM) fields. STEP consists of an integrated sequence of classes, enrichment activities, and student research opportunities through which students gain hands-on experience in modern scientific research methods, explore theme-based interdisciplinary scientific issues, and develop mentoring relationships with CWU STEM faculty.

Application to STEP is open to new freshman and transfer students with an interest in and aptitude for STEM fields.

STEP freshman participate in a three-quarter-long series of courses known as the STEP Freshman Science Seminar (STEP 101, STEP 102, and STEP 103). Completion of these three courses satisfies one of the Natural Sciences General Education Program requirements. Students who successfully complete the STEP Freshman Science Seminar series will be eligible to apply for and participate in the STEP Sophomore Bridging Program. The STEP Sophomore Bridging Program provides the opportunity for students in their sophomore year to participate in undergraduate research or serve as a Teaching Assistant in various STEM courses. Those students who have already had some college-level experience are invited to apply directly to the STEP Transfer Bridging Program and will take two STEP courses, STEP 301 in the fall and STEP 302 in the winter. Upon completion of these courses, transfer students will have the opportunity to apply for positions in the STEP Transfer Bridging Program.

The Science Talent Expansion Program at CWU involves faculty members from several academic departments: Biological Sciences; Chemistry; Computer Science; Geological Science; Engineering Technologies, Safety, and Construction Management; Mathematics; and Physics. More information about the program and participating faculty members is available on the STEP website.

Teaching Elementary Adolescent and Young Children Department

College of Education and Professional Studies
Ellensburg
Black Hall, room 101
Mail Stop 7412
509-963-1464
Fax: 509-963-1162
www.cwu.edu/elementary

See the website for how these programs may be used for educational and career purposes.

Faculty and Staff
Chair
B. Keith Salyer, PhD

Professor
Cory Gann, MA, early childhood education

Associate Professors
Tina Georgeson, EdD, early childhood and elementary education
Khodi Kaviani, PhD, elementary education
Keith Salyer, PhD, early childhood and elementary education

Assistant Professors
Dia Gary, EdD, early childhood education
Teresa Walker, EdD, early childhood education

Lecturers
Judy Backlund, MA, senior lecturer
Trisha Dee, MFA, senior lecturer
Susan Connolly, MEd, senior lecturer
Christine English, EdD, senior lecturer
Melanie Kingham, MEd, senior lecturer

Staff
Tina Clark, program support supervisor
Tracy Wise, k-8 advisor

Department Information, Standards, and Requirements
Major and/or minor programs in the TEACH department include early childhood education and elementary education. Additionally the TEACH department contributes to the middle-level teaching programs in mathematics (see mathematics in the catalog) and science teaching (see science education in the catalog).

In addition to a listed major and/or minor, students must maintain full admission status in the Teacher Certification Program (see College of Education and Professional Studies in the catalog) and complete the Professional Education Program (see Department of Education Foundations and Curriculum in the catalog) to qualify for teacher certification in the endorsable area. The early childhood education major and minor offer options in which these requirements do not apply (see descriptions below). At least 75 percent of an endorsable major or minor must be completed prior to the Professional Education Program course, EDCS 442 (Student Teaching).

All students seeking a teacher certification endorsement must maintain a 3.0 GPA or higher for the last 45 graded credits. Students must also earn a minimum grade of "C" in all required major, minor, and Professional Education Program courses.

Early Childhood Education Major

(With Washington State Teacher Certification)

This major is intended to prepare students to become birth through grade 3 teaching specialists. As it is less than a 60-credit major it requires a minor or second major. Students who elect to complete this major for a teacher certification endorsement in early childhood education are strongly advised to simultaneously complete the elementary education major (see a department advisor as to how this may be effectively accomplished). Students seeking the teacher certification endorsement in early childhood education must complete Teacher Certification and Professional Education Program requirements. Successful completion of EDEC 492 and EDEC 493 (minimum of 12 credits) is expected before student teaching. Majors and minors will complete program as a learning cohort (beginning fall or winter quarter) EDEC 492 and EDEC 493 concurrently and then either course may be repeated individually. Candidates must be fully admitted to the major prior to beginning the six quarter cohort sequence. Students enrolling in any course with a field experience must have a current WSP and FBI fingerprint and background clearance on file with CWU. Please check with the CWU Teacher Certification Office (Black Hall, room 228; 509-963-2660) regarding clearance.

(Without Washington State Teacher Certification)

A student may complete the Early Childhood Education major without gaining entry to the Teacher Certification Program or completing the Professional Education Program. Under such circumstances a teacher certification endorsement in early childhood will not be granted. This option exists for those individuals who wish to work with young children in birth-age 8 settings that do not require teacher certification. Candidates must be fully admitted to the major or minor prior to beginning the six quarter cohort sequence. While full application to the Teacher Certification Program is not required, students enrolling in any Early Childhood Education Program class that has a field experience, must have current WSP/FBI fingerprint and background clearance. Please check with the CWU Teacher Certification Office (Black Hall, room 228; 509-963-2660) regarding clearance.

Required Courses

- EDEC 306 - Professional Growth and Expectations **Credits:** (2)
- EDEC 307 - Equity, Culture, and Anti-bias in ECE **Credits:** (3)
- EDEC 312 - Childhood Learning **Credits:** (3)
- EDEC 313 - Materials and Manipulatives in ECE **Credits:** (3)
- EDEC 314 - Learning through Play **Credits:** (3)
- EDEC 321 - Curriculum I **Credits:** (3)
- EDEC 322 - Parent Involvement **Credits:** (3)
- EDEC 411 - Curriculum II **Credits:** (3)
- EDEC 412 - Responsible Childhood Assessment **Credits:** (3)

- **OR** EFC 315 - Educational Assessment **Credits:** (3)
- EDEC 422 - Classroom Management in an ECE Classroom **Credits:** (3)
- **OR** EFC 350 - Classroom Management **Credits:** (3)
- EDEC 424 - Curriculum III **Credits:** (3)
- EDEC 432 - Theories in Child Development **Credits:** (3)
- EDEC 492 - Senior Seminar **Credits:** (3)
- EDEC 493 - Professional Educators Field Experience **Credits:** (3-18)

Total Credits: 50

Elementary Education Major

This major satisfies the teacher certification endorsement for elementary (K-8) education. As it is less than a 60-credit major it requires a minor OR second major. There is not an option to complete this major without completing all Teacher Certification and Professional Education Program requirements, which include the Professional Education Program courses (49-52 credits).

Students who complete this major will be endorsed to teach in regular, self-contained elementary classrooms. EDLT 308, EDLT 409, EDLT 422, EDEL 323, EDEL 420, and SCED 322 must be taken prior to EFC 480 (Student Teaching).

Required Courses

- EDEL 320 - Integrated Arts in the Elementary School **Credits:** (5)
- EDEL 323 - Teaching Elementary School Mathematics **Credits:** (4)
- EDEL 420 - Social Sciences in the Elementary School **Credits:** (4)
- EDEL 423 - Integrated Methods for the Elementary School **Credits:** (3)
- EDLT 308 - Literacy I **Credits:** (3)
- EDLT 321 - Teaching Children's Literature **Credits:** (3)
- EDLT 409 - Literacy II **Credits:** (5)
- EDLT 422 - Teaching the Language Arts **Credits:** (4)
- HED 446 - Health Education Curriculum for Elementary Teachers **Credits:** (3)
- MATH 164 - Foundations of Arithmetic **Credits:** (5)
- MATH 250 - Intuitive Geometry for Elementary Teachers **Credits:** (4)
- PE 334 - Physical Education Activities for the Elementary School **Credits:** (3)
- SCED 322 - Science Education in the Elementary School **Credits:** (4)
- Department-approved electives - **Credits:** (3-5)

Total Credits: 53-55

Middle-level Humanities Teaching Major, BA

The middle-level humanities teaching major is designed for students who are seeking teaching careers in teaching English language arts and social studies (economics, history, geology, social studies and civics) at the middle-level grades (5-8). The coursework provides experiences in the humanities subject content areas and instructional pedagogy including field experiences that are designed to prepare teacher certification and content endorsement. The middle-level humanities teaching major does not require a minor for the degree program. Students in the middle-level humanities teaching major must be admitted to the Teacher Certification Program and complete the Professional Education Program sequence (50 credits) coursework as part of the teacher certification process.

Required Courses

- EDEL 476 - Integrated Humanities at the Middle-level Grades **Credits:** (5)
- EDEL 477 - Middle School Students and Their Environment **Credits:** (4)
- EDEL 478 - Developmentally Responsive Curriculum in the Middle Grades **Credits:** (3)
- EDEL 493 - Professional Educators Field Experience **Credits:** (1-15) (Must be taken for 3 credits)
- EDLT 324 - Literacy Across the Curriculum **Credits:** (3)
- ENG 247 - Multicultural Literature **Credits:** (5)
- ENG 320 - English Grammar **Credits:** (5)
- ENG 429 - Teaching Writing in Middle-level Humanities **Credits:** (5)
- ENG 488 - Teaching Portfolio **Credits:** (2)
- ENG 492 - Practicum **Credits:** (3)
- HIST 101 - World Civilization to 1500 **Credits:** (5)
- HIST 143 - United States History to 1865 **Credits:** (5)
- HIST 301 - Pacific Northwest History **Credits:** (5)
- POSC 210 - American Politics **Credits:** (5)

Select from one of the following Credits: (5)

- ECON 101 - Economic Issues **Credits:** (5)
- ECON 102 - World Economic Issues **Credits:** (5)
- ECON 201 - Principles of Economics Micro **Credits:** (5)
- ECON 202 - Principles of Economics Macro **Credits:** (5)

Select from one of the following Credits: (5)

- GEOG 101 - World Regional Geography **Credits:** (5)
- GEOG 108 - Introduction to Human Geography **Credits:** (5)

Select from the following Credits: (10)

Upper-division World History to 1600

- HIST 313 - History of Rome 500 B.C. to 500 A. D. **Credits:** (5)
- HIST 315 - Muslim Middle East **Credits:** (5)
- HIST 325 - Renaissance and Reformation **Credits:** (5)
- HIST 370 - Medieval European History **Credits:** (5)
- HIST 383 - East Asian Civilization **Credits:** (5)
- HIST 422 - Roman and Medieval Britain **Credits:** (5)
- HIST 473 - Russia to 1881 **Credits:** (5)

Upper-division United States History to 1900

- HIST 339 - Colonial British America **Credits:** (5)
- HIST 341 - The Constitution and the New Republic, 1783-1800 **Credits:** (5)
- HIST 434 - American Indian History to 1795 **Credits:** (5)
- HIST 438 - American Indian History since 1795 **Credits:** (5)
- HIST 440 - The American Revolution **Credits:** (5)
- HIST 442 - Jefferson, Jackson, and American Growth, 1800-1848 **Credits:** (5)
- HIST 443 - The West in American History **Credits:** (5)
- HIST 444 - Sectionalism, Civil War, and Reconstruction **Credits:** (5)
- HIST 450 - Exploring U.S. Cultural History **Credits:** (5)
- HIST 454 - American Environmental History **Credits:** (5)

Total Credits: 78

Early Childhood Education Minor

(With Washington State Teacher Certification)

This minor is intended to prepare the students to become a birth through grade 3 teacher. Students who elect to complete this minor with a teaching endorsement in early childhood education are strongly advised to simultaneously complete the elementary education major (see a department advisor as to how this may be effectively accomplished). Students seeking the teacher certification endorsement in early childhood education must complete Teacher Certification and Professional Education Program requirements and courses (50 credits). Candidates must be fully admitted to the minor prior to beginning the six quarter cohort sequence. All students in the ECE program must have WSP/FBI background and fingerprint clearance. Please check with the CWU Teacher Certification Office (Black Hall, room 228; 509-963-2660) regarding clearance.

(Without Washington State Teacher Certification)

A student may complete this minor without gaining entry to the Teacher Certification Program or completing the Professional Education Program. Under such circumstances a teacher certification endorsement in early childhood will not be granted. This option exists for those individuals who wish to work with young children in an infancy/toddler/preschool setting. Candidates must be fully admitted to the minor prior to beginning the six quarter cohort sequence. All students in the ECE program must have WSP/FBI background and fingerprint clearance. Please check with the CWU Teacher Certification Office (Black Hall, room 228; 509-963-2660) regarding clearance.

Required Courses

- EDEC 306 - Professional Growth and Expectations **Credits:** (2)
- EDEC 307 - Equity, Culture, and Anti-bias in ECE **Credits:** (3)
- EDEC 312 - Childhood Learning **Credits:** (3)
- EDEC 313 - Materials and Manipulatives in ECE **Credits:** (3)
- EDEC 314 - Learning through Play **Credits:** (3)
- EDEC 321 - Curriculum I **Credits:** (3)
- EDEC 322 - Parent Involvement **Credits:** (3)
- EDEC 411 - Curriculum II **Credits:** (3)
- EDEC 412 - Responsible Childhood Assessment **Credits:** (3)

- **OR** EFC 315 - Educational Assessment **Credits:** (3)
- EDEC 422 - Classroom Management in an ECE Classroom **Credits:** (3)
- **OR** EFC 350 - Classroom Management **Credits:** (3)
- EDEC 424 - Curriculum III **Credits:** (3)

Total Credits: 32

Middle-level English Minor (Non-Endorsement)

The middle-level English minor is designed for students who are seeking teaching careers at the elementary or middle school level. While this minor does not result in a Washington State middle-level humanities endorsement which requires both the English and social studies content areas, it does provide additional training and expertise in the English and language arts content areas. Candidates seeking the elementary endorsement (K-8) can add this minor to provide an English/language arts content focus area to the generalist teaching degree. Teacher candidates at the middle-level and secondary-level can add this minor to broaden specialized content areas as the first step in adding a middle-level humanities (English language arts and social studies) endorsement.

Required Courses

- EDEL 476 - Integrated Humanities at the Middle-level Grades **Credits:** (5)
- EDEL 477 - Middle School Students and Their Environment **Credits:** (4)
- EDEL 478 - Developmentally Responsive Curriculum in the Middle Grades **Credits:** (3)
- EDLT 324 - Literacy Across the Curriculum **Credits:** (3)
- ENG 247 - Multicultural Literature **Credits:** (5)
- ENG 303 - Principles of English Studies **Credits:** (5)
- ENG 320 - English Grammar **Credits:** (5)
- ENG 429 - Teaching Writing in Middle-level Humanities **Credits:** (5)
- ENG 488 - Teaching Portfolio **Credits:** (2)
- ENG 492 - Practicum **Credits:** (3)

Total Credits: 40

Middle-level Social Studies Minor (Non-Endorsement)

The middle-level social studies minor is designed for students who are seeking teaching careers at the elementary or middle school level. While this minor does not result in a Washington State middle-level humanities endorsement, which requires both the English and social studies content areas, it does provide additional training and expertise in the social studies, history, economics, civics, and geography content areas. Candidates seeking the elementary endorsement (K-8) can add this minor to provide a social studies content focus area to the generalist teaching degree. Teacher candidates at the middle-level and secondary-level can add this minor to broaden specialized content areas as the first step in adding a middle-level humanities (English language arts and social studies) endorsement.

Required Courses

- EDEL 476 - Integrated Humanities at the Middle-level Grades **Credits:** (5)
- EDEL 477 - Middle School Students and Their Environment **Credits:** (4)
- EDEL 478 - Developmentally Responsive Curriculum in the Middle Grades **Credits:** (3)
- EDEL 493 - Professional Educators Field Experience **Credits:** (1-15) (Must be taken for 3 credits)

Select from the following: Credits (15)

- HIST 101 - World Civilization to 1500 **Credits:** (5)
- HIST 143 - United States History to 1865 **Credits:** (5)
- HIST 301 - Pacific Northwest History **Credits:** (5)
- POSC 210 - American Politics **Credits:** (5)

Select from the following: Credits (5)

- GEOG 101 - World Regional Geography **Credits:** (5)
- GEOG 108 - Introduction to Human Geography **Credits:** (5)

Select from the following: Credits (5)

- ECON 101 - Economic Issues **Credits:** (5)
- ECON 102 - World Economic Issues **Credits:** (5)
- ECON 201 - Principles of Economics Micro **Credits:** (5)

- ECON 202 - Principles of Economics Macro **Credits:** (5)

Select from the following: Credits (5)

Upper-division World History to 1600

- HIST 313 - History of Rome 500 B.C. to 500 A. D. **Credits:** (5)
- HIST 315 - Muslim Middle East **Credits:** (5)
- HIST 325 - Renaissance and Reformation **Credits:** (5)
- HIST 370 - Medieval European History **Credits:** (5)
- HIST 383 - East Asian Civilization **Credits:** (5)
- HIST 422 - Roman and Medieval Britain **Credits:** (5)
- HIST 473 - Russia to 1881 **Credits:** (5)

Upper-division United States History to 1900

- HIST 339 - Colonial British America **Credits:** (5)
- HIST 341 - The Constitution and the New Republic, 1783-1800 **Credits:** (5)
- HIST 434 - American Indian History to 1795 **Credits:** (5)
- HIST 438 - American Indian History since 1795 **Credits:** (5)
- HIST 440 - The American Revolution **Credits:** (5)
- HIST 442 - Jefferson, Jackson, and American Growth, 1800-1848 **Credits:** (5)
- HIST 443 - The West in American History **Credits:** (5)
- HIST 444 - Sectionalism, Civil War, and Reconstruction **Credits:** (5)
- HIST 450 - Exploring U.S. Cultural History **Credits:** (5)
- HIST 454 - American Environmental History **Credits:** (5)

Total Credits: 45

Theatre Arts Department

College of Arts and Humanities
Ellensburg
McConnell Hall, room 102
Mail Stop 7460
509-963-1750
Fax: 509-963-1767
email: theatre@cwu.edu
www.cwu.edu/theatre

See the website for how this program may be used for educational and career purposes.

Faculty and Staff

Chair

Scott R. Robinson, MFA

Professors

Brenda Hubbard, MFA, acting, performance, literature
Scott R. Robinson, MFA, chair, theatre management
Michael J. Smith, MFA, head of performance, dialect, acting for the camera

Associate Professors

Christina Barrigan, MFA, head of design, resident lighting designer
George W. Bellah, 3rd, MFA, movement, performance, stage combat, Asian drama
Terri Brown, PhD, head of music theatre, history, literature and music theatre
David Brown, MM, musical director, music theory
Marc Haniuk, MFA, resident scenic designer

Assistant Professors

Jay Ball, PhD, graduate coordinator theatre studies
Patrick Dizney, MFA, voice, performance

Senior Lecturer

Jerry Dougherty, MFA, stage and production management

Lecturers

David Barnett, MFA, McConnell stage manager, scene shop manager, technical director
Joshua Legate, MA, light shop manager
Meredith Magoun, MFA, costume design and technology
M. Catherine McMillen, BA, costume shop manager, wigs and makeup
Joseph Sasnett, BFA, voice instructor
Megan Smith, BFA, dance instructor, choreographer
Jason Tucholke, MFA, sound design and technology

Staff

Gwen Bruce, fiscal technician II
Mary Makins, secretary senior

Department Information
The Department of Theatre Arts offers comprehensive study in the varied facets of theatre arts as they relate to theatre production. Coursework prepares students for rigorous and rewarding work within Central Theatre Ensemble (CTE), the production arm of the program, leading to professional work in the entertainment industry. Based on a professional model of theatre, CTE offers students the opportunity to thrive in all aspects of theatre production in a safe and mentoring environment, working in state-of-the-art venues supported by fully equipped shops and studios.

Admission Requirements

BA Program
Students seeking a BA degree must complete one year of college/university study or two years of high school study of a single world language.

A cumulative grade point average of 2.7 (B-) in the pre-major required courses must be achieved with a minimum grade of "C+" (2.3) in each course. The applicant must have earned a minimum cumulative GPA of 2.0 in all other collegiate study.

Pre-major required courses:

- TH 107 - Introduction to Theatre **Credits:** (4)
- TH 144 - Foundations of Acting **Credits:** (3)
- TH 166 - Theory of Play Production **Credits:** (3)

BFA Specializations
Admission to the BFA is by audition/interview only. Auditions/interviews are held each year, in late February and early March. See the Auditions Procedures Page www.cwu.edu/theatre/node/2479/#8.

Theatre Arts-General Studies, BA

A perfect choice for the theatre artist, general studies allows for advanced study in a variety of areas allowing students to become the kind of well-rounded theatre artist who can go on to a focused study in graduate school or a variety of careers in the field. The general studies degree is also a great choice for the student who has a number of interests and needs the flexibility to explore several options.

The Department of Theatre Arts offers students a variety of emphasis areas to choose from to ensure that each participant receives specialized attention in the theatre discipline of their choice. By focusing on an emphasis, students can build skills and acquire the training to build strong resumes and portfolios in order to pursue professional jobs or advanced degrees.

Pre-admission Requirements

Students seeking a BA degree must complete one year of college/university study or two years of high school study of a single foreign language.

A cumulative grade point average of 2.7 in the pre-admission requirements courses must be achieved with a minimum grade of “C+” (2.3) in each course. The applicant must have earned a minimum cumulative GPA of 2.0 in all other collegiate study.

Students who have met all the above requirements will be admitted unless the number of eligible applicants exceeds available space. In that case, acceptance will be acceptance will be competitive, based on a selection index.

- TH 107 - Introduction to Theatre **Credits:** (4)
- TH 144 - Foundations of Acting **Credits:** (3)
- TH 166 - Theory of Play Production **Credits:** (3)

Required Courses

- TH 261 - Costume Technology **Credits:** (3)
- TH 267 - Scene Technology **Credits:** (3)
- TH 268 - Lighting Technology **Credits:** (3)
- TH 363 - Theatre History I **Credits:** (4)
- TH 364 - Theatre History II **Credits:** (4)
- TH 365 - Theatre History III **Credits:** (4)
- TH 495 - Senior Research Project **Credits:** (3)

Choose any of the following for a total of 8 credits:

- TH 375 - Asian Drama **Credits:** (4)
- TH 377 - Staging Gender **Credits:** (4)
- TH 382 - Diverse Experiences in American Drama **Credits:** (4)

Choose either of the following for a total of 3 credits:

- TH 329 - Directing I **Credits:** (3)
- TH 360 - Stage Management **Credits:** (3)

Complete 3 credits of TH 393 and 1 credit of TH 493 - Credits: (4).

- TH 393 - Theatre Laboratory **Credits:** (1)
- TH 493 - Theatre Laboratory **Credits:** (1)

Choose any of the following for a total of 12 credits:

- TH 201 - Dance Production Application **Credits:** (1-3)
- TH 202 - Performance Studio **Credits:** (1-3)
- TH 301 - Production Application **Credits:** (3)
- TH 302 - Performance Application **Credits:** (3)
- TH 303 - Management Application **Credits:** (3)
- TH 332 - New Play Production **Credits:** (2)
- TH 401 - Production Application **Credits:** (3)
- TH 402 - Performance Application **Credits:** (3)
- TH 403 - Management Application **Credits:** (3)

Choose any Theatre Electives for a total of 14 credits:

(Any TH course as approved by advisor)

Total Credits: 75

Theatre Art BFA, Design and Production Specialization

Theatre Arts BFA Core Requirements

Theatre Major, BFA

The BFA program is designed to prepare knowledgeable, skilled graduates who will compete at all levels in an increasingly competitive field. Students will also learn to assess, explain, and interpret the many roles and responsibilities inherent in the world of the professional theatre artist. They will also understand how to use the skills they have developed in other career paths related to their degree.

The BFA theatre program is innovative and interdisciplinary. Students complete a sequence of core foundation courses, gain admission into the program through audition/interview, and focus in a single emphasis-performance, design and production, or musical theatre.

Interdisciplinary course work is integral to the structure and success of the BFA theatre program. All of the required and elective courses for the degree are part of other major programs and are regularly taught. Besides the theatre arts courses, 29 interdisciplinary courses are offered by two colleges from seven other CWU departments: art, communications, dance, English, physical education, family and consumer sciences, industrial engineering, and music.

Admission to the BFA is by audition/interview only. Auditions/interviews begin with an online screening, which is outlined on the department website. Continuing BFA students will sign up for audition/interview appointments as part of the annual BFA juries.

BFA candidates must maintain a cumulative GPA of 3.0 in Theatre Arts with a minimum grade of "B-" (2.7) in each course within their specialization. In addition, BFA candidates must earn a grade point average of 2.7 in the department pre-admission requirements courses (TH 107, TH 166, TH 144/244) and must achieve a minimum grade of "C+" (2.3) in any course in their BFA degree plan. The applicant must earn a minimum cumulative GPA of 2.0 in all other collegiate study. Meeting this standard is reviewed as part of the annual jury in each specialization.

Students articulating transfer credit from Seattle Film Institute should contact the department for advisement.

BFA Core Requirements

- TH 107 - Introduction to Theatre **Credits:** (4)
- TH 166 - Theory of Play Production **Credits:** (3)
- TH 363 - Theatre History I **Credits:** (4)
- TH 364 - Theatre History II **Credits:** (4)
- TH 365 - Theatre History III **Credits:** (4)

Lab Component - Credits: (4)

Complete 4 credits of the following:

- TH 393 - Theatre Laboratory **Credits:** (1)
- TH 493 - Theatre Laboratory **Credits:** (1)

Production Component - Credits: (3)

Choose one of the following:

- TH 301 - Production Application **Credits:** (3)
- TH 401 - Production Application **Credits:** (3)

BFA Core Total Credits: 26

Design and Production Specialization

The design and production specialization builds specific skills in production from a strong foundation of general knowledge of technical theatre and the design aspect of theatre. Students choose from a range of courses, both introductory and advanced from writing and drawing, construction, and sewing.
To help students prepare for future employment or graduate school, all students are strongly encouraged to pursue practical experience through TH 490 - Cooperative

Education (internship) as well as the production application courses, designed to put theory into practice as part of Central Theatre Ensemble's regular on-campus season.

Specialization Core - Credits: (30)

- TH 140 - Introduction to Theatre Design **Credits:** (3)
- TH 144 - Foundations of Acting **Credits:** (3)
- TH 261 - Costume Technology **Credits:** (3)
- TH 266 - Theatre Drafting **Credits:** (3)
- TH 267 - Scene Technology **Credits:** (3)
- TH 268 - Lighting Technology **Credits:** (3)
- TH 360 - Stage Management **Credits:** (3)
- TH 366 - Theatre Rendering **Credits:** (3)
- TH 489 - Career & Portfolio Preparation **Credits:** (3)
- TH 495 - Senior Research Project **Credits:** (3)

Literature Component - Credits: (8)

Choose any of the following for a minimum of 8 credits.

- TH 375 - Asian Drama **Credits:** (4)
- TH 377 - Staging Gender **Credits:** (4)
- TH 380 - Studies in Drama **Credits:** (5)
- TH 382 - Diverse Experiences in American Drama **Credits:** (4)

Production Component - Credits: (15)

Choose any of the following for a minimum of 15 credits.

- ATM 381 - Fashion Show Production **Credits:** (2)
- TH 201 - Dance Production Application **Credits:** (1-3)
- TH 301 - Production Application **Credits:** (3)
- TH 303 - Management Application **Credits:** (3)
- TH 393 - Theatre Laboratory **Credits:** (1)
- TH 401 - Production Application **Credits:** (3)
- TH 403 - Management Application **Credits:** (3)
- TH 490 - Cooperative Education **Credits:** (1-12)
- TH 492 - Practicum in Devising and Touring Theatre **Credits:** (3-12)
- TH 493 - Theatre Laboratory **Credits:** (1)

Core Skills Component - Credits: (3)

Choose any of the following for a minimum of 3 credits.

- ART 150 - Introduction to Drawing **Credits:** (3)
- TH 215 - Music Fundamentals for Musical Theatre I **Credits:** (3)
- TH 465 - Costume and Fashion Drawing **Credits:** (3)

Area Skills Component - Credits: (12)

Choose from the following for a minimum of 12 credits.

- COM 207 - Introduction to Human Communication **Credits:** (5)
- COM 251 - Small Group Dynamics **Credits:** (4)
- EMS 245 - First Aid **Credits:** (3)
- ATM 355 - Consumer Textiles **Credits:** (4)
- ETSC 160 - Computer-aided Design and Drafting **Credits:** (4)
- ETSC 161 - Architectural Computer Aided Design **Credits:** (3)
- SHM 201 - Introduction to Safety and Health Management **Credits:** (1)
- TH 270 - Stage Makeup **Credits:** (3)
- TH 353 - Stage Properties **Credits:** (3)
- TH 354 - Scene Painting **Credits:** (3)
- TH 356 - Stage Sound **Credits:** (3)
- TH 357 - Entertainment Rigging **Credits:** (3)
- TH 362 - Costume Crafts **Credits:** (3)
- TH 384 - Puppetry **Credits:** (3)
- TH 464 - Wig Creation, Styling, and Maintenance **Credits:** (3)

History/Writing Component - Credits: (6)

Choose any of the following for a minimum of 6 credits.

- ADMG 385 - Business Communications and Report Writing **Credits:** (5)
- ART 235 - Ancient and Medieval Art **Credits:** (3)
- ART 236 - Renaissance through Mid-19th-century Art **Credits:** (3)
- ART 237 - Impressionism through Postmodernism **Credits:** (3)
- ENG 310 - Technical Writing **Credits:** (4)
- ATM 452 - History of Fashion **Credits:** (4)
- TH 452 - History of Fashion **Credits:** (4)

Intermediate Skills Component - Credits: (6)

Choose any of the following for a minimum of 6 credits.

- HRM 381 - Management of Human Resources **Credits:** (5)
- MGT 380 - Organizational Management **Credits:** (5)
- TH 361 - Stage Costuming **Credits:** (3)

- TH 367 - Stage Scenery **Credits:** (3)
- TH 368 - Stage Lighting **Credits:** (3)

Advanced Skills Component - Credits: (4)

Choose any of the following for a minimum of 4 credits.

- TH 456 - Sound Design **Credits:** (4)
- TH 460 - Production Management **Credits:** (4)
- TH 461 - Costume Design **Credits:** (4)
- TH 467 - Scene Design **Credits:** (4)
- TH 468 - Lighting Design **Credits:** (4)

Total Design and Production Credits: 84

Total Credits: 110

Theatre Arts BFA, Musical Theatre Specialization

Theatre Arts BFA Core Requirements

Theatre Major, BFA

The BFA program is designed to prepare knowledgeable, skilled graduates who will compete at all levels in an increasingly competitive field. Students will also learn to assess, explain, and interpret the many roles and responsibilities inherent in the world of the professional theatre artist. They will also understand how to use the skills they have developed in other career paths related to their degree.

The BFA theatre program is innovative and interdisciplinary. Students complete a sequence of core foundation courses, gain admission into the program through audition/interview, and focus in a single emphasis-performance, design and production, or musical theatre.

Interdisciplinary course work is integral to the structure and success of the BFA theatre program. All of the required and elective courses for the degree are part of other major programs and are regularly taught. Besides the theatre arts courses, 29 interdisciplinary courses are offered by two colleges from seven other CWU departments: art, communications, dance, English, physical education, family and consumer sciences, industrial engineering, and music.

Admission to the BFA is by audition/interview only. Auditions/interviews begin with an online screening, which is outlined on the department website. Continuing BFA students will sign up for audition/interview appointments as part of the annual BFA juries.

BFA candidates must maintain a cumulative GPA of 3.0 in Theatre Arts with a minimum grade of "B-" (2.7) in each course within their specialization. In addition, BFA candidates must earn a grade point average of 2.7 in the department pre-admission requirements courses (TH 107, TH 166, TH 144/244) and must achieve a minimum grade of "C+" (2.3) in any course in their BFA degree plan. The applicant must earn a minimum cumulative GPA of 2.0 in all other collegiate study. Meeting this standard is reviewed as part of the annual jury in each specialization.

Students articulating transfer credit from Seattle Film Institute should contact the department for advisement.

BFA Core Requirements

- TH 107 - Introduction to Theatre **Credits:** (4)
- TH 166 - Theory of Play Production **Credits:** (3)
- TH 363 - Theatre History I **Credits:** (4)
- TH 364 - Theatre History II **Credits:** (4)
- TH 365 - Theatre History III **Credits:** (4)

Lab Component - Credits: (4)

Complete 4 credits of the following:

- TH 393 - Theatre Laboratory **Credits:** (1)
- TH 493 - Theatre Laboratory **Credits:** (1)

Production Component - Credits: (3)

Choose one of the following:

- TH 301 - Production Application **Credits:** (3)
- TH 401 - Production Application **Credits:** (3)

BFA Core Total Credits: 26

Musical Theatre Specialization

The musical theatre specialization builds specific skills in production from a strong foundation of using the body as the artist's instrument through singing, voice, and stage movement in the musical theatre style. Students choose from a range of courses, both introductory and advanced, from writing and movement, dancing, and voice.

To help students prepare for future employment or graduate school, all students are strongly encouraged to pursue practical experience through TH 490 - Cooperative Education internship as well as the performance

application courses, designed to put theory into practice as part of Central Theatre Ensemble's regular on-campus season.

Specialization Core - Credits: (64)

- MUS 152A - Class Piano I **Credits:** (1)
- MUS 153A - Class Piano II **Credits:** (1)
- MUS 154A - Class Piano III **Credits:** (1)
- TH 143 - Private Voice Lessons **Credits:** (1-4) (repeated each quarter for residency at least 9 credits)
- TH 148 - Actor Conditioning – Monologue **Credits:** (1)
- TH 161 - Intro to Technology 1: Costumes and Makeup **Credits:** (3)
- TH 162 - Intro to Technology 2: Scenery and Lighting **Credits:** (3)
- TH 215 - Music Fundamentals for Musical Theatre I **Credits:** (3)
- TH 216 - Music Fundamentals for Musical Theatre II **Credits:** (3)
- TH 217 - Music Fundamentals for Musical Theatre III **Credits:** (3)
- TH 243 - Singing for Actors **Credits:** (1) (must be repeated for 3 credits)
- TH 244 - Basic Acting I **Credits:** (3)
- TH 245 - Basic Acting II **Credits:** (3)
- TH 246 - Basic Acting III **Credits:** (3)
- TH 248 - Vocal Conditioning for the Actor **Credits:** (1)
- TH 249 - Vocal Conditioning for the Actor II **Credits:** (1)
- TH 252 - Stage Dance **Credits:** (2)
- TH 343 - Singing for Actors II **Credits:** (1) (must be repeated for 6 credits)
- TH 344 - Intermediate Acting I **Credits:** (3)
- TH 352 - Stage Dance II **Credits:** (3)
- TH 415 - Musical Theatre History and Literature I **Credits:** (3)
- TH 416 - Musical Theatre History and Literature II **Credits:** (3)
- TH 489 - Career & Portfolio Preparation **Credits:** (3)

Movement Component - Credits: (11)

Choose any of the following for a minimum of 11 credits.

- PED 101 - Modern Dance I **Credits:** (2)
- PED 102 - Modern Dance II **Credits:** (2)
- PED 104 - Ballet I (Level 1) **Credits:** (2)
- PED 121 - Tap Dance I **Credits:** (1)
- PED 141 - Jazz Dance I **Credits:** (1)
- PED 142 - Jazz Dance II **Credits:** (1)
- PED 204 - Ballet II (Level 1) **Credits:** (2)
- PEID 120 - Beginning Fencing **Credits:** (1)
- PEID 145 - Beginning Circus Arts **Credits:** (1)
- TH 252 - Stage Dance **Credits:** (2)
- TH 333 - Stage Combat Fundamentals **Credits:** (3)
- TH 335 - Movement for the Actor **Credits:** (3)
- TH 352 - Stage Dance II **Credits:** (3)
- TH 433 - Advanced Stage Combat **Credits:** (3)

Performance Component - Credits: (9)

Repeat any of the following for a minimum of 9 credits.

- TH 202 - Performance Studio **Credits:** (1-3)
- TH 302 - Performance Application **Credits:** (3)
- TH 332 - New Play Production **Credits:** (2)
- TH 402 - Performance Application **Credits:** (3)

Total Musical Theatre Specialization Credits: 84

Total Credits: 110

Theatre Arts BFA, Performance Specialization

Theatre Arts BFA Core Requirements

Theatre Major, BFA

The BFA program is designed to prepare knowledgeable, skilled graduates who will compete at all levels in an increasingly competitive field. Students will also learn to assess, explain, and interpret the many roles and responsibilities inherent in the world of the professional theatre artist. They will also understand how to use the skills they have developed in other career paths related to their degree.

The BFA theatre program is innovative and interdisciplinary. Students complete a sequence of core foundation courses, gain admission into the program through audition/interview, and focus in a single emphasis-performance, design and production, or musical theatre.

Interdisciplinary course work is integral to the structure and success of the BFA theatre program. All of the required and elective courses for the degree are part of other major programs and are regularly taught. Besides the theatre arts courses, 29 interdisciplinary courses are offered by two colleges from seven other CWU

departments: art, communications, dance, English, physical education, family and consumer sciences, industrial engineering, and music.

Admission to the BFA is by audition/interview only. Auditions/interviews begin with an online screening, which is outlined on the department website. Continuing BFA students will sign up for audition/interview appointments as part of the annual BFA juries.

BFA candidates must maintain a cumulative GPA of 3.0 in Theatre Arts with a minimum grade of "B-" (2.7) in each course within their specialization. In addition, BFA candidates must earn a grade point average of 2.7 in the department pre-admission requirements courses (TH 107, TH 166, TH 144/244) and must achieve a minimum grade of "C+" (2.3) in any course in their BFA degree plan. The applicant must earn a minimum cumulative GPA of 2.0 in all other collegiate study. Meeting this standard is reviewed as part of the annual jury in each specialization.

Students articulating transfer credit from Seattle Film Institute should contact the department for advisement.

BFA Core Requirements

- TH 107 - Introduction to Theatre **Credits:** (4)
- TH 166 - Theory of Play Production **Credits:** (3)
- TH 363 - Theatre History I **Credits:** (4)
- TH 364 - Theatre History II **Credits:** (4)
- TH 365 - Theatre History III **Credits:** (4)

Lab Component - Credits: (4)

Complete 4 credits of the following:

- TH 393 - Theatre Laboratory **Credits:** (1)
- TH 493 - Theatre Laboratory **Credits:** (1)

Production Component - Credits: (3)

Choose one of the following:

- TH 301 - Production Application **Credits:** (3)
- TH 401 - Production Application **Credits:** (3)

BFA Core Total Credits: 26

Performance Specialization

The performance specialization builds specific skills in production from a strong foundation of using the body as the artist's instrument through acting styles, voice, and stage movement. Students choose from a range of courses, both introductory and advanced, from writing and dancing, to stage and screen.

To help students prepare for future employment or graduate school, all students are strongly encouraged to pursue practical experience through TH 490: Cooperative Education (Internship), as well as the production application courses, designed to put theory into practice as part of Central Theatre Ensemble's regular on-campus season.

Specialization Core Credits: (39)

- TH 148 - Actor Conditioning – Monologue **Credits:** (1)
- TH 161 - Intro to Technology 1: Costumes and Makeup **Credits:** (3)
- TH 162 - Intro to Technology 2: Scenery and Lighting **Credits:** (3)
- TH 244 - Basic Acting I **Credits:** (3)
- TH 245 - Basic Acting II **Credits:** (3)
- TH 246 - Basic Acting III **Credits:** (3)
- TH 248 - Vocal Conditioning for the Actor **Credits:** (1)
- TH 249 - Vocal Conditioning for the Actor II **Credits:** (1)
- TH 329 - Directing I **Credits:** (3)
- TH 342 - Dialects for Stage and Screen **Credits:** (3)
- TH 344 - Intermediate Acting I **Credits:** (3)
- TH 345 - Intermediate Acting II **Credits:** (3)
- TH 445 - Audition Techniques for the Stage **Credits:** (3)
- TH 446 - Audition Techniques for the Camera **Credits:** (3)
- TH 489 - Career & Portfolio Preparation **Credits:** (3)

Literature Component Credits: (8)

Choose any of the following for a minimum of 8 credits.

- TH 375 - Asian Drama **Credits:** (4)
- TH 377 - Staging Gender **Credits:** (4)
- TH 380 - Studies in Drama **Credits:** (5)
- TH 382 - Diverse Experiences in American Drama **Credits:** (4)

Performance Component Credits: (9)

Choose or repeat any of the following for a minimum of 9 credits.

- TH 202 - Performance Studio **Credits:** (1-3)
- TH 302 - Performance Application **Credits:** (3)
- TH 402 - Performance Application **Credits:** (3)

Stage Movement Component Credits: (10)

Choose any of the following for a minimum of 10 credits.

- PED 101 - Modern Dance I **Credits:** (2)
- PED 102 - Modern Dance II **Credits:** (2)
- PED 104 - Ballet I (Level 1) **Credits:** (2)
- PED 121 - Tap Dance I **Credits:** (1)
- PED 141 - Jazz Dance I **Credits:** (1)
- PED 142 - Jazz Dance II **Credits:** (1)
- PED 204 - Ballet II (Level 1) **Credits:** (2)
- PEID 120 - Beginning Fencing **Credits:** (1)
- PEID 121 - Intermediate Fencing **Credits:** (1)
- PEID 145 - Beginning Circus Arts **Credits:** (1)
- TH 252 - Stage Dance **Credits:** (2)
- TH 333 - Stage Combat Fundamentals **Credits:** (3)
- TH 335 - Movement for the Actor **Credits:** (3)
- TH 352 - Stage Dance II **Credits:** (3)
- TH 433 - Advanced Stage Combat **Credits:** (3)
- TH 435 - Advanced Movement for the Actor **Credits:** (3)

Special Skills Component Credits: (15)

Choose any of the following for a minimum of 15 credits.

- TH 143 - Private Voice Lessons **Credits:** (1-4) (may be repeated)
- TH 202 - Performance Studio **Credits:** (1-3)
- TH 243 - Singing for Actors **Credits:** (1)
- TH 270 - Stage Makeup **Credits:** (3)
- TH 302 - Performance Application **Credits:** (3)
- TH 332 - New Play Production **Credits:** (2)
- TH 343 - Singing for Actors II **Credits:** (1)
- TH 374 - Introduction to Acting for the Camera **Credits:** (3)
- TH 402 - Performance Application **Credits:** (3)
- TH 433 - Advanced Stage Combat **Credits:** (3)
- TH 435 - Advanced Movement for the Actor **Credits:** (3)
- TH 444 - Acting Styles **Credits:** (4)
- TH 474 - Acting for Film and Television **Credits:** (4)
- TH 481 - Kennedy-Center Festival **Credits:** (1-2)
- TH 490 - Cooperative Education **Credits:** (1-12)
- TH 492 - Practicum in Devising and Touring Theatre **Credits:** (3-12)

Total Performance Specialization Credits: 81

Total Credits: 107

Dance Performance Minor

Program Director
Therese Young

The dance performance minor is an interdisciplinary minor administered jointly by the dance and theatre arts faculty designed for students who wish to broaden their academic background and receive a well-rounded dance education, thus preparing them in the area of dance performance in a wide variety of settings. Students will develop competencies in choreography, rhythmic concepts, and dance production.

Requirement: Minimum of one year active membership in Orchesis Dance Company and PED 112.

Dance Performance Minor

Required Courses

- PED 102 - Modern Dance II **Credits:** (2)
- PED 103 - Modern Dance III **Credits:** (2)
- PED 112 - Dance Rehearsal and Performance **Credits:** (1)
- PED 142 - Jazz Dance II **Credits:** (1)
- PED 143 - Jazz Dance III **Credits:** (1)
- PED 161 - Cultural History of Dance **Credits:** (4)
- PED 204 - Ballet II (Level 1) **Credits:** (2)
- PED 205 - Ballet II (Level 2) **Credits:** (2)
- PED 206 - Ballet II (Level 3) **Credits:** (2)
- PED 211 - Music for Dance - Rhythms and Resources **Credits:** (2)
- PED 301 - Choreography **Credits:** (3)
- PED 302 - Dance Production **Credits:** (3)
- **OR** TH 301 - Production Application **Credits:** (3)

Choose any of the following for a minimum of 10 credits:

- PED 116 - Beginning Folk Dance **Credits:** (1)
- PED 121 - Tap Dance I **Credits:** (1)
- PED 122 - Tap Dance II **Credits:** (1)
- PED 135 - Ballroom Dance I **Credits:** (1)
- PED 136 - Ballroom Dance II **Credits:** (1)
- PED 138 - Swing Dance I **Credits:** (1)
- PED 139 - Swing Dance II **Credits:** (1)
- TH 252 - Stage Dance **Credits:** (2)
- TH 352 - Stage Dance II **Credits:** (3)

Total Credits: 37

Theatre Arts Minor

The theatre arts minor offers an opportunity for students to study theatre while pursuing a degree in another discipline. This minor is often added to enhance study in art, music, politics, and interior design, among others.

Required Core

- TH 107 - Introduction to Theatre **Credits:** (4)
- TH 144 - Foundations of Acting **Credits:** (3)
- TH 166 - Theory of Play Production **Credits:** (3)

Select 3 credits of production participation from the following - Credits (3)

- TH 201 - Dance Production Application **Credits:** (1-3)
- TH 202 - Performance Studio **Credits:** (1-3)
- TH 301 - Production Application **Credits:** (3)
- TH 302 - Performance Application **Credits:** (3)
- TH 303 - Management Application **Credits:** (3)
- TH 332 - New Play Production **Credits:** (2)
- TH 393 - Theatre Laboratory **Credits:** (1)
- TH 401 - Production Application **Credits:** (3)
- TH 402 - Performance Application **Credits:** (3)
- TH 403 - Management Application **Credits:** (3)
- TH 493 - Theatre Laboratory **Credits:** (1)

Theatre Electives as approved by advisor Credits: (17)

Total Credits: 30

University and Enrichment Program

Undergraduate Studies

First Area-Skill Building
The first area includes the UNIV 101, 102, and 103 courses. These courses are ancillary courses that enable students to build skills needed to succeed at CWU. These courses allow students to learn about the General Education program, graduation requirements, develop skills for academic and social success, learn about major and minor programs, and how to approach developing an appropriate career. UNIV 101 is a required course for all students who have 39 or fewer transfer credits.

Second Area-Skill Exploration and Enrichment
The second area is the enrichment program, which includes UNIV 297, 497, and 597. These courses are designed to encourage student exploration and intellectual enrichment and are only offered during summer quarter. Enrichment courses are not intended to substitute for either general education requirements or major or minor requirements. These courses are a part of a student's enrollment planning-specifically as free electives. Only eight enrichment course credits can be counted toward a student's elective degree requirements.

Third Area-Skill Practice and Engagement
The third area is the civic engagement program, which includes UNIV 109, 295, 308, and 309. These courses are designed to help students explore and engage in career interests while meeting community needs.

William O. Douglas Honors College

Ellensburg
Language and Literature Bldg., room 103
Mail Stop 1445
509-963-1445
Fax: 509-963-1206
www.cwu.edu/douglas-honors

Director
Anne Cubilié, PhD

Associate Director
Dominic Klyve, PhD

Academic and Student Success Coordinator
Christina Denison

The William O. Douglas Honors College (DHC) is Central's interdisciplinary program for academically talented students. The program is divided into two parts: a core curriculum and an upper-division scholarship experience. The core curriculum is composed of a series of courses that emphasize how the arts, humanities, sciences, and social sciences converge in considering historically important questions. The upper-division scholarship experience involves additional, advanced courses and a culminating research project either in the arts and humanities or in the sciences. DHC also sponsors cultural field trips, guest lectures, and a number of other extracurricular activities.

The college is named for U.S. Supreme Court Justice William O. Douglas, a native of Yakima, Washington, and a great supporter of higher education. Following Justice Douglas' example, the DHC encourages intellectual breadth, academic curiosity, and the application of scholarship to pressing social issues.

Students wishing to apply should contact the DHC office to find out about minimum qualifications and the application process. Students may apply to the honors college at any point in their college career.

DHC students must maintain a high level of academic achievement. A DHC student is in good standing when his or her cumulative grade point average (GPA) is 3.0 or higher. If a first-year DHC student's cumulative GPA falls below 3.0 and remains below 3.0 for two consecutive quarters, the student shall be placed on academic warning for one quarter. After the first year, a DHC student will be placed on academic warning if his or her cumulative GPA falls below 3.0 for one quarter. Any student placed on warning shall be suspended from the DHC if his or her cumulative GPA is not 3.0 or above the quarter following the warning. The DHC director has the discretion to waive and/or modify these standards for individual students as long as such modification does not affect the academic integrity of the DHC, as determined by the DHC director. A student who has been suspended from the DHC may reapply only if his or her cumulative GPA reaches 3.0 or higher.

For additional information, visit the DHC website (www.cwu.edu/douglas-honors), stop by the office (Language and Literature Building, room 103), or call 509-963-1445.

Basic and Breadth Requirements

Required Courses

- DHC 140 - Humanistic Understanding I **Credits:** (5)
- DHC 141 - Humanistic Understanding II **Credits:** (5)
- DHC 150 - Aesthetic Experience I **Credits:** (5)
- DHC 151 - Aesthetic Experience II **Credits:** (5)
- DHC 160 - Physical and Biological Systems I **Credits:** (5)
- DHC 161 - Physical and Biological Systems II **Credits:** (5)
- DHC 250 - Social and Behavioral Dynamics I **Credits:** (5)
- DHC 251 - Social and Behavioral Dynamics II **Credits:** (5)
- DHC 260 - Cultural Studies I **Credits:** (5)
- DHC 261 - Cultural Studies II **Credits:** (5)
- DHC 270 - Integrated Learning **Credits:** (5)
- UNIV 101 - Academic Advising Seminar **Credits:** (1)

Total Credits: 56

Advising Seminar

In accordance with university requirements, DHC students must take UNIV 101: Academic Advising Seminar as part of their general education coursework. Preferably, students taking UNIV 101 should take the section designated specifically for DHC students.

World Language

DHC applicants are normally expected to have met the competence requirements for world language prior to

acceptance. Students who have not done so will be required to take classes through World Language 153.

Mathematics

DHC applicants are normally expected to have met the competence requirements for mathematics prior to acceptance. Students who have not done so will be required to take classes through MATH 154 or placement in MATH 172 or higher.

Upper-division Scholarship Experience

The upper-division scholarship experience involves additional, advanced courses and a culminating research project either in the arts and humanities or in the sciences. Students may take either of the upper-division scholarship experiences at any time, with or without the DHC core curriculum.

Arts and Humanities Honors

A student who completes the upper-division honors courses in the arts and humanities as well as a thesis/capstone project will earn the title *Arts and Humanities Honors Scholar*.

- DHC 301 - Honors Seminar: Elements of Arts and Humanities Research **Credits:** (2)
- DHC 380 - History of Science **Credits:** (5)
- DHC 399 - Interdisciplinary Honors Seminar **Credits:** (5)
- DHC 401 - Honors Capstone Seminar **Credits:** (3)
- DHC 497 - Honors Thesis and/or Creative Project **Credits:** (2)

Total Credits: 17

Science Honors Program

A student who completes the upper-division honors courses in the Science Honors Program as well as a science honors thesis will earn the title *Science Honors Scholar*.

- DHC 380 - History of Science **Credits:** (5)
- DHC 399 - Interdisciplinary Honors Seminar **Credits:** (5)
- SHP 301 - Science Honors Junior Seminar: Elements of Scientific Research **Credits:** (2)
- SHP 401 - Science Honors Capstone Seminar **Credits:** (2)
- SHP 497 - Science Honors Thesis **Credits:** (1)

Undergraduate research credits in appropriate department (e.g., PHYS 495) Credits: 2

Total Credits: 17

Douglas Honors College Scholar

A student who completes both the core curriculum and one of the upper-division scholarship experiences will be designated a *Douglas Honors College Scholar* by the university.

Interdisciplinary Honors Minor

A student who completes the following course regimen (35 credits) earns a DHC minor.

Select from the following: Credits: 5

- DHC 140 - Humanistic Understanding I **Credits:** (5)
- DHC 141 - Humanistic Understanding II **Credits:** (5)

Select from the following: Credits: 5

- DHC 150 - Aesthetic Experience I **Credits:** (5)
- DHC 151 - Aesthetic Experience II **Credits:** (5)

Select from the following: Credits: 5

- DHC 160 - Physical and Biological Systems I **Credits:** (5)
- DHC 161 - Physical and Biological Systems II **Credits:** (5)

Select from the following: Credits: 5

- DHC 250 - Social and Behavioral Dynamics I **Credits:** (5)
- DHC 251 - Social and Behavioral Dynamics II **Credits:** (5)

Select from the following: Credits: 5

- DHC 260 - Cultural Studies I **Credits:** (5)
- DHC 261 - Cultural Studies II **Credits:** (5)

Required Courses Credits: 10

- DHC 270 - Integrated Learning **Credits:** (5)
- DHC 380 - History of Science **Credits:** (5)

Total Credits: 35

Women's and Gender Studies Program

College of the Sciences
Ellensburg
Farrell., room 436

509-963-1574
Fax 509-963-1308
www.cwu.edu/women-gender
See the website for how this program may be used for educational and career purposes.

Director
Judith Hennessy, PhD

Program Information
Women's and gender studies cultivates a critical awareness of the contributions of women and the impact of gender in our lives, both historically and in the contemporary world. Our interdisciplinary scope includes examining these issues from the perspective of politics, anthropology, sociology, psychology, history, philosophy, art, and literature. The objectives of the program are:

1. To explore existing knowledge about women and gender in a variety of disciplines
2. To critically assess the traditional disciplines in the light of new data concerning women and gender
3. To provide an academic foundation for students planning careers in women's studies or related fields
4. To promote research about women and gender within existing disciplines

Women's and gender studies offers an interdisciplinary minor as described below. With approval of the women's and gender studies director, the student will select appropriate electives to meet personal and professional goals.

With faculty advisement, interested students may construct individualized majors in women's and gender studies through the individual studies program for BA or BS major.

Women's and Gender Studies Minor

Required Courses

- WGS 201 - Introduction to Women's and Gender Studies **Credits:** (5)
- WGS 488 - Capstone Project **Credits:** (2)

Elective courses (select 18 credits, with no more than 10 credits in a single department) Credits: 18

- ANTH 356 - Gender Roles in Cross-cultural Perspective **Credits:** (4)
- ANTH 384 - Language and Gender **Credits:** (4)
- COM 402 - Gender Communication **Credits:** (4)
- ENG 335 - Women's Literature **Credits:** (5)
- HIST 334 - History of Gender and Sexuality in Africa from Pre-colonial Times to the Present **Credits:** (5)
- HIST 346 - Women in American History **Credits:** (5)
- HIST 352 - The History of the American Family **Credits:** (3)
- LAJ 403 - Sexual Minorities, the Law, and Justice **Credits:** (4)
- LAJ 453 - Domestic Violence Issues **Credits:** (4)
- PHIL 325 - Women and Philosophy **Credits:** (5)
- POSC 311 - Women and Politics **Credits:** (5)
- PSY 312 - Queer Theory and Sexuality **Credits:** (4)
- PSY 483 - Psychology of Gender **Credits:** (4)
- SOC 348 - Women and Crime **Credits:** (5)
- SOC 356 - Sociology of Gender **Credits:** (5)
- SOC 357 - Sociology of Families **Credits:** (5)
- TH 377 - Staging Gender **Credits:** (4)
- SOC 358 - Sociology of Sexualities **Credits:** (5)
- SOC 359 - U.S. Feminist Movements **Credits:** (5)
- WGS 250 - Introduction to Queer Studies **Credits:** (5)
- WGS 490 - Cooperative Education **Credits:** (1-12)

Total Credits: 25

World Languages Department

College of Arts and Humanities
Ellensburg
Language and Literature Bldg., room 102
Mail Stop 7552
509-963-1218
wlang_dept@cwu.edu
www.cwu.edu/foreign-language
See website for how these programs can be used for educational and career purposes.

Faculty and Staff
Chair
Laila Abdalla, PhD

Professors
Rodney Bransdorfer, PhD, Spanish
Nathalie Kasselis, PhD, Spanish, French
Natalie Lefkowitz, PhD, Spanish, French
Stella Moreno, PhD, Spanish
Joshua S. Nelson, PhD, Japanese

Associate Professors
Alejandro Lee, PhD, Spanish
Eric Mayer, PhD, Spanish

Assistant Professors
Volha Isakava, PhD, Russian
Michael Johnson, PhD, French

Lecturers
Roselia Arellano-Sandoval, MA, Spanish
Dinara Georgeoliani, PhD, Russian
Yuanxia Liu, MA Chinese
Jer Loudenback, MA, American sign language
Laurie Moshier, DA, French, German
Mariko Okada-Collins, MA, Japanese

Staff
Johanna Larson, secretary senior

Department Information
The Department of World Languages offers BA degrees in French, Japanese, Russian and Spanish and offers minors in ASL, Chinese, French, German, Japanese, Russian and Spanish. BA degrees in teaching are available in French, Japanese, Russian, and Spanish.

For non-majors or minors, the first-and second-year sequences are designed to provide basic proficiency in a world language. The department recommends that all majors include some organized study abroad where their major language is spoken.

Admission to Department Programs

Students planning to major or minor must meet with an advisor in the world languages department for details about admission requirements, and complete an application form.

Departmental Standards
Students in non-teaching majors and minors must earn a minimum grade of C+ in each course used for the major and/or minor. Students in teaching majors must earn a minimum grade of B in each course used for the major.

Core Course Requirements
Only courses numbered 200 and above will count toward a major or minor. For students with sufficient preparation, the 200-level sequence may be waived through credit by examination. Please note that Spanish CLEP test scores may be used to complete General Education and/or graduation requirements but may not be used to fulfill course requirements for Spanish majors or minors. Students planning to study abroad must see their advisor prior to departure to ensure the applicability of the proposed course of study. All upper-division classes not listed as requirements are approved electives.

French Major, BA

This major requires a minor and study abroad.

Required Courses

Second-year French Credits: 15

- FR 251 - Second-year French **Credits:** (5)
- FR 252 - Second-year French **Credits:** (5)
- FR 253 - Second-year French **Credits:** (5)

Department-approved French electives Credits: 30

Total Credits: 45

Japanese Major, BA - Large Plan

This major does not require a minor. Those pursuing a Japanese large plan major are required to earn at least 10 credits in a study abroad program where the courses are taught in the target language.

Required Courses

Second-year Japanese Credits: 15

- JAPN 251 - Second-year Japanese **Credits:** (5)
- JAPN 252 - Second-year Japanese **Credits:** (5)
- JAPN 253 - Second-year Japanese **Credits:** (5)

Composition, Grammar and Conversation Credits: 15

- JAPN 361 - Composition, Grammar and Conversation I **Credits:** (5)
- JAPN 362 - Composition, Grammar and Conversation II **Credits:** (5)
- JAPN 363 - Composition, Grammar and Conversation III **Credits:** (5)

Department-approved Japanese electives Credits: 30

Total Credits: 60

Japanese Major, BA - Small Plan

This major requires a minor and study abroad.

Required Courses

Second-year Japanese Credits: 15

- JAPN 251 - Second-year Japanese **Credits:** (5)
- JAPN 252 - Second-year Japanese **Credits:** (5)
- JAPN 253 - Second-year Japanese **Credits:** (5)

Composition, Grammar and Conversation Credits: 15

- JAPN 361 - Composition, Grammar and Conversation I **Credits:** (5)
- JAPN 362 - Composition, Grammar and Conversation II **Credits:** (5)
- JAPN 363 - Composition, Grammar and Conversation III **Credits:** (5)

Department-approved Japanese electives Credits: 15

Total Credits: 45

Russian Major, BA

This major requires a minor and study abroad.

Required Courses

Second-year Russian Credits: 15

- RUSS 251 - Second-year Russian **Credits:** (5)
- RUSS 252 - Second-year Russian **Credits:** (5)
- RUSS 253 - Second-year Russian **Credits:** (5)

Intermediate Composition and Grammar Credits: 6

- RUSS 341 - Intermediate Composition and Grammar **Credits:** (3)
- RUSS 342 - Intermediate Composition and Grammar **Credits:** (3)

Advanced Composition and Grammar Credits: 3

- RUSS 441 - Advanced Composition and Grammar **Credits:** (3)

Topics in Russian Language Credits: 4

Variable topics (2 courses of 2 credits each)

- RUSS 445 - Topics in Russian Language **Credits:** (2)

Department-approved Russian electives Credits: 17

Total Credits: 45

Spanish Major, BA

This major requires a minor.

Required Courses

Second-year Spanish Credits: 15

- SPAN 251 - Second-year Spanish **Credits:** (5)
- SPAN 252 - Second-year Spanish **Credits:** (5)
- SPAN 253 - Second-year Spanish **Credits:** (5)

OR

Spanish for Heritage Speakers Credits: 15

- SPAN 261 - Spanish for Heritage Speakers I **Credits:** (5)
- SPAN 262 - Spanish for Heritage Speakers II **Credits:** (5)
- SPAN 263 - Spanish for Heritage Speakers III **Credits:** (5)

Literature and Cultures Credits: 8

- SPAN 301 - Introduction to Spanish and Latin American Literature **Credits:** (4)
- SPAN 310 - Hispanic Civilizations and Cultures **Credits:** (4)

Composition and Grammar I Credits: 4

- SPAN 341 - Spanish Composition and Grammar I **Credits:** (4)
- **OR** SPAN 345 - Composition and Grammar for Heritage Speakers I **Credits:** (4)

Composition and Grammar II Credits: 4

- SPAN 342 - Spanish Composition and Grammar II **Credits:** (4)
- **OR** SPAN 346 - Composition and Grammar for Heritage Speakers II **Credits:** (4)

Department-approved Spanish language electives Credits: 8

Department-approved Spanish literature/culture electives Credits: 8

Total Credits: 47

American Sign Language Minor

A program designed for students who wish to develop advanced level proficiency in American Sign Language. This minor is of benefit to students planning to work in education, human services, and many other career fields.

Required Courses

- ASL 251 - Second-year American Sign Language **Credits:** (5)
- ASL 252 - Second-year American Sign Language **Credits:** (5)
- ASL 253 - Second-year American Sign Language **Credits:** (5)
- ASL 301 - American Sign Language Literature **Credits:** (5)
- ASL 310 - Deaf Culture **Credits:** (5)
- ASL 343 - American Sign Language in Education **Credits:** (5)

Total Credits: 30

Chinese Minor

Courses must be numbers 200 or above. This minor requires study abroad to complete elective courses.

Required Courses

Second-year Chinese Credits: 15

- CHIN 251 - Second-year Chinese **Credits:** (5)
- CHIN 252 - Second-year Chinese **Credits:** (5)
- CHIN 253 - Second-year Chinese **Credits:** (5)

Department-approved Chinese electives Credits: 12

Total Credits: 27

French Minor

Courses must be numbered 200 or above.

Required Courses

Second-year French Credits: 15

- FR 251 - Second-year French **Credits:** (5)
- FR 252 - Second-year French **Credits:** (5)
- FR 253 - Second-year French **Credits:** (5)

Department-approved French electives Credits: 12

Total Credits: 27

German Minor

Courses must be numbered 200 or above. This minor requires study abroad to complete elective courses.

Required Courses

Second-year German Credits: 15

- GERM 251 - Second-year German **Credits:** (5)
- GERM 252 - Second-year German **Credits:** (5)
- GERM 253 - Second-year German **Credits:** (5)

Department-approved German electives Credits: 12

Total Credits: 27

Japanese Minor

Courses must be numbered 200 or above.

Required Courses

Second-year Japanese Credits: 15

- JAPN 251 - Second-year Japanese **Credits:** (5)
- JAPN 252 - Second-year Japanese **Credits:** (5)
- JAPN 253 - Second-year Japanese **Credits:** (5)

Composition, Grammar and Conversation Credits: 15

- JAPN 361 - Composition, Grammar and Conversation I **Credits:** (5)
- JAPN 362 - Composition, Grammar and Conversation II **Credits:** (5)
- JAPN 363 - Composition, Grammar and Conversation III **Credits:** (5)

Total Credits: 30

Russian Minor

Courses must be numbered 200 or above.

Required Courses

Second-year Russian Credits: 15

- RUSS 251 - Second-year Russian **Credits:** (5)
- RUSS 252 - Second-year Russian **Credits:** (5)
- RUSS 253 - Second-year Russian **Credits:** (5)

Intermediate Composition and Grammar Credits: 6

- RUSS 341 - Intermediate Composition and Grammar **Credits:** (3)
- RUSS 342 - Intermediate Composition and Grammar **Credits:** (3)

Advanced Composition and Grammar Credits: 3

- RUSS 441 - Advanced Composition and Grammar **Credits:** (3)

Topics in Russian Language Credits: 4

Variable topics (2 courses of 2 credits each)

- RUSS 445 - Topics in Russian Language **Credits:** (2)

Total Credits: 28

Spanish Minor

Courses must be numbered 200 or above.

Required Courses

Second-year Spanish Credits: 15

- SPAN 251 - Second-year Spanish **Credits:** (5)
- SPAN 252 - Second-year Spanish **Credits:** (5)
- SPAN 253 - Second-year Spanish **Credits:** (5)

OR

Spanish for Heritage Speakers Credits: 15

- SPAN 261 - Spanish for Heritage Speakers I **Credits:** (5)
- SPAN 262 - Spanish for Heritage Speakers II **Credits:** (5)
- SPAN 263 - Spanish for Heritage Speakers III **Credits:** (5)

Composition and Grammar Credits: 4

- SPAN 341 - Spanish Composition and Grammar I **Credits:** (4)
- **OR** SPAN 345 - Composition and Grammar for Heritage Speakers I **Credits:** (4)

Department-approved Spanish electives Credits: 8

Total Credits: 27

Course Descriptions

Africana and Black Studies Courses

ABS 110. Expressive African American Culture (5). An interdisciplinary exploration of a variety of perspectives in African American folk culture, from oral expressions developed during slavery to contemporary rap and stand-up comedy. The course includes an overview of the worldwide contribution of black oral performative art. Prerequisite: ENG 101 with a grade of C- or higher. AH-Literature and Humanities

ABS 210. Introduction to Africana and Black Studies (5). Introduction to the political, cultural, social, and economic forces shaping the African American experience. A survey of Africana and African American Studies from 1400 to the present.

ABS 300. Black Diaspora Studies: Afro-Latin America and Afro-Caribbean Cultures (5). Examines communities developing from displacement of Africans during colonization of the New World and the impact of these communities on Latin America and the Caribbean.

ABS 302. Hip Hop as Global Culture (5). This course examines Africana and black diasporic connections through popular culture using hip hop music. Hip hop allows us to study and understand contemporary history of black youth in Africa, Europe, and North America.

ABS 305. 20th Century Black Women's Literature (4). This seminar reads poetry, fiction, memoir, and criticism by and about black American women from 1919 to the 1990s. Prerequisite: ENG 101.

ABS 308. African American Folklore (5). This course focuses on various elements of African American Folklore; including, but not limited to folktales, folk life, music, dance, and material culture.

ABS 309. Race and Sports: Freedom, Power, and Difference (4). Sports in the United States present a fascinating paradox: while athletics offers many young people of diverse backgrounds unparalleled opportunities for self-advancement, intercollegiate and professional sports in many respects reproduce or intensify prevailing images and stereotypes around race, difference, and identity.

ABS 398. Special Topics (1-6). May be repeated for credit.

ABS 399. ABS Seminar (3-5). With faculty mentoring and direction, students conduct in depth study of issues and events impacting African descendants in the United States, the Caribbean, Latin America, and other areas of the African Diaspora. Students present research and projects to SOURCE, academic meetings, ABS faculty, and student audiences. Prerequisite: ABS 210.

ABS 400. Race and Literature (4). Course reviews theory and use of "race" in the construction of knowledge and in English canonical texts.

Accounting Courses

ACCT 251. Financial Accounting (5). An introduction to the theory and practice of accounting and financial reporting. Topics include the accounting cycle, financial statements, and corporate accounting for assets, liabilities, equities, revenues and expenses.

ACCT 252. Managerial Accounting (5). An introduction to the use of accounting information by managers. Topics included the use of accounting information for planning and control, performance evaluation, decision making, and the statement of cash flows, along with financial statement analysis. Prerequisite: C- or higher in ACCT 251.

ACCT 296. Individual Study (1-6).

ACCT 301. Financial Accounting Analysis (5). Underlying concepts, preparation, and use of financial statements from the user's viewpoint. This course is not open to accounting or business administration majors. Recommended for individuals not majoring in accounting or business. Not open to accounting and business administration majors.

ACCT 305. Cost Accounting (5). Economics of cost accounting; industrial analysis, production control through costs, types of cost systems, and burden application. Prerequisites: a grade of C or higher in ACCT 251 and ACCT 252, and a pre-major or major or minor or certificate student in a College of Business program; or admission to the MPA program.

ACCT 346. Income Tax Accounting I (5). Introduction to income taxation of corporations, partnerships, and individuals with an emphasis on tax compliance, planning, and computer-based tax

research. Prerequisite: a grade of C or higher in ACCT 251 and ACCT 252, and a pre-major or major or minor or certificate student in a College of Business program; or admission to the MPA program.

ACCT 350. Intermediate Accounting I (5). An in-depth study of financial accounting theory and practice. The first of a three-course intermediate sequence, this course is intended for the student who requires more than principles level accounting coverage. Prerequisite: a grade of C or higher in ACCT 251 and ACCT 252, and a pre-major or major or minor or certificate student in a College of Business program; or admission to the MPA program.

ACCT 351. Intermediate Accounting II (5). The second of a three-course intermediate sequence, this course continues ACCT 350, covering complex topics in accounting and financial reporting. Prerequisite: a grade of C or higher in ACCT 350, and a pre-major or major or minor or certificate student in accounting; or admission to the MPA program.

ACCT 352. Intermediate Accounting III (5). The third of a three-course intermediate sequence, this course continues ACCT 351, covering complex topics in accounting and financial reporting. Also included are special topics and existing/emerging issues. Prerequisite: a grade of C or higher in ACCT 351, and a pre-major or major or minor or certificate student in accounting; or admission to the MPA program.

ACCT 396. Individual Study (1-6).

ACCT 405. Advanced Cost Accounting (5). This course reviews, enhances, and extends concepts learned in ACCT 305. The focus is on assessing the information needs of end users in the organization, then creating reports (including Excel workbooks) to address those needs. ACCT 405 and ACCT 505 are layered courses; students may not receive credit for both. Prerequisites: a grade of C or higher in ACCT 305 and admission to the accounting major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25.

ACCT 430. Governmental and Non-profit Accounting (5). Accounting and budgetary controls for governmental units and non-profit service organizations, including educational institutions (from school districts to universities) and hospitals. Emphasis is on the advantages, uses, disadvantages, and differences in fund accounting. ACCT 430 and ACCT 530 are layered courses; students may not receive credit for both. Prerequisites: (a grade of C or higher in ACCT 351 or concurrent enrollment in ACCT 351 with a cumulative CWU GPA greater than 3.0); AND admission to the accounting major AND completion of the college of business foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum grade of C- in each course and a minimum collegiate GPA of 2.25.

ACCT 446. Income Tax Accounting II (5). Taxation of trusts and estates, gratuitous transfers, and the formation and termination of corporations and partnerships, with emphasis on tax compliance, planning, and computer-based tax research. ACCT 446 and ACCT 546 are layered courses; students may not receive credit for both. Prerequisites: a grade of C or higher in ACCT 346 and admission to the accounting major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25.

ACCT 450. Advanced Accounting (5). Accounting theory and practice for business, combinations and consolidated financial statements, foreign currency transactions and translation, partnerships, and advanced special topics. ACCT 450 and ACCT 550 are layered courses; students may not receive credit for both. Prerequisites: a grade of C or higher in ACCT 351 and admission to the accounting major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25.

ACCT 455. Accounting Information Systems (5). Accounting information system

development process and related information systems technologies. Includes the application, control, and audit of accounting information systems. ACCT 455 and ACCT 555 are layered courses; students may not receive credit for both. Prerequisites: a grade of C or higher in ACCT 350, and admission to accounting major and completion of the College of Business Foundation courses (ACCT 251, ACCT 252, BUS 221, BUS 241, ECON 130, ECON 201, MATH 153) with a minimum C- grade in each course and a minimum cumulative GPA of 2.25.

ACCT 460. Auditing (5). Auditor's functions and responsibilities. Evaluation of the system of internal control, the determination of appropriate auditing procedures, and the extent of their application. Prerequisites: (a grade of C or higher in ACCT 352 or concurrent enrollment in ACCT 352 with a cumulative CWU GPA greater than 3.0); AND admission to the accounting major AND completion of the college of business foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum grade of C- in each course and a minimum collegiate GPA of 2.25.

ACCT 461. Fraud Examination (5). Detection and prevention of financial statement fraud and other forms of business fraud. ACCT 461 and ACCT 561 are layered courses; students may not receive credit for both. Prerequisites: a grade of C or higher in ACCT 351 and admission to the accounting major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25.

ACCT 475. International Accounting (5). Explores the formulation and application of accounting principles in other industrialized countries. Particular emphasis directed toward the harmonization of accounting principles between the U.S. and other countries. ACCT 475 and ACCT 575 are layered courses; students may not receive credit for both. Prerequisites: a grade of C or higher in ACCT 351 and admission to the accounting major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25.

ACCT 484. Professional Writing and Speaking for the Accountant (5). Develop written and verbal communications skills for practical application in public, private, and governmental accounting fields. Includes interviewing techniques, preparation and presentation of group and individual reports, and preparation of resumes, letters, memos, and work papers. ACCT 484 and ACCT 584 are layered courses; students may not receive credit for both. Prerequisites: (a grade of C or higher in ACCT 351 AND admission to the accounting major AND completion of the college of business foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum grade of C- in each course and a minimum collegiate GPA of 2.25.

ACCT 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. (Student should have an overall GPA greater than a cumulative 2.0 in order to get internship credit.) Note: While ACCT 490 can no-longer be used as an accounting elective in the accounting major, it can still be used toward the 20 hours of internship credit allowed by the university and for the 225-hour requirement for the CPA examination. Prerequisites: prior approval and admission to the accounting major. May be repeated for credit. Grade will either be S or U.

ACCT 492. Volunteer Income Tax Assistance (2). Preparation of tax returns of low income taxpayers, including tax return preparation training. Prerequisites: ACCT 346 and admission to the accounting major; or permission of the department chair. Grade will either be S or U.

ACCT 493. Applied Accounting Techniques (3). Under direct supervision of the instructor, assist in answering accounting students' questions and aid in

completion of homework for a minimum of six hours weekly. Other tasks as assigned. Prerequisite: admission to the accounting major. Grade will either be S or U.

ACCT 496. Individual Study (1-6). Prerequisite: admission to the accounting major. May be repeated for credit.

ACCT 498. Special Topics (1-6). Prerequisite: admission to the accounting major. May be repeated for credit under a different subtitle.

ACCT 499. Seminar (1-5). Prerequisite: admission to the accounting major. Repeatable for credit under different subtitle.

Administrative Management Courses

ADMG 201. Introduction to Business (3). Functions, practices, and organization of the business enterprise. ADMG 201 and ADMG 301 are layered course; students may not receive credit for both.

ADMG 271. Business Math Applications (4). Business and merchandising mathematics applications. ADMG 271 and ADMG 317 are layered courses; students may not receive credit for both.

ADMG 301. Introduction to Business (3). Functions, practices, and organization of the business enterprise. ADMG 201 and ADMG 301 are layered courses; students may not receive credit for both.

ADMG 302. Financial Analysis for Administrative and IT Support (5). This course addresses the financial analysis functions necessary for an administrative and IT support manager to complete requested financial documents. Administrative and IT support staff must understand the basis of financial accounting. Prerequisites: ADMG 271 and junior standing.

ADMG 317. Business Math Applications (4). Business and merchandising mathematics applications. ADMG 271 and ADMG 317 are layered courses; students may not receive credit for both.

ADMG 371. Administrative Management (4). Administrative management techniques and practices.

ADMG 372. Leadership and Supervision (4). Develop leadership techniques and behavioral traits to improve productivity of supervisors and leaders in the workplace, and enhance interpersonal skills for career success.

ADMG 373. Training and Development for Administrative and IT Support (4). This course provides students with an overview of the employee training and development process--a key component to employee success. Development and delivery of a training program will be the outcome of this course. Prerequisite: AMDG 371 and junior standing or above.

ADMG 374. Project Management (5). Development of skills in the core project management areas; scope management, time management, cost management, quality management. Prerequisite: junior standing or above.

ADMG 385. Business Communications and Report Writing (5). Planning and writing skills for business letters, memoranda, employment, and reports. Prerequisites: ENG 102 or a direct transfer degree, and junior standing or above.

ADMG 410. Comparative Global Studies in ITAM I (5). This course offers the student an opportunity to study and experience various industries operating in another country or region with an emphasis on global information technology, retail management, entrepreneurship, and leadership. Acceptance to study abroad trip.

ADMG 412. Comparative Global Studies in ITAM II (5). This course offers the student an opportunity to study and experience cultural differences and similarities in another country or region from the perspective of IT and administrative management. Acceptance to study abroad trip.

ADMG 424. Administrative Management Policy (4). Administrative management policies dealing with technology and innovation; the analysis, decision making, implementation, and control of these policies; the intent and core competencies of an organization; and the competitive integration of technology. Prerequisites: ADMG 371, ADMG 385 and senior standing.

ADMG 471. Leading Change (4). An in-depth study of organizational dynamics, as applied to organization-wide interventions, designed to improve organizational functioning and to implement change in the organization. The course will include techniques for developing and improving organizations through organizational assessment and diagnosis of culture and processes. Prerequisites: ADMG 371, ADMG 372, and senior status.

ADMG 474. Executing Project Management I (4). This course introduces students to the principles defined by the Institute Project Management Body of Knowledge (PMBOK). Students will examine the PM process groups of initiating, planning and executing while developing a project plan. Prerequisite: ADMG 374.

ADMG 475. Executing Project Management II (4). This course is a continuation of Executing Project Management - I. Students will explore quality, human resources, communications, risk and procurement as they continue to build their project plan. Prerequisite: ADMG 474.

ADMG 485. Managerial Communications (3). Advanced written, oral, and non-verbal business communications including proposals, crisis management, international communication, international/domestic etiquette, meeting management, conflict resolution, negotiation, and collaboration. Prerequisite: ADMG 385.

ADMG 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prerequisite: RMT 379. Offered summers only. Departmental consent. May be repeated for credit. Grade will either be S or U.

ADMG 491. Workshop (1-6). May be repeated for credit under different subtitle. May be repeated for credit.

ADMG 493A. Undergraduate Research Practicum (1-3). Conduct research under direct supervision of a professor with specific learning agreement required. ADMG/IT/RMT 493A are cross-listed courses; students may not receive credit for more than one. Prerequisite: permission of department chair. May be repeated for a total of 3 credits. Grade will either be S or U.

ADMG 493B. Undergraduate Assistant Practicum (1-3). Assist in monitoring, supervising, supporting, and tutoring instruction under direct supervision of a professor with specific learning agreements required. ADMG/IT/RMT 493B are equivalent courses; students may only receive credits for one. Prerequisite: permission of department chair. May be repeated for a total of 3 credits. Grade will either be S or U.

ADMG 496. Individual Study (1-6). By permission. May be repeated for credit.

ADMG 498. Special Topics (1-6). May be repeated for credit under different subtitle. By permission. May be repeated for credit.

ADMG 499. Seminar (1-5). May be repeated for credit under different subtitle. By permission. May be repeated for credit.

Aerospace Studies Courses

AFRO 101. Foundations of the USAF (1). A survey course briefly overviewing Air Force structure, missions, organizations, officership, professionalism, and an introduction to communicative skills.

AFRO 101LAB. GMC Leadership Laboratory (2). Practical experience in Air Force customs and courtesies, physical fitness, drills, ceremonies, and opportunities available to commissioned officers. Co-requisite: AFRO 101. Two hours weekly plus mandatory physical training. Grade will either be S or U.

AFRO 102. Foundations of the USAF (1). A survey course briefly overviewing Air Force structure, missions, organizations, officership, professionalism, and an introduction to communicative skills.

AFRO 102LAB. GMC Leadership Laboratory (2). Practical experience in Air Force customs and courtesies, physical fitness, drills, ceremonies, and opportunities available to commissioned officers. Co-requisite: AFRO 102. Two hours weekly plus mandatory physical training. Grade will either be S or U.

AFRO 103. Foundations of the USAF (1). A survey course briefly overviewing Air Force structure, missions, organizations, officership, professionalism, and an introduction to communicative skills.

AFRO 103LAB. GMC Leadership Laboratory (2). Practical experience in Air Force customs and courtesies, physical fitness, drills, ceremonies, and opportunities available to commissioned officers. Co-requisite: AFRO 103. Two hours weekly plus mandatory physical training. Grade will either be S or U.

AFRO 201. The Evolution of USAF Air and Space Power (1). Through historical examples, we examine the development of Air Force capabilities and missions to demonstrate the

evolution of today's USAF air and space power.

AFRO 201LAB. GMC Leadership Laboratory (2). Practical experience in Air Force customs and courtesies, drills, ceremonies, giving military commands, and preparation for field training. Co-requisite: AFRO 201. Two hours weekly plus mandatory physical training. Grade will either be S or U.

AFRO 202. The Evolution of USAF Air and Space Power (1). Through historical examples, we examine the development of Air Force capabilities and missions to demonstrate the evolution of today's USAF air and space power.

AFRO 202LAB. GMC Leadership Laboratory (2). Practical experience in Air Force customs and courtesies, drills, ceremonies, giving military commands, and preparation for field training. Co-requisite: AFRO 202. Two hours weekly plus mandatory physical training. Grade will either be S or U.

AFRO 203. The Evolution of USAF Air and Space Power (1). Through historical examples, we examine the development of Air Force capabilities and missions to demonstrate the evolution of today's USAF air and space power.

AFRO 203LAB. GMC Leadership Laboratory (2). Practical experience in Air Force customs and courtesies, drill and ceremonies, giving military commands, and preparation for field training. Co-requisite: AFRO 203. Two hours weekly plus mandatory physical training. Grade will either be S or U.

AFRO 296. Individual Study (1-3). May be repeated for credit.

AFRO 298. Special Topics (1-6). May be repeated for credit under different subtitle. May be repeated for credit.

AFRO 301. Air Force Leadership Studies (3). Provides leadership, management fundamentals, professional knowledge, Air Force personnel and evaluation systems, leadership ethics, and the communication skills required of an Air Force junior officer.

AFRO 301LAB. POC Leadership Laboratory (2). Students plan, organize, coordinate, and direct cadet corps activities, enhancing communication, management, and other leadership skills. Co-requisite: AFRO 301. Two hours weekly plus mandatory physical training. Grade will either be S or U.

AFRO 302. Air Force Leadership Studies (3). Provides leadership, management fundamentals, professional knowledge, Air Force personnel and evaluation systems, leadership ethics, and the communication skills required of an Air Force junior officer.

AFRO 302LAB. POC Leadership Laboratory (2). Students plan, organize, coordinate, and direct cadet corps activities, enhancing communication, management, and other leadership skills. Co-requisite: AFRO 302. Two hours weekly plus mandatory physical training. Grade will either be S or U.

AFRO 303. Air Force Leadership Studies (3). Provides leadership, management fundamentals, professional knowledge, Air Force personnel and evaluation systems, leadership ethics, and the communication skills required of an Air Force junior officer.

AFRO 303LAB. POC Leadership Laboratory (2). Students plan, organize, coordinate, and direct cadet corps activities, enhancing communication, management, and other leadership skills. Co-requisite: AFRO 303. Two hours weekly plus mandatory physical training. Grade will either be S or U.

AFRO 350. Four-week Summer Field Training (3). Organization, operation, and mission of an Air Force base; physical conditioning; applied leadership training and evaluation; marksmanship; survival orientation; and field exercises. May be repeated for credit. Grade will either be S or U.

AFRO 398. Special Topics (1-6). May be repeated for credit under different subtitle. May be repeated for credit.

AFRO 401. National Security Affairs and Preparation for Active Duty (3). Examines national security process, regional studies, advanced leadership ethics, Air Force Doctrine, officership, military justice, and preparation for active duty.

AFRO 401LAB. POC Leadership Laboratory (2). Advanced leadership experiences involving planning and conducting cadet training activities, oral and written communications, and developing human relations skills. Co-requisite: AFRO 401. Two hours weekly plus mandatory physical training. Grade will either be S or U.

AFRO 402. National Security Affairs and Preparation for Active Duty (3). Examines national security process, regional studies, advanced leadership ethics, Air Force Doctrine, officership, military justice, and preparation for active duty.

AFRO 402LAB. POC Leadership Laboratory (2). Advanced leadership experiences involving planning and conducting cadet training activities, oral and written communications, and developing human relations skills. Co-requisite: AFRO 402. Two hours weekly plus mandatory physical training. Grade will either be S or U.

AFRO 403. National Security Affairs and Preparation for Active Duty (3). Examines national security process, regional studies, advanced leadership ethics, Air Force Doctrine, officership, military justice, and preparation for active duty.

AFRO 403LAB. POC Leadership Laboratory (2). Advanced leadership experiences involving planning and conducting cadet training activities, oral and written communications, and developing human relations skills. Co-requisite: AFRO 403. Two hours weekly plus mandatory physical training. Grade will be either S or U.

AFRO 496. Individual Study (1-3). May be repeated for credit.

AFRO 498. Special Topics (1-6). May be repeated for credit under different subtitle. May be repeated for credit.

American Indian Studies Courses

AIS 101. Pre-contact Period of American Indians, Pre-AD 1492 (5). An interdisciplinary approach explores the lifeways and environments of American Indians prior to European contact and settlement. Sources of pre-contact information consist of the archaeological, oral history, and paleoenvironmental records. SB-Perspectives on Cultures, Experiences of U.S. (W)

AIS 102. Contact Period of American Indians (5). An interdisciplinary study of the lifeways and environments of American Indians during the period of European contact. Sources of contact period information come from the archaeological, American Indian and European written and oral history records. SB-Perspectives on Cultures, Experiences of U.S. (W).

AIS 103. Emergence of Contemporary American Indians (5). An interdisciplinary approach explores the emergence of contemporary American Indians after AD 1890 with an emphasis on social, political, and cultural aspects. Sources of information about this period come from written and oral history. SB-Perspectives on Cultures, Experiences of U.S. (W).

AIS 296. Individual Study (1-6).

AIS 320. American Indian Philosophy (5). The course examines philosophy indigenous to North America through native and non-native historical and contemporary sources; explores the interplay of native and non-native philosophical concepts and the influence of indigenous American roots on contemporary American philosophy.

AIS 321. American Indian Spirituality (5). Introduction to American Indian spirituality with emphasis on myths, rituals, and beliefs; including historical, economic, political and legal issues that influence the ways of American Indian spiritual practice; Ghost Dance, Native American Church, etc.

AIS 398. Special Topics (1-5).

AIS 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student-learning plan, cooperating employer supervision, and faculty coordination. By permission. May be repeated for credit. Grade will either be S or U.

AIS 491. Workshop (1-6). Occasional workshops will be offered to provide a context for American Indian artists/scholars to teach. May be repeated for credit. Grade will either be S or U.

AIS 496. Individual Study (1-6).

AIS 498. Special Topics (1-5).

Anthropology and Museum Studies Courses

ANTH 107. General Anthropology (5). Human biological and cultural adaptations: survey of concepts, methods, and perspectives on past and present. SB-Foundations of Human Adaptation, Behavior.

ANTH 110. Introduction to Biological Anthropology (5). A survey of the history, philosophy, and theory of biological anthropology including biological relationships to other primate forms, the fossil record, and evolutionary adaptations. Corequisite: ANTH 110LAB. NS-Patterns, Connections, Natural World

ANTH 110LAB. Biological Anthropology Laboratory (1). Practical laboratory experience with data in human osteology, comparative primate anatomy and ethology, forensic anthropology, genetics, and the fossil record of human evolution. Two hours laboratory

per week. ANTH 110LAB required for anthropology majors and minors; optional for students completing breadth requirements of General Education.

ANTH 120. Introduction to Archaeology (5). Introduction to the concepts, methods, and development of archaeology. SB-Foundations of Human Adaptation, Behavior (W)

ANTH 130. Introduction to Cultural Anthropology (5). Understanding human cultures: concepts, methods, and basic data involved in the comparative study of human cultural adaptations. SB-Perspectives on World Cultures.

ANTH 180. Introduction to Linguistics (5). Backgrounds, developments, and relation to other fields of study. ANTH 180 and ENG 180 are cross-listed courses; students may not receive credit for both.

ANTH 296. Individual Study (1-6). By permission. May be repeated for credit.

ANTH 298. Special Topics (1-6).

ANTH 301. Anthropology: Principles and Assessment (2). Principles and assessment course for majors: current topics and careers, research, funding; development of assessment portfolios and individual program plans. Required for all BA and BS anthropology majors at admission.

ANTH 309LAB. Skeletal Analysis and Comparison (2). Upper-division introductory laboratory course which provides critical visual and hands-on exposure essential to students planning to continue with coursework in fossil primate studies, human evolution, and other applications, such as forensic anthropology. Meets anthropology subfield Biological Anthropology (B).

ANTH 310. Research/Laboratory in Biological Anthropology (1-2). Laboratory research analysis of biological anthropology materials. May be taken concurrently with and as a supplement to other 300-level courses in biological anthropology. Prerequisite: previous college work in biological anthropology or other natural sciences, and permission of instructor. No more than 10 credits of ANTH 310 and 485 are allowed to fulfill BA or BS requirements. Meets anthropology subfield Biological Anthropology (B). The course may be repeated for a cumulative maximum of 8 credits.

ANTH 311. Advanced Biological Anthropology: Principles of Human Evolution (4). Analysis and interpretation of major principles of modern biological anthropology from an evolutionary perspective: genetics, population genetics, ecology, comparative anatomy and human paleontology. Prerequisites: ANTH 110 and 110LAB. Meets anthropology subfield Biological Anthropology (B).

ANTH 312. Human Origins: The Fossil Evidence (4). The fossil record of human and protohuman forms. Basic data and interpretation. Three hours lecture and two hours laboratory per week. Meets anthropology subfield Biological Anthropology (B).

ANTH 313. Primate Social Behavior (4). Survey of field studies of nonhuman primates relevant to the study of human social systems and adaptation. Prerequisites: ANTH 107 or 110 or 130 or BIO 183. Meets anthropology subfield Biological Anthropology (B).

ANTH 314. Human Variation and Adaptation in Living Populations (4). Survey of genetic, morphological, and physiological variability of living human populations and their biological source mechanisms. Current population dynamics are used to project future alternatives for change. Prerequisite: sophomore standing or above. NS-Applications Natural Science

ANTH 315. Forensic Skeletal Analysis (4). A survey of the human skeleton and techniques of human skeletal analysis. Identification of age, sex, and other traits in modern and extinct populations. Meets anthropology subfield Biological Anthropology (B).

ANTH 316. History and Theory of Molecular Anthropology (4). This seminar will include readings from important studies that have influenced the field of biological anthropology including the areas of human origins, phylogeny and dispersal. Prerequisite: ANTH 311 or by permission of the instructor.

ANTH 318. Introduction to Forensics (4). This course explores the subject matter and methods forensic investigators use when searching and recovering evidence from crime scenes.We examine approaches to forensics across multiple disciples including anthropology, biological sciences, chemistry, law and justice, geological sciences, physics, psychology, and sociology. The goal is to provide a broad overview for students interested in exploring forensic careers. ANTH 318 and LAJ 318

are crosslisted courses; students may not receive credit for both.

ANTH 320. Research/Laboratory in Archaeology (2). Analysis of archaeological materials. Prerequisite: ANTH 120. Minimum of 4 hours laboratory per week. No more than 10 credits of ANTH 320 and 486 allowed to fulfill BA or BS requirements. Meets anthropology subfield Archaeology (A).

ANTH 321. Archaeological Methods (4). Introduction to methods used by archaeologists, with an emphasis on laboratory methods for analysis of chipped stone, ceramics, faunal remains, and other archaeological materials. Meets anthropology subfield Archaeology (A).

ANTH 321LAB. Archaeological Methods Laboratory (2). Hands-on application of typical methods used in archaeological investigations, with an emphasis on laboratory techniques for studying chipped stone, ceramics, faunal remains, and other archaeological materials. Co- or prerequisite: ANTH 321. Meets anthropology subfield Archaeology (A).

ANTH 322. World Prehistory (4). Old and New World prehistory from late Pliocene to the early historic period, including the ecology and development of hunting-gathering, agriculture and state-level societies. ANTH 322 and HIST 322 are cross-listed courses; students may not receive credit for both. Meets anthropology subfield Archaeology (A).

ANTH 323. Field Archaeology (3-6). Identification, mapping and recording of archaeological sites; techniques of excavation. Prerequisite: ANTH 120. Meets anthropology subfield Archaeology (A). Grade will be either S or U.

ANTH 324. North American Archaeology (4). Prehistoric cultures of North America, with emphasis on adaptation to changing environments. Meets anthropology subfield Archaeology (A).

ANTH 325. Prehistory of the Pacific Northwest (4). Prehistoric cultures of Washington State and adjoining regions. Meets anthropology subfield Archaeology (A).

ANTH 333. Culture & Marriage (4). The reciprocal relationships between the biophysical and cultural components in mating, nurturing and sexual access. Cross-cultural patterns in marriage. ANTH 333 and FS 333 are cross-listed courses; students may not receive credit for both. Meets anthropology subfield Cultural Anthropology (C).

ANTH 340. Ethnography of China (4). This course is designed to explore China from the perspectives of general cultural patterns and ethnicity. ANTH 340 and AST 340 are cross-listed courses; students may not receive credit for both.

ANTH 341. Native American Cultures of the Pacific Northwest (4). Ecological settings and cultural adaptations of Pacific Northwest Native Americans in historical and contemporary contexts. Culture change and continuity, language, religion, resource management, and tribal sovereignty. Meets anthropology subfield Cultural Anthropology (C).

ANTH 342. Hispanic Cultures of the Western U.S. (4). This course provides an overview of Hispanic cultures in the American Southwest, California and the Pacific Northwest. Culture change and maintenance through language, religion and an economic resource base are highlighted. Meets anthropology subfield Cultural Anthropology (C).

ANTH 343. Culture and Power in Africa (4). Anthropological study power in precolonial African societies, ideological and cultural dimensions of social inequality and social struggle, classical social anthropology and contemporary analysis of war, genocide, refugee movement, and political consciousness. Meets anthropology subfield Cultural Anthropology (C).

ANTH 344. Cultures of Asia (4). Setting and cultural adaptation of the peoples of Asia. Representative groups from cultural regions of East Asia and Central/Inner Asia. Meets anthropology subfield Cultural Anthropology (C).

ANTH 345. Cultures of Southeast Asia and Oceania (4). Setting and cultural adaptation of the peoples of Southeast Asia and Oceania. Meets anthropology subfield Cultural Anthropology (C).

ANTH 346. Cultures of Latin America and the Caribbean (4). Survey of anthropological research on cultures of Latin America and the Caribbean in historical and contemporary contexts. Meets anthropology subfield Cultural Anthropology (C). Put on reserve 9/16/2014. Last taught in 2009. Will go inactive 8/24/17.

ANTH 347. Native American Cultures of North America (4). Ecological settings and cultural adaptations of North American Native Americans in historical and contemporary contexts. Culture change and continuity,

language, religion, resource management and tribal sovereignty. Meets anthropology subfield Cultural Anthropology (C).

ANTH 351. Visual Anthropology (4). Provides methodological, theoretical and practical background to produce and evaluate imagery in films and video; guidelines and practice of image presentation/manipulation in anthropological and social contexts. ANTH 351 and COM 351 are cross-listed courses; students may not receive credit for both. Prerequisites: ANTH 130 or ART 225 or COM 321 or COM 330. Meets anthropology subfield Cultural Anthropology (C).

ANTH 352. Anthropology of Environmental Issues (4). Anthropological approaches to environmental issues and debates, from climate change to the availability of clean water and beyond. Students use critical thinking in assessing the role of culture nationally and internationally in current environmental issues. Meets anthropology subfield Cultural Anthropology (C).

ANTH 353. Childhood and Culture (4). Cross-cultural comparison of children's lives in different societies. Exploration of developmental paradigms and comparison of ideas about what childhood is and how children become competent in different societies.

ANTH 354. Anthropology of Religion (4). A cross-cultural analysis of religion, cosmology and world view. Meets anthropology subfield Cultural Anthropology (C).

ANTH 355. Culture, Person, Self (4). A cross-cultural analysis of the relationship of individuals to cultural beliefs and practices. Meets anthropology subfield Cultural Anthropology (C).

ANTH 356. Gender Roles in Cross-cultural Perspective (4). Bio-cultural factors affecting human gender roles. Meets anthropology subfield Cultural Anthropology (C).

ANTH 357. Medical Anthropology: Cross-cultural Perspectives on Health and Healing (4). Emphasizes cultural and biological factors influencing health maintenance in human populations and cross-cultural perspectives on illness, healing and the provision of health care. Meets anthropology subfield Cultural Anthropology (C).

ANTH 358. Culture and Politics in a Global Economy (4). Comparative perspectives on cultural processes of change within the global economic system. Meets anthropology subfield Cultural Anthropology (C).

ANTH 359. Survey of Music in Cross-cultural Perspectives (2). An introduction to ethnomusicology: the cultural context of music with emphasis on Africa, Asia, Native North and South America, Oceania. ANTH 359 and MUS 359 are cross-listed courses; students may not receive credit for both.

ANTH 360. Introduction to Museum Studies (4). Concepts relating to museums in society: history, ethics, philosophy, administration, legislation and education. Meets anthropology subfield Cultural Anthropology (C).

ANTH 361. Museum Exhibit Design (4). Principles of design applied to visual presentation of material culture, ideas and concepts through educational exhibits.

ANTH 362. Museum Curation and Management (4). Application of techniques of environmental security, restoration and preservation in the management of museum collections.

ANTH 380. Non-verbal Communication (4). Fundamentals of non-verbal communication including codes, relationship to biology and culture, usage, and interrelationships. COM 380 and ANTH 380 are cross-listed courses. Meets anthropology subfield Linguistics (L).

ANTH 381. Language in Culture (4). Language as a culture trait. Influence of language on other human institutions. Includes psycholinguistics, sociolinguistics, ethnographic semantics, and multilingualism in its sociocultural setting. Meets anthropology subfield Linguistics (L).

ANTH 382. Descriptive Linguistics (4). Introduction to the basic concepts and mechanics of formal linguistic analysis. Meets anthropology subfield Linguistics (L).

ANTH 384. Language and Gender (4). This course is designed to guide students to explore the active and rapidly expanding field of gender studies and language research dealing with how biological and cultural awareness of sexes are reflected in speech. ANTH 384 and WS 384 are cross-listed courses; students may not receive credit for both. Meets anthropology subfield Linguistics (L).

ANTH 398. Special Topics (1-6).

ANTH 404. Intermediate GIS (5). Applied concepts, principles, and operation of fundamental GIS applications, including raster-vector data models,

topology, digitizing, and various analytical techniques such as overlay, buffers, and Boolean queries. Lecture and practical applications. ANTH 404, GEOG 404, and GEOL 404 are cross-listed courses; students may not receive credit for both. Prerequisites: students must have completed either GEOG 303, GEOL 303, or ANTH 303.

ANTH 410. Biological Anthropology: Theoretical and Research Issues (4). Exploration of the theoretical underpinnings of biological anthropology, their expression in current research topics in the field, and the transition from earlier approaches to their current implementation. Seminar structure. Prerequisites: ANTH 110 and an additional 5 units of biological anthropology. Meets anthropology subfield Biological Anthropology (B) and Seminar (S). May be repeated for a total of 8 credits.

ANTH 411. Primate Conservation (4). A seminar that focuses on conservation issues of particular relevance for non-human primates, including deforestation, bushmeat hunting, and pet trade; and on conservation strategies, including reintroduction, captive management, and ecotourism. ANTH 411 and PRIM 511 are cross-listed courses; students may not receive credit for both. Prerequisites: ANTH 110 and ANTH 313. Meets anthropology subfield Biological Anthropology (B) and Seminar (S).

ANTH 412. Long-term Primate Studies (4). A survey of major long term field research projects including apes, monkeys, and lemurs; comparisons across sites and results of long term observation of non-human primates. Prerequisite: ANTH 313. Meets anthropology subfield Biological Anthropology (B) and Seminar (S).

ANTH 413. Research Methods in Primatology (5). Review of methods used in collection and analysis of primatological data, including hypothesis development, delineation of variables, subject sampling, data collection techniques, data analysis, and captive versus field settings for research projects. ANTH 413 and PRIM 513 are layered courses; students may not receive credit for both. Prerequisite: junior or senior standing or permission of instructor.

ANTH 414. Forensic Anthropology: Cold Case Analysis (6). The course explores the recovery and examination of skeletal remains through practical experience in the recovery of buried remains. Students will plan, manage, and conduct a forensic skeletal analysis of a cold case. Findings will be presented. Prerequisites: ANTH 110, 315, 310, and permission of the instructor. Meets anthropology subfield Biological Anthropology (B). May be repeated for credit.

ANTH 415. Forensic Anthropology: Theoretical and Applied Issues (4). An in-depth and critical analysis of journal articles pertaining to forensic anthropology, osteology, and archaeology. An examination of archaeological techniques that can be adapted to forensic and medico-legal investigations. Prerequisites: ANTH 110, 315, 310, and permission of the instructor. Meets anthropology subfield Biological Anthropology (B).

ANTH 416. Pongid Behavior (4). An overview of Pongid (chimpanzee, gorilla and orangutan) physiology, social and developmental behaviors in natural and laboratory conditions. ANTH 416 and PRIM 516 are cross-listed courses; students may not receive credit for both. Prerequisite: ANTH 313. Meets anthropology subfield Biological Anthropology (B) and Seminar (S).

ANTH 417. Advanced GIS (4). Advanced GIS principles, techniques, analysis, and application. Lecture and practical hands-on experience. Applied experience using GIS software. ANTH, GEOL, and GEOG 417 are cross-listed courses; students may not receive credit for more than one. Prerequisites: GEOG 404, GEOL 404, or ANTH 404.

ANTH 418. Primate Evolution (4). An overview of primate evolution from the earliest forms to modern representatives. Fossils, paleo environments, adaptive radiations and evolutionary trends among the primates. Prerequisites: ANTH 110 and ANTH 313. Meets anthropology subfield Biological Anthropology (B).

ANTH 421. Archaeological Theory (4). Discussion of research problems in data collection, analysis, and interpretation. Prerequisite: ANTH 120. Meets anthropology subfield Archaeology (A) and Seminar (S).

ANTH 425. Zooarchaeology (4). Mammalian osteology and methods in the analysis of animal bones from archaeological sites.

Prerequisites: ANTH 120 and either ANTH 110LAB or BIOL 183. Meets anthropology subfield Archaeology (A).

ANTH 426. Stone Tool Analysis (4). The theory, method, and technique of stone tool analysis are presented so that students can undertake a research project analyzing a stone tool assemblage. Prerequisites: ANTH 120 or ANTH 323. Meets anthropology subfield Archaeology (A).

ANTH 427. Environmental Archaeology (4). Analyses of sediments and plant and animal remains from archaeological sites are used to explore relationships between humans and their environments. Case studies combine natural and physical sciences to study long-term change in landscapes and ecosystems. ANTH 427/527 and GEOG 427/527 are cross-listed courses; students may not receive credit for more than one. Graduate credit requires an additional research paper to be specified in syllabus. Prerequisites: ANTH 120 or GEOG 107. Meets anthropology subfield Archaeology (A).

ANTH 432. Heritage Preservation (4). Students will discuss the merits of preserving heritage buildings and landscapes, and question what is deemed worth of heritage designation. Techniques will be developed for investigating a building's history and experience gained in writing proposals and policies to preserve heritage resources. ANTH 432 and GEOG 432 are cross-listed courses; students may not receive credit for both. Prerequisite: GEOG 305 or enrollment in REM Program or permission of instructor.

ANTH 440. Ecology and Culture (4). Investigation into interdependent environmental and human cultural systems. Traditional agroecologies and subsistence strategies; contemporary problems of resource management, social equity, political ecology, and sustainable development. ANTH 440 and GEOG 440 are cross-listed courses, students may not receive credit for both. Meets anthropology subfield Cultural Anthropology (C) and Seminar (S).

ANTH 444. Ethnographic Field Methods (4). Methods used in ethnographic field work. Meets anthropology subfield Cultural Anthropology (C) and Seminar (S).

ANTH 446. Anthropology of Globalization (4). Critically examines current theories of globalization in anthropology. Course includes selected ethnographic research on topics including global flows of people, material, ideas, identities, global political structures, and local accommodation and resistance. Meets anthropology subfield Cultural Anthropology (C) and Seminar (S).

ANTH 449. Contemporary Native American Cultures and Issues (4). Analysis of contemporary Native North American cultures and issues, including tribal sovereignty, resource management, education, religion, economic, and health status, cultural continuity, and adaptation. SOC 449 and ANTH 449 are cross-listed courses; students may not receive credit for both. Prerequisites: either ANTH 341, ANTH 347, SOC 366, AIS 103, or permission of instructor. Meets anthropology subfield Cultural Anthropology (C) and Seminar (S).

ANTH 451. History and Theory of Anthropology (4). Content and developmental history of anthropological theories and methods. Prerequisite: 20 units of anthropology courses. Meets anthropology subfield Cultural Anthropology (C) and Seminar (S).

ANTH 458. Senior Comprehensive Survey (4). Advanced comprehensive survey of the field of anthropology as to its content and intent. Specifically designed for majors preparing for graduate work. Prerequisite: admission to an anthropology major plan.

ANTH 480. Survey of Linguistics (4). Linguistic concepts and the relation between linguistics and other fields of study. Open to seniors and graduate students only. ANTH 480 and ENG 480 are cross-listed courses; students may not receive credit for both. Prerequisite: senior standing. Meets anthropology subfield Linguistics (L).

ANTH 483. Sociolinguistics (4). Concepts and methods of sociolinguistic analysis in first and second languages. Will examine differences among cultures in the relationship between language usage and inequality. ANTH 483 and FNLA 483 are cross-listed courses; students may not receive credit for both. Prerequisites: either ANTH 180, ANTH 381, ENG 180, or FNLA 481. Meets anthropology subfield Linguistics (L).

ANTH 485. Method and Theory in Biological Anthropology (1-8). Methods and techniques, research problems, data collection, analysis, interpretation. Laboratory

orientation. No more than 10 credits of ANTH 310 and ANTH 485 are allowed to fulfill BA or BS requirements. Prerequisite: introductory plus 5 upper-division credits in biological anthropology or corresponding coursework in the biological sciences. Meets anthropology subfield Biological Anthropology (B). May be repeated up to 8 credits.

ANTH 486. Advanced Methods in Archaeology (1-8). Archaeological research design; planning and supervision of laboratory and field operation; preparation of reports for publication. Prerequisite: 5 upper-division credits in archaeology. No more than 10 credits of ANTH 320 and 486 allowed to fulfill BA or BS requirements. Meets anthropology subfield Archaeology (A). May be repeated up to 8 credits.

ANTH 487. Field Linguistics (1-8). A laboratory oriented course providing both demonstration and practicum in recording, transcription, and structure of languages. Tapes and field derived data. Meets anthropology subfield Linguistics (L). May be repeated up to 8 credits.

ANTH 488. Advanced Research in Cultural Anthropology (1-8). Prerequisites: ANTH 130 and 5 upper-division credits in cultural anthropology. Meets anthropology subfield Cultural Anthropology (C). May be repeated up to 8 credits.

ANTH 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student-learning plan, cooperating employer supervision, and faculty coordination. By permission. May be repeated for credit. Grade will either be S or U.

ANTH 491. Workshop (1-6). May be repeated for credit.

ANTH 492. Anthropological Teaching Experience (1-2). May be repeated for credit. Grade will either be S or U.

ANTH 493. Anthropological Field Experience (1-8). Individual or group off-campus experience in the field study of anthropological phenomena. May be repeated for credit.

ANTH 494. Applied GIS Project (2-6). GIS projects in anthropology, biology, geography, geology, resource management. ANTH, GEOG, and GEOL 494 are cross-listed courses.

ANTH 496. Individual Study (1-6). By permission. May be repeated for credit. Grade will either be S or U.

ANTH 497. Forensics Capstone (1). A capstone course designed to assess student mastery of fundamental knowledge of forensics through submission of a portfolio of work collected throughout the program, and explore future opportunities. ANTH 497 and LAJ 497 are crosslisted; students may not receive credit for both. Prerequisite: senior standing.

ANTH 498. Special Topics (1-6).

ANTH 499. Seminar (1-5).

Art Courses

ART 101. Introduction to Western Art (5). The visual arts as an expression of the human experience. Does not apply to the art major. AH-Aesthetic Experience.

ART 102. Introduction to Non-Western Art (5). A survey of non-western painting, sculpture, and architecture. This course does not apply to the art major. AH-Aesthetic Experience.

ART 103. Art Appreciation (4). An introduction to artistic styles, periods, techniques, and ways of making art. The class will consider art from the prehistoric to the contemporary period and will introduce students to the visual components. AH-Aesthetic Experience.

ART 150. Introduction to Drawing (3). Introduction to observational drawing. Students will learn to see, interpret, and accurately render objects while exploring a variety of traditional drawing media and techniques. Class meets five hours per week.

ART 170. Two-Dimensional Design (3). Fundamental exploration of two-dimensional design, with emphasis on the elements and principles of design, skill acquisition, and the development of creative problem solving in design. Class meets five hours per week.

ART 171. Three-Dimensional Design (3). Fundamental exploration of three-dimensional design, with emphasis on the elements and principles of design, skill acquisition, and the development of creative problem solving in design. Class meets five hours per week.

ART 172. Computer Fundamentals in Art and Design (3). This course introduces the use of digital media from the artist's perspective, covering basic skills in MAC OS, Windows, the Adobe Creative Suite, and

Microsoft Office. Class meets five hours per week.

ART 225. Beginning Photography (4). Introduction to 35mm black and white film-based photography. Emphasis on technical skill development, applied printmaking techniques, and creative problem-solving. Course meets 5 hours per week.

ART 226. Beginning Photography: Digital (5). This course surveys the beginning conceptual and technical tools required to navigate digital photography. Six hours of studio per week.

ART 235. Ancient and Medieval Art (3). A historical survey of at of the western world from ancient art through art of the Medieval era.

ART 236. Renaissance through Mid-19th-century Art (3). A historical survey of art of the western world from the Renaissance to Impressionism. Class meets four hours per week. Prerequisite: ART 235.

ART 237. Impressionism through Postmodernism (3). A historical survey of art of the western world from Impressionism through Postmodernism. Class meets four hours per week. Prerequisites: ART 235 and 236.

ART 241. Beginning Wood Design (4). Introduction to wood as an artistic and design medium. Emphasis on visual communication utilizing basic shaping and finishing processes. Class meets five hours per week.

ART 246. Beginning Jewelry/ Metals (4). Design and construction of jewelry and small-scale metal objects. Emphasis on technical skill development, applied technique, conceptual problems and introduction to contemporary work. Class meets five hours per week.

ART 250. Figure Drawing (3). Further continuation of the skills, methods, and media from ART 150, with an emphasis on the study of anatomy on drawing the clothed and nude human form. Class meets five hours per week. Prerequisite: ART 150.

ART 251. Beginning Illustration (4). Introduction to illustration using a variety of media and industry standard software. Class meets five hours per week. Prerequisites: ART 150, and ART 170, and ART 172.

ART 260. Beginning Painting (4). An introduction to a variety of painting techniques. Class meets five hours per week.

ART 262. Beginning Watercolor (5). An introduction to painting, utilizing watercolor and other water-based media. Class meets five hours per week.

ART 265. Beginning Ceramics (4). Beginning instruction in ceramics with a focus on hand-building and wheel-throwing techniques, including concept development and historic, contemporary, and multi-cultural approaches to the medium. Class meets five hours per week.

ART 274. Beginning Typography (4). History and application of typography as a tool for visual communication using industry standard software. Class meets five hours per week. Prerequisite: ART 170.

ART 280. Beginning Sculpture (4). Introduction to the studio experience in sculpture. Emphasis is on the fundamental materials and basic methods of sculpture. Class meets five hours per week.

ART 282. Computer Art I (5). Use of computer systems and web software as tools for creative expression. Prerequisite: ART 170.

ART 283. Beginning Graphic Interface Design (4). Design of graphic interfaces for web pages and applications using principles of visual organization and composition. Class meets five hours per week. Prerequisite: ART 172 and ART 274.

ART 285. Printmaking I (5). Exploration of techniques and history of prints, with an emphasis on relief printmaking. Prerequisites: ART 150 and ART 170. Six hours of studio per week.

ART 296. Individual Study (1-6). By permission. May be repeated for credit.

ART 298. Special Topics (1-6).

ART 299. Seminar (1-5).

ART 300. Papermaking (4). Hand papermaking techniques, exploring historical and contemporary works/methods. Watermarking, pigmentation, moldmaking, with emphasis on sheetforming and fiber preparation. May be repeated for credit.

ART 324. History of Photography (4). An historical survey of photography from its beginnings to the present, focusing on interrelationships between photography and other visual arts, changing technologies, and contributions of major photographers and art movements. Prerequisite: ART 237.

ART 325A. Intermediate Photography: Color (4). Introduction to digital color photography with emphasis on color image capture, editing, printing, and artificial lighting as well as historical and contemporary uses of color.

Class meets five hours per week. Prerequisite: ART 225.

ART 325B. Intermediate Photography: Analog Processes (4). Continued exploration of film-based darkroom photography, with the introduction of new techniques, prcesses and applications. Incorporation contemporary practices and concepts. Class meets five hours per week. Prerequisite: ART 225.

ART 325C. Intermediate Photography: Visual Narratives (4). Exploration of the creative and conceptual processes of utilizing the photographic medium to explore visual language. Class meets five hours per week. Prerequisite: ART 225.

ART 330. Art in the Elementary School (4). Content and methodology for teaching art in the elementary school. Prerequisite: conditional or full admission to the Teacher Certification Program.

ART 332. Art Curriculum and Field Experience (4). Developing discipline-based art education curriculum for the elementary and middle school, as well as preparing curriculum to teach Friday children's art classes. Prerequisite: ART 330 and current WSP/FBI fingerprint clearance .

ART 333. Art, Design, and Popular Culture (4). An exploration of artistic eras from a cultural perspective. focus is on the relationship of the fine arts, architecture and design to the historical era in which works were created. The course explores the ways in which art influences and is influenced by its cultural and social context.

ART 341. Intermediate Wood Design (4). Design and fabrication of furniture forms. Emphasis on creative form development utilizing sophisticated fabrication and finishing processes. Class meets five hours per week. Prerequisite: ART 241.

ART 346A. Intermediate Jewelry/Metals: Casting and Link Structures (4). Technical and conceptual aspects of jewelry and metalwork through model-making, casting, mold-making, and construction of linkages and chains. Emphasis on personal exploration. Class meets five hours per week. Prerequisite: ART 246.

ART 346B. Intermediate Jewelry/Metals: Enameling (4). Technical and conceptual aspects of jewelry and metalwork with focus on enameling (glass on metal). Emphasis on personal exploration. Class meets five hours per week. Prerequisite: ART 246.

ART 346C. Intermediate Jewelry/Metals: Form and Surface (4). Technical and conceptual aspects of jewelry and metalwork with focus on form development (chasing, dieforming and electroforming) and surface embellishment techniques. Emphasis on personal exploration. Class meets five hours per week. Prerequisite: ART 246.

ART 350. Mixed-media Drawing (4). Continued exploration in drawing with emphasis on mixed-media processes. Class meets five hours per week. Prerequisite: ART 250.

ART 351. Intermediate Illustration (4). Continues exploration of illustration stressing development of personal expression in variety of media and industry standard software. Class meets five hours per week. Prerequisite: ART 251 and permission.

ART 360A. Intermediate Painting: Narrative and Representation (4). Continued exploration of painting techniques with a focus on narrative and representation. Class meets five hours per week. Prerequisite: ART 260.

ART 360B. Intermediate Painting: Color (4). Further development of painting techniques with emphasis on color as a conceptual, formal, and organization tool. Class meets five hours per week. Prerequisite: ART 260.

ART 360C. Intermediate Painting: Abstraction (4). Further development of painting techniques with emphasis on abstraction as a conceptual, formal, and organizational tool. Class meets five hours per week. Prerequisite: ART 260.

ART 362. Intermediate Watercolor (4). Further development of the techniques and skills acquired in ART 262, with emphasis on personal expression. Class meets five hours per week. Prerequisite: ART 262.

ART 365A. Intermediate Ceramics: Hand-Building (4). Intermediate instruction in ceramics with a focus on developing hand-building techniques, including more in-depth concept development and historic, contemporary, and multi-cultural approaches to the medium. Class meets five hours per week. Prerequisite: ART 265.

ART 365B. Intermediate Ceramics: Wheel-Throwing (4). Intermediate instruction in ceramics with a focus on developing wheel-throwing techniques, including more in-

depth concept development and historic, contemporary, and multi-cultural approaches to the medium. Class meets five hours per week. Prerequisite: ART 265.

ART 365C. Intermediate Ceramics: Mold-Making (4). Intermediate instruction in ceramics with a focus on mold-making and mold materials including plaster, plywood and polystyrene molds, including more in-depth concept development and historic, contemporary, and multi-cultural approaches to the medium. Class meets five hours per week. Prerequisite: ART 265.

ART 368. Ceramic Materials and Effects (5). This course covers an investigation into materials and their effects in the media of ceramics. Glaze calculation and testing along with clay body tests will be the main focus of this course. Low fire, midrange and high-fire temperatures will also be addressed. Prerequisite: ART 265. May be repeated up to 10 credits.

ART 370. Beginning Layout and Design (4). Application of two and three-dimensional design principles and theoretical concepts to layout and design using industry standard software. Class meets five hours per week. Acceptance into the BFA graphic design major via portfolio review. Prerequisites: ART 150, and ART 171, and ART 172, and ART 274 and permission.

ART 371. Intermediate Layout and Design (4). Continued work in design composition with emphasis on the application of letter, forms, color, image and concept using industry standard software. Class meets five hours per week. Prerequisite: ART 370. Two hours lecture and four hours studio per week.

ART 372. Beginning Design and Production (4). Design composition with emphasis on production techniques, as well as the application of type, image and concept using industry standard software. Class meets five hours per week. Prerequisite: ART 371.

ART 374. History of Graphic Design (4). A historical survey of the graphic arts from their beginning to the present.

ART 380A. Intermediate Sculpture: Object and Form (4). A continuation of the studio experience in sculpture, emphasizing the development of object and form, a higher level of technical competence, continued exploration of materials and conceptual development. Class meets five hours per week. Prerequisite: ART 280.

ART 380B. Intermediate Sculpture: Installation Art (4). A continuation of the studio experience of sculpture, emphasizing the development of installation art within a spatial context, higher level of technical competence, continued exploration of materials and conceptual development. Class meets five hours per week. Prerequisite: ART 280.

ART 382. Computer Art II (5). Exploration of several software programs and computer output devices for creation of electronic art.

ART 383. Intermediate Graphic Interface Design (4). Further exploration of graphic interface design for web pages and applications using principles of visual organization and composition. Class meets five hours per week. Prerequisite: ART 283 and permission.

ART 389. Contemporary Concepts in Art (4). Exploration of the contextual, formal, and philosophic meanings of current art movements and theories in regards to their relevance and place in contemporary art practice.

ART 398. Special Topics (1-6).

ART 410. Art of the Italian Renaissance (4). The painting, sculpture, and architecture of the Italian Renaissance from the late Middle Ages through the 16th century. Prerequisite: ART 236. Put on reserve 9/16/2014. Last taught in 2011. Will go inactive 8/24/17.

ART 414. Recent Art (4). The visual arts of the last 25 years, including the traditional forms of painting, sculpture and architecture, and newer forms including video, computer, and performance art. Prerequisite: ART 237.

ART 420. American Art and Architecture (4). A study of art and architecture in America from the Colonial era to today. Contributions of Americans to world art, the role of art in American life and the work of canonical artists and architects are stressed. Recognition of major and styles is emphasized.

ART 425. Advanced Photography (4). Development of a personal portfolio with emphasis on developing conceptual ideas through research, planning, and experimentation. Class meets five hours per week. Prerequisites: ART 325A, and ART 325B, and ART 325C. May be repeated up to 16 credits.

ART 430. Components of Art Education (4). Content and strategies for teaching aesthetics, art criticism, art history, and art production in

art education; writing, implementing, and assessing quality art lessons. Prerequisite: ART 330.

ART 432. Art in Secondary School (4). Current philosophies and curriculum in the secondary school; objectives, planning, methods of teaching and evaluation. Prerequisite: ART 430.

ART 441. Advanced Wood Design (4). Advanced design and fabrication of furniture forms, with emphasis on research and development utilizing advanced or innovative fabrication and finishing processes. Class meets five hours per week. Prerequisite: ART 341. May be repeated up to 16 credits.

ART 446. Advanced Jewelry/Metals (4). Advanced exploration of personal expression in jewelry and/or metals. Emphasis on self-direction, conceptual and technical mastery and professionalization of practice. Class meets five hours per week. Prerequisites: ART 346A, and ART 346B, and ART 346C or by permission after having taken two of these three courses. May be repeated up to 16 credits.

ART 450. Advanced Drawing (4). Further development of skills in drawing with emphasis on building a cohesive body of work. Class meets five hours per week. Prerequisite: ART 250. May be repeated up to 16 credits.

ART 456. History of Eastern Art (4). A survey of the architecture, sculpture, painting, and the crafts of India, Indonesia, China, and Japan. ART 456 and ART 556 are layered courses; students may not receive credit for both. Put on reserve 9/16/2014. Last taught in 2011. Will go inactive 8/24/17.

ART 460. Advanced Painting (4). Advanced exploration of painting with an emphasis on building a cohesive body work. Class meets five hours per week. Prerequisites: ART 360A, and ART 360B, and ART 360C or permission of instructor. May be repeated up to 16 credits.

ART 465. Advanced Ceramics (4). Advanced instruction in ceramics with a focus on developing technical expertise and creating a visual voice in the medium through self-directed research in historical, contemporary, and multi-cultural approaches to the medium. Class meets five hours per week. Prerequisites: ART 365A , and ART 365B, and ART 365C, or permission of instructor. May be repeated up to 16 credits.

ART 470. Advertising Graphic Design (4). Concept and design as applied to advertising problems with emphasis on presentation and communication skills with analysis and implementation of marketing strategies. Class meets five hours per week. Acceptance into the BFA graphic design major via portfolio review. Prerequisite: by permission. May be repeated up to 8 credits.

ART 471. Corporate Graphic Design (4). Concept and design as applied to corporate graphic design problems with emphasis on presentation and communication skills with analysis and implementation of marketing strategies. Class meets five hours per week. Prerequisite: ART 470.

ART 472. Intermediate Design and Production (4). Development of professional practices, creative problem solving techniques, and understanding and establishing relationships with vendors. Class meets five hours per week. Prerequisite: ART 471.

ART 474. Intermediate Typography (4). Exploration of advanced type and image relationships, including conceptual, structural and visual elements with an emphasis on history and terminology. Class meets five hours per week. Prerequisites: ART 172 and ART 274.

ART 480. Advanced Sculpture (4). Advanced studies in sculpture. Emphasis is on creative self-expression and the development of a self-directed body of work. Class meets five hours per week. Prerequisites: ART 380A and ART 380B or by permission. May be repeated up to 16 credits.

ART 483. Advanced Graphic Interface Design (4). Advanced exploration of graphic interface design for web pages and applications using principles of visual organization and composition. Class meets five hours per week. Prerequisite: ART 383 and permission.

ART 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student-learning plan, cooperating employer supervision, and faculty coordination. By permission. May be repeated for credit. Grade will either be S or U.

ART 491. Workshop (1-6). May be repeated for credit.

ART 495. Studio Project (2). Preparation of a professional portfolio and presentation of the portfolio or of a body of work

for exhibition. Satisfies end-of-year assessment requirements. Must be taken during one of the last two quarters prior to graduation. Prerequisite: by permission.

ART 496A. Individual Study: Computer Art (1-6). By permission. May be repeated for credit.

ART 496C. Individual Study: Ceramics (1-6). By permission. May be repeated for credit.

ART 496D. Individual Study: Drawing (1-6). By permission. May be repeated for credit.

ART 496E. Individual Study: Art Education (1-6). By permission. May be repeated for credit.

ART 496G. Individual Study: Graphic Design (1-6). By permission. May be repeated for credit.

ART 496H. Individual Study: Art History (1-6). By permission. May be repeated for credit.

ART 496J. Individual Study: Jewelry/Metals (1-6). By permission. May be repeated for credit.

ART 496P. Individual Study: Painting (1-6). By permission. May be repeated for credit.

ART 496S. Individual Study: Sculpture (1-6). By permission. May be repeated for credit.

ART 496T. Individual Study: Photography (1-6). By permission. May be repeated for credit.

ART 496W. Individual Study: Wood Design (1-6). By permission. May be repeated for credit.

ART 498. Special Topics (1-6).

ART 499. Seminar (1-5).

American Sign Language Courses

ASL 151. American Sign Language (5). Conversational approach with intensive visual/manual drill. Firm foundation in basic signs and structural principles of the language. Students may not receive credit for both ASL 151,152, 153, and EDSE 427, 428, 429. Courses must be taken in sequence. By permission only.

ASL 152. American Sign Language (5). Conversational approach with intensive visual/manual drill. Firm foundation in basic signs and structural principles of the language. Students may not receive credit for both ASL 151,152, 153 and EDSE 427, 428, 429. Prerequisite: ASL 151. Courses must be taken in sequence. By permission only.

ASL 153. American Sign Language (5). Conversational approach with intensive visual/manual drill. Firm foundation in basic signs and structural principles of the language. Students may not receive credit for both ASL 151,152, 153 and EDSE 427, 428, 429. Prerequisite: ASL 152. Courses must be taken in sequence. By permission only.

ASL 251. Second-year American Sign Language (5). How signers construct meaning and messages in ASL, grammatical variation, and discourse strategies is covered with special focus on increasing non-manual behavior. Courses must be taken in sequence. By permission only.

ASL 252. Second-year American Sign Language (5). How signers construct meaning and messages in ASL, grammatical variation, and discourse strategies is covered with special focus on increasing non-manual behavior. Prerequisite: ASL 251. Courses must be taken in sequence. By permission only.

ASL 253. Second-year American Sign Language (5). How signers construct meaning and messages in ASL, grammatical variation, and discourse strategies is covered with special focus on increasing non-manual behavior. Prerequisite: ASL 252. Courses must be taken in sequence. By permission only.

ASL 301. American Sign Language Literature (5). Introduces aspects of ASL literature, including poetry, narrative, humor and folklore. Students will develop knowledge of the literary history of ASL and will acquire skills in comprehending and producing ASL literary texts. Prerequisite: ASL 253. By permission only.

ASL 310. Deaf Culture (5). Overview of the cultural development and linguistic history of the Deaf. Provides a comprehensive study of the deaf-world through analysis of historical events, sociolinguistic factors that affect ASL and current issues. Prerequisite: ASL 253. By permission only.

ASL 343. American Sign Language in Education (5). Overview of current practices concerning the use of ASL in the educational setting. Topics explored will include manually coded English systems, bilingual bicultural education, and language acquisition in deaf children. Prerequisite: ASL 253. By permission only.

Asia Pacific Studies Courses

AST 102. Introduction to Asian Studies (3). An interdisciplinary introduction to the study of Asia; emphasizing geography, history, culture, and economics. SB-Perspectives on World Cultures (W).

AST 301. Chinese Literature in Translation (4). A survey of Chinese literature in translation. AST 301 and CHIN 301 are equivalent courses; students may not receive credit for both.

AST 310. Japan Today (3). Study of culture, social structure, human relations, and issues and problems in contemporary Japan.

AST 340. Ethnography of China (4). This course is designed to explore China from the perspectives of general cultural patterns and ethnicity. ANTH 340 and AST 340 are cross-listed courses; students may not receive credit for both.

AST 396. Individual Study (1-6).

AST 398. Special Topics (1-6).

AST 401. Asia/Pacific Studies Capstone (3). Senior research project of creative expression, to be completed in conjunction with elective course under the supervision of an Asia Pacific Studies teaching faculty member or someone designated by director.

AST 465. Indian Cinema (4). An examination of the history, aesthetic achievements, major directors and themes, and cultural explorations of Indian cinema. The course explores films from a variety of Indian cinematic traditions including the Bengali, Hindi, Bangladeshi, Telugu, Tamil, Marathi, Malayalam, Kashmir, and Kannada film industries. Put on reserve 9/16/2014. Last taught in 2010. Will go inactive 8/24/17.

Apparel Textiles and Merchandising Courses

ATM 251. Style Principles: Body to Store (3). Theory and practice of merchandise presentation from store windows and displays to merchandising on the body. Application of principles and elements of design and concept development to execution for a variety of mediums. Prerequisite: ATM 301.

ATM 270. Digital Presentation Techniques (4). Introduction to industry standard software used to visually communicate information. Basic skills acquired include the development of line plan components, presentation techniques, and concept boards.

ATM 280. Basic Sewing Techniques (3). Basic clothing construction theory, techniques, and teaching methods covering basic garment components: collars, sleeves, bodices, pleats, etc.

ATM 285. Buying and Merchandising Math (4). An introduction to the financial management of fashion products; mathematical applications using percentages, mark-ups, profit formulas, pricing principles, tracking inventory, and mathematical formulas used in all levels of apparel operations.

ATM 289. Northwest Field Experience in Apparel and Textiles (3). An applied study of clothing, textiles, fashion merchandising, and design through regional field visits to meet with fashion professionals within a range of careers. By permission.

ATM 298. Special Topics (1-6).

ATM 301. Introduction to the Fashion Industry (4). Overview of the history, structure, and operation of the fashion industry. Provides knowledge and skills for effective development in understanding the dynamics of the fashion industry. Prerequisite: ATM 270.

ATM 351. Sociocultural Aspects of Apparel (4). Clothing in relation to individual and group behavior patterns; personal and social meanings attributed to dress; and cultural patterns of technology, aesthetics, ritual, morality, and symbolism. Recommended, PSY 101, SOC 107, and ANTH 107.

ATM 353. Apparel Manufacturing (5). Analysis and evaluation of apparel through manufacturing; specification development, seam/stitch classifications, apparel assembly, equipment capabilities and production processes, costing, strategic sourcing, and quality assurance. Consideration of consumer product expectations, sustainability and intended end-use will be evaluated throughout the course. Prerequisites: ATM 280, and ATM 301, and ATM 355 are required.

ATM 355. Consumer Textiles (4). Study of natural and synthetic textiles: generic classification, fiber-forming substances, morphology, fabrication, finishing and dyeing processes, properties, and performances. Ten dollar material fee.

ATM 379. ATM Internship Planning (1). Preparation for required ATM internship; identifying professional goals, skills, opportunities and strategies, complete resumes, the application processes, preparing for interviews, analyzing the student internship, and introductory portfolio preparation.

ATM 381. Fashion Show Production (2). Preparation, production, and evaluation of special fashion related events. Professional learning experiences will include

modeling techniques, organization and directing procedures. May be repeated up to 4 credits.

ATM 388. Advanced Fashion Design (3). Fundamental concepts of flat pattern and draping design theories and techniques. Design and execution of draped and flat patterned samples and garment structures will be required. Includes translation of garment ideas from conception through production and merchandising. Prerequisite: ATM 280 or TH 261 and admission to the apparel, textiles and merchandising major or minor or the apparel design minor or permission of the instructor. May be repeated up to 6 credits.

ATM 389. Fashion Trend Analysis (3). Fashion forecasting; reflecting the acceptance or rejection of trends; analysis of socio-economic, demographic, media, and fashion influences. Students will have an opportunity to travel to market. Prerequisite: ATM 301.

ATM 398. Special Topics (1-6).

ATM 452. History of Fashion (4). Historical changes in fashion and costume design from Egyptian period through Eastern civilization to present. Social, political, and religious influences on fashions. ATM 452 and TH 452 are cross-listed courses; students may not receive credit for both.

ATM 485. International Merchandising (4). Emphasis on international retailing and global trade. Focus on cross-cultural differences, work environments, policies, and regulations. ATM 485 and RMT 485 are cross-listed courses; students may not receive credit for both. Prerequisite: RMT 330.

ATM 487. Fashion Merchandising Exit Assessment (1). During the last quarter of their program, students are assessed on program outcomes and portfolios are created for internship and job interviews. Grade will either be S or U.

ATM 488. Fashion Line Development (3). Production of an apparel line from conceptualization to completion. Design concepts will be executed through storyboards, identification of target market, merchandising strategy, and completion of muslin samples. A final project of three original designs will be showcased at the annual fashion show. Prerequisite: ATM 388 or TH 361 and admissions to the apparel, textiles and merchandising major or minor or the apparel design minor or permission of the instructor. May be repeated up to 6 credits.

ATM 489. Merchandise Buying and Planning (4). Principles of buying and selling merchandise; analysis of consumer demand, stock inventories and open-to-buy. Prerequisite: ATM 285 and RMT 330.

ATM 490. Cooperative Education (1-12). An individualized, contracted field experience within the apparel industry. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. 40 hours required per credit. Prerequisite: ATM 379. May be repeated up to 20 credits.

ATM 491. Workshop (1-6). May be repeated for credit.

ATM 498. Special Topics (1-6).

ATM 499. Seminar (1-5).

Aviation Management Courses

AVM 296. Individual Study (1-6). By permission. May be repeated for credit.

AVM 298. Special Topics (1-6). May be repeated for credit.

AVM 330. Aviation Law (3). This course provides an introduction to aviation law, the legal system, and the principles of law and how they may be applied to aspects of air transportation. Students must be junior standing or above to enroll in this class.

AVM 332. Aviation Legislation (4). History and evolution of aviation governmental regulatory agencies in the US and internationally, including FAA, ICAO, and homeland security. Agency organization and operation, and legislative and treaties related to enforcement of aviation standards. Prerequisite: AVM 330.

AVM 333. Air Transportation (4). The air transportation system including facilities, regulations, and problems encountered in commercial transportation, airline operations, economic, ethical, and social considerations. Prerequisite: English 101 with a grade of C- or better.

AVM 334. Airport Management (3). Airport operations and management, including analysis of the role of the airport manager in planning, finance, and administration; public relations, social, political, and environmental considerations; operational requirements and facilities maintenance.

AVM 335. Aviation Management (3). Management of aviation activities, manpower, facilities, regulations, and flight operations.

AVM 338. Airport Administration and Finance (4). The role of airport and airline in the aviation industry, including time value of money, risk and return, complex nature of costs (fixed, semi-fixed, variable and marginal). Analysis of financial statements as they apply to the overall financial health and revenue stream of an aviation organization such as an airport or airline. Prerequisite: AVM 334.

AVM 350. Aviation Career Planning and Professionalism (3). Career planning as applicable to students pursuing careers in the air transportation industry. Prerequisite: junior standing or above.

AVM 417. Aviation Safety Management (4). Fundamentals of aviation safety program management. Prerequisites: AVP 340 or enrolled in aviation management major/minor and junior or senior standing.

AVM 418. Threat and Error Management in Aviation (3). Principles of Threat and Error Management (TEM) in aviation operations. Prerequisite: AVM 417 and senior standing.

AVM 420. Aviation Labor Relations (4). Overview of aviation industries and development of US labor law and policy, including statutory, regulatory, and case laws in airline and corporate aviation. Principles, practices and procedures in collective bargaining and dispute resolution; and the changing airline labor relations environment. Prerequisite: AVM 330.

AVM 422. Legal Ethics Aviation (4). Aviation ethical issues relative to the deregulation act of 1978. Government and industry roles in aviation employee responsibility, diversity, airport ground issues, air traffic control and security, health and the environment, and crew/passenger safety. Prerequisite: AVM 330.

AVM 424. Aviation Security (4). Airport security systems, protection criteria, crime prevention, perimeter security, and access control. Policies and procedures forming security infrastructure required by Department of Homeland Security and the TSA to maintain a secure air transportation system. Prerequisite: AVM 333.

AVM 426. International Aviation Management (4). International aviation management and policy, including cross-cultural challenges, interpersonal relationships in a diverse domestic and foreign environment, and evolving global trends. Managing workforce diversity from a culture-based perspective, including social responsibility, ethics, and environmental interdependence. Prerequisite: AVM 335.

AVM 430. Airport/Airline Marketing (4). Basic economics and marketing principles of airports, airlines, and aviation business within air transport value chain. New principles including inclusive advertising, marketing to the connected traveler online, offline advertising, and social media. Prerequisite: AVM 335.

AVM 434. Airport Operations (3). Prerequisites: AVM 333 and AVM 334

AVM 438. Airport Planning and Design (4). Methodologies necessary to the planning and design of airports. Prerequisite: AVM 434

AVM 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student-learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated up to 20 credits. Grade will either be S or U.

AVM 496. Individual Study (1-6). By permission. May be repeated for credit.

AVM 498. Special Topic (1-6). May be repeated for credit.

AVM 499. Seminar (1-5). May be repeated for credit.

Aviation Pilot Courses

AVP 101. Private Pilot Flight Laboratory I (1). Basic flight maneuvers, solo flight in local area, and introduction of maximum performance takeoff and landing procedures. Co-requisite: AVP 141.

AVP 102. Private Pilot Flight Laboratory II (1). Plan and conduct cross-country flights and perform short-field and soft-field takeoffs and landings. Prerequisite: AVP 101. Co-requisite: AVP 142.

AVP 103. Private Pilot Flight Laboratory III (1). Perform private pilot operation at a standard to obtain the private pilot certificate. Prerequisite: AVP 102.

AVP 104. Intermediate Pilot Flight Laboratory (1). Flight operations for recurrent and standardization training for professional pilot degree. May be repeated up to 3 credits.

AVP 141. Principles of Flight I (4). Basic knowledge of airplanes and their systems, aerodynamics, flight safety,

airports, aeronautical charts, airspace, radio communications, air traffic control services, and aviation regulations. Co-requisite: AVP 221.

AVP 142. Principles of Flight II (4). Basic knowledge of airplane performance and loading, preflight planning including weather analysis, visual and radio (VOR/ADF) navigation, flight physiology, and aeronautical decision making. Preflight planning for cross-country flights. Prerequisite: a grade of C- or higher in AVP 141. Co-requisite: AVP 211.

AVP 201. Instrument Pilot Flight Laboratory I (1). Altitude control by instrument reference only, use of full and partial panel, and radio navigation. Prerequisite: private pilot certification.

AVP 202. Instrument Pilot Flight Laboratory II (1). IFR approaches and holding patterns. Prerequisite: AVP 201.

AVP 203. Instrument Pilot Flight Laboratory III (1). Perform all IFR maneuvers and procedures to FAA instrument rating practical test standards. Prerequisite: AVP 202.

AVP 211. Meteorology for Pilots (4). Meteorological processes and weather hazards applicable to the flight environment. . Co-requisite: AVP 142 or AVP 242 or instructor permission.

AVP 221. Aircraft Systems I (3). Light training aircraft engines, propellers and engine systems, flight controls, fuel systems, instrumentation, tires, wheels and brakes. Co-requisite: AVP 141.

AVP 241. Instrument Flight I (4). Discussion and study of aircraft instruments, basic attitude instrument flying, navigation, regulations, procedures, and aeronautical decision making for the instrument pilot. Prerequisite: private pilot certifications.

AVP 242. Instrument Flight II (3). Procedures for IFR departure, enroute and arrival operations. Preparation for FAA aeronautical knowledge exam. Prerequisite: a grade of C- or higher in AVP 241. Co-requisite: AVP 312.

AVP 296. Individual Study (1-6). By permission. May be repeated for credit.

AVP 298. Special Topics (1-6). Course content identified by title in the university class schedule. May be repeated for credit under different titles. May be repeated for credit.

AVP 301. Certified Flight Instructor Laboratory (1). Analyze and perform maneuvers from the right seat. Demonstrate proficiency and instructional knowledge to FAA practical test standards Prerequisite: AVP 448 and Commercial Pilot Certificate.

AVP 304. Commercial Pilot Flight Laboratory I (1). Plan and conduct VFR cross-country flights using pilotage, dead reckoning, and radio navigation. Night flight operations. Prerequisite: AVP 203.

AVP 305. Commercial Pilot Flight Laboratory II (1). Operation of complex aircraft and basic knowledge of advanced commercial maneuvers. Prerequisite: AVP 304.

AVP 306. Commercial Pilot Flight Laboratory III (1). Perform flight maneuvers and procedures to FAA commercial pilot practical test standards. Prerequisite: AVP 305.

AVP 308. Instrument/Commercial Pilot Flight Laboratory (1). Flight operations for recurrent and standardization training for Instrument/Commercial Pilot transition. May be repeated up to 3 credits.

AVP 312. Aviation Weather Services (3). Comprehensive analysis of weather service for flight crews, including interpretation of applicable alpha-numeric and graphic weather reports and forecasts. Co-requisite: AVP 241.

AVP 319. Applied Aerodynamics (3). Theories of flight and flight factors including airfoil shape, drag, velocity, lift and thrust, stability and control. Co-requisite: AVP 242.

AVP 322. Aircraft Systems II (3). Complex aircraft systems. Prerequisite: AVP 221. Co-requisite: AVP 354.

AVP 323. Advanced Navigation (3). Advanced navigation systems, their function, operation and application. Prerequisite: AVP 354.

AVP 331. National Airspace System (3). The national air traffic control system, control procedures, the integration of centers, approach communications, navigation procedures, radar operations, and facilities.

AVP 332. Aviation History (3). Major developments in the history of powered flight. Includes perspectives from civilian, military, international, and air carrier operations. Prerequisite: ENG 101 with a grade of C- or higher.

AVP 337. Aviation Physiology and Survival (4). Physiological aspects of flight crew performance, including effects of high altitude, accelerations, disorientation, and fatigue. Basic introduction to wilderness survival. Prerequisites: AVP 141 and AVP 142.

AVP 340. Human Factors in Flight (4). Psychological aspects of flight crew performance and fundamental concepts of crew resource management. Prerequisites: AVP 337 and instrument rating.

AVP 348. Air Carrier Operations (4). Familiarization and utilization of Company Operations Manual excerpts, Operations Specifications, and Minimum Equipment Lists, and the Code of Federal Regulations (CFR), Hazardous Materials (HMR) part 175, CFR parts 119, 120, 121, and NTSB830 to determine safety of flight and compliance with company policies and procedures and federal regulations. Exposure to multi-crew environment and expectations of professional behavior for flight crews. Prerequisite: AVP 354.

AVP 352. Multiengine Principles (2). Discussion and study of multiengine aerodynamics, operating procedures, systems, performance, weight, and balance considerations, engine-out procedures, single-engine aerodynamics, and instrument flight. Prerequisite: AVP 354.

AVP 354. Commercial Pilot (4). Operation of advanced systems appropriate to complex airplanes and execution of advanced flight maneuvers. Preparation for FAA written examination. Prerequisite: private pilot certificate with instrument (airplane) rating, or FAA instrument airplane knowledge test passed. Corequisite: AVP 322.

AVP 375. Mountain and Canyon Flying (3). Synthesis of fundamental concepts and practices including navigation in mountainous terrain, aircraft performance and density altitude, canyon flying and airport operations in constricted areas, mountain and canyon meteor, emergencies, and flight safety. Prerequisite: private pilot certificate or permission of instructor.

AVP 401. Multiengine Flight Laboratory (1). Perform multiengine aircraft systems and operations, normal and emergency procedures to FAA practical test standards. Prerequisite: AVP 352 and Commercial Pilot Certificate.

AVP 410. Crew Resource Management (3). Study of human performance in complex systems with an examination of stress, anxiety, fatigue, communication, personality and judgement, and practical application of human factors and performance in modern aviation. Prerequisite: AVP 340.

AVP 422. Aircraft Systems III-Turboprop Systems (3). Introduction and familiarization of turbine engines and turboprop aircraft systems. Prerequisites: AVP 322 and AVP 354.

AVP 423. Aircraft Systems IV-Turbojet Systems (4). Introduction and familiarization of transport category aircraft systems. Prerequisite: AVP 422.

AVP 444. Multiengine FTD, Baron G58 (2). Introduction to and familiarization of Electronic Flight Instrument Systems (EFIS), Crew Resource Management (CRM) in multi-crew environment, use of flight director and autopilot in a simulated flight environment. Prerequisite: AVP 352, admission to the flight officer specialization, and Commercial Pilot Certificate course stage V complete or instructor permission.

AVP 445. Turboprop FTD, King Air 200 (2). Introduction and familiarization of turbine-powered aircraft operations in a simulated flight environment, including Crew Resource Management (CRM), Electronic Flight Information Systems (EFIS), Flight Director (FD), and Autopilot (AP) operations. Prerequisites: AVP 422 and AVP 444.

AVP 448. Fundamentals of Flight Instruction (5). A two-part course consisting of fundamentals of instruction, including; foundations of learning, learning theories, styles, domains, teaching process and methods, lesson design and evaluation, and human behavior. The role of the airplane flight instructor, including; privileges and responsibilities, teaching aeronautical decision making, flight safety, and professionalism. Prerequisite: instrument rating and commercial pilot flight stage V complete.

AVP 458. Advanced Flight Instruction, Instrument (3). Methodology used in teaching instrument flight and acquisition of the Instrument Ground Instructor certificate (IGI). Prerequisite: AVP 448, and Certified Flight Instructor Certificate course stage 1.

AVP 469. Turbojet Operations (4). Introduction and familiarization of transport category aircraft operations including; Crew Resource Management (CRM), flows and checklist procedures, aircraft limitations, normal and emergency operational procedures. Prerequisite: AVP 423.

AVP 475A. Specialty Flight Laboratory: Single Engine Seaplane (1). Receive ground and flight instruction in the

listed specialty. Flight hours will vary with each specialty. A minimum of 10 flight hours normally required for credit except as approved by aviation faculty. May be repeated for a different specialty. Prerequisite: FAA pilot certificate or equivalent and permission. Grade will either be S or U.

AVP 475B. Specialty Flight Laboratory: Multiengine Seaplane (1). Receive ground and flight instruction in the listed specialty. Flight hours will vary with each specialty. A minimum of 10 flight hours normally required for credit except as approved by aviation faculty. Prerequisite: FAA pilot certificate or equivalent and permission. May be repeated for a different specialty. Grade will either be S or U.

AVP 475C. Specialty Flight Laboratory: Helicopters (1). Receive ground and flight instruction in the listed specialty. Flight hours will vary with each specialty. A minimum of 10 flight hours normally required for credit except as approved by aviation faculty. Prerequisite: FAA pilot certificate or equivalent and permission. May be repeated for a different specialty. Grade will either be S or U.

AVP 475D. Specialty Flight Laboratory: Mountain Flying (1). Receive ground and flight instruction in the listed specialty. Flight hours will vary with each specialty. A minimum of 10 flight hours normally required for credit except as approved by aviation faculty. Prerequisite: FAA pilot certificate or equivalent and permission. May be repeated for a different specialty. Grade will either be S or U.

AVP 475E. Specialty Flight Laboratory: Aerobatics (1). Receive ground and flight instruction in the listed specialty. Flight hours will vary with each specialty. A minimum of 10 flight hours normally required for credit except as approved by aviation faculty. Prerequisite: FAA pilot certificate or equivalent and permission. May be repeated for a different specialty. Grade will either be S or U.

AVP 475F. Specialty Flight Laboratory: Other (1). Receive ground and flight instruction in the listed specialty. Flight hours will vary with each specialty. A minimum of 10 flight hours normally required for credit except as approved by aviation faculty. Hang gliders are specifically omitted. Prerequisite: FAA pilot certificate or equivalent and permission. By advisement and permission. May be repeated for a different specialty. Grade will either be S or U.

AVP 489. Turbo FTD, CRJ-200 (3). Introduction and familiarization of turbojet-powered aircraft operations in a simulated flight environment, including Crew Resource Management (CRM), Electronic Flight Instrument Systems (EFIS), Engine Indicating and Crew Alerting Systems (EICAS), Flight Director (FD), and automation philosophy/operation. Prerequisite: AVP 423, AVP 445 and AVP 469, multiengine rating.

AVP 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. By permission. May be repeated for credit. Grade will either be S or U.

AVP 496. Individual Study (1-6). By permission. May be repeated for credit.

AVP 498. Special Topics (1-6). Course content identified by title in the university class schedule. May be repeated for credit under different subtitle.

AVP 499. Seminar (1-5). May be repeated for credit.

Biological Sciences Courses

BIOL 101. Fundamentals of Biology (5). Biology in the modern world. Four hours lecture and one two-hour laboratory per week. May not be counted toward a major or minor in the department of biological sciences. NS-Fund Disc Phys, Biological Science (L).

BIOL 106. Life Science Inquiry (5). Inquiry-based investigations into life science to help students develop understanding of fundamental concepts and the process of scientific investigation. This course is designed for prospective elementary teachers but is open to all students.

BIOL 181. General Biology I (5). Introduction to the scientific method and the principles of ecology, genetics and evolution. Co- or prerequisite: CHEM 181. Four lecture hours and three laboratory hours per week.

BIOL 182. General Biology II (5). Introduction to the principles of cellular and molecular biology. Prerequisite: BIOL 181. Co- or prerequisite: CHEM 182. Four lecture hours and three laboratory hours per week.

BIOL 183. General Biology III (5). Introduction to the form and

function of multicellular organisms. Prerequisite: BIOL 182. Co- or prerequisite: CHEM 183. Four lecture hours and three laboratory hours per week.

BIOL 200. Plants in the Modern World (5). Plants and their significance in the world today. Three hours lecture and three hours laboratory per week. (Not open to majors in the biological sciences.) May not be counted toward a major or minor in the department of biological sciences. NS-Patterns, Connections, Natural World (W) (L).

BIOL 201. Human Physiology (5). Organ systems of humans. Not open to students with credit in BIOL 455; may not be counted toward a major or minor in the department of biological sciences. NS-Patterns, Connections, Natural World.

BIOL 213. Introductory Biostatistics (4). An introduction to commonly used methods for analyzing biological data. Use of statistical and graphical software will be emphasized. Prerequisites: BIOL 182 and MATH 130 or higher.

BIOL 220. Introductory Cell Biology (5). Concepts, processes and structures involved in understanding life at the cellular level. Prerequisites: CHEM 113 or 183. Does not count toward biology majors for students who complete BIOL 181, 182, and 183.

BIOL 262. Natural History of the Pacific Northwest (5). Classroom, lab and flied exploration of the biological diversity of the Pacific Northwest. Emphasis will be on the natural history of local flora and fauna and their ecological and evolutionary relationships. Mat not be counted toward a major in the department of biological sciences.

BIOL 295. Research (1-6). Laboratory research experience. May be repeated up to 15 credits.

BIOL 298. Special Topics (1-6).

BIOL 300. Introduction to Evolution (5). The evidence, theories, and mechanisms of the evolution of life, including man. Prerequisite: sophomore standing or above. May not be counted toward a major in the department of biological sciences. NS-Patterns, Connections, Natural World.

BIOL 302. Sustainability and Environmental Change (5). Basic concepts of ecology with emphasis on ecosystems and populations and how human activities and attitudes relate to these basic concepts. May not be counted toward a major in the department of biological sciences. NS-Applications Natural Science.

BIOL 321. Genetics (5). A lecture and laboratory course in the basic principles of heredity of plants and animals. Four hours lecture and two hours laboratory per week. Prerequisites: BIOL 183 or BIOL 220 and either BIOL 213 or CHEM 332 and CHEM 332LAB.

BIOL 322. Introductory Microbiology (5). Introductory biology of microorganisms and viruses with applications to medicine, food science, industry, and agriculture. Intended for nutrition and allied health students. Prerequisites: BIOL 182 or BIOL 220. Three hours lecture and four hours laboratory per week. Biology majors are encouraged to take BIOL 323. May be counted toward a degree in the biology department in lieu of BIOL 323, but cannot be counted toward a degree in the biology department if BIOL 323 is successfully completed.

BIOL 323. Microbiology (5). Principles of microbiological practice, including isolation, cultivation, identification, physiology, evolution, and ecology. Prerequisites: BIOL 213 and either BIOL 183 or BIOL 220. Two hours lecture and six hours laboratory per week. Does not count toward any biology major if student has successfully completed BIOL 322.

BIOL 341. Plant Taxonomy (5). Classification of vascular plants, using local flora. Two hours lecture and six hours laboratory per week; the course includes field trips and individual field work. Prerequisites: BIOL 111, BIOL 183 or BIOL 200.

BIOL 343. Plant Anatomy (5). A treatment of the fundamental facts and aspects of vascular plant anatomy. Plant tissues with special reference to their development, organization, and biological significance. Three hours lecture and four hours laboratory per week. Prerequisites: BIOL 111 or BIOL 183.

BIOL 344. Dendrology (4). A study of trees, their habits of growth, the characteristic forest areas of North America. Two hours lecture and four hours laboratory per week. A field course. Prerequisite: BIOL 183.

BIOL 351. General Entomology (5). Insect biology, taxonomy, structure, and relationships to man. Prerequisite: BIOL 183 or permission. Two hours lecture and six hours laboratory or field work per week.

BIOL 352. Parasitology (5). Biological relations of animal parasite and host; structure,

classification, and methods of diagnosis of parasitic protozoa, worms, and arthropods. Two hours lecture and six hours laboratory per week. Prerequisite: BIOL 183.

BIOL 353. Integrative Anatomy (6). Vertebrate and human anatomy and embryology in an evolutionary context. Three hours lecture and six hours laboratory per week. Prerequisite: BIOL 183 or EXSC 350 and EXSC 350LAB.

BIOL 354. Developmental Biology (5). Embryonic development with an emphasis on the molecular mechanisms involved in fertilization, pattern formation, and cell differentiation. Three hours lecture and four hours laboratory per week. Prerequisites: CHEM 361 and BIOL 183.

BIOL 355. Human Anatomy and Physiology I (5). The first quarter of a two-quarter study of the structure and function of the human body. Prerequisites: BIOL 183 or BIOL 220, or both EXSC 350 and EXSC 351. Students should not take BIOL 355 unless they intend to take BIOL 356. Three hours lecture and four hours laboratory per week. A student cannot use BIOL 355/356 and BIOL 455 in the major.

BIOL 356. Human Anatomy and Physiology II (5). The second quarter of the two quarter study of the structure and function of the human body. Co- or prerequisite: BIOL 355. Three hours lecture and four hours laboratory per week. A student cannot use BIOL 355/356 and BIOL 455 in the major.

BIOL 360. General Ecology (5). Interrelationships of organisms with their environment. Prerequisites: BIOL 213 and MATH 153. Three hours lecture and four hours laboratory/field work/discussion per week. A weekend field trip may be required.

BIOL 362. Biomes of the Pacific Northwest (4). One-week field trip to explore the various biomes of Washington. Emphasis on writing field notes, observing and identifying organisms and communities. Prerequisite: BIOL 181.

BIOL 377. Regional Natural History (2). Classroom study of the natural history of a selected region as preparation for a one- to two-week field trip. Emphasis will be on developing background skills to undertake a field exploration over the quarter (winter, spring, summer) break. Subtitles will identify the selected geological region (e.g. Baja California Natural History). BIOL 377 and GEOL 377 are cross-listed courses, students may not receive credit for both. May be repeated for credit under a different subtitle (region). By permission. May be repeated for credit.

BIOL 377LAB. Regional Natural History (3). Special fees required. One- to two-week field trip to explore biological and physical patterns and processes in selected regions of North America. Emphasis will be on recording field observations, keeping a field journal, field study techniques, and performing investigations chosen and developed by student participants. Subtitles will identify the region studied. BIOL 377LAB and GEOL 377LAB are cross-listed courses, students may not receive credit for both. May be repeated for credit.

BIOL 398. Special Topics (1-6).

BIOL 405. Current Topics in Biology (2-5). An in-depth analysis of a specific topic within the field of biological science. Current literature and research will be reviewed, analyzed, and discussed. Prerequisite: BIOL 213. May be repeated up to 10 credits.

BIOL 413. Advanced Biostatistics (5). Visualization and analysis of complex biological data-sets. Computer laboratory exercises will utilize R, a free and powerful software environment for statistical computing and graphics. BIOL 413 and BIOL 513 are layered courses; students may not receive credit for both. Three hours lecture and two hours laboratory per week. Prerequisites: BIOL 213 or permission of instructor.

BIOL 420. Environmental Microbiology (5). Ecology of microorganisms in marine, fresh-water and soil environments. Prerequisites: BIOL 323 and CHEM 362. Three hours lecture and four hours laboratory per week.

BIOL 421. General Virology (5). Interrelationship between animal, plant, and bacterial viruses and their hosts, with emphasis on the animal viruses. Prerequisites: BIOL 430 or BIOL 321 or CHEM 432. Five hours lecture per week.

BIOL 422. Immunology (5). Nature of the immune response, disease preventing and producing mechanisms and laboratory applications. Prerequisites: BIOL 183 or BIOL 220 and CHEM 361. Five hours lecture per week.

BIOL 423. Techniques in Immunology and Virology (5). A practical course in dealing with the routine techniques used in diagnostic and experimental immunology and

virology. Prerequisites: BIOL 420 or 422. Three hours lecture and four hours laboratory per week.

BIOL 425. Molecular Biotechnology (5). The practice and theory of techniques used in molecular biology. Prerequisite: BIOL 321. Two hours lecture and six hours laboratory per week.

BIOL 426. Medical Microbiology (3). An introduction to medical microbiology emphasizing the biology of pathogenic bacteria, their relation to infectious diseases and the isolation and identification of specific disease agents. Prerequisite: BIOL 323. Three lectures per week.

BIOL 426LAB. Medical Microbiology Laboratory (2). Prerequisite: BIOL 323. Co-prerequisite: BIOL 426.

BIOL 427. Biotechnology for Teachers (5). This course will help pre-service teachers develop the necessary skills to construct and perform biological experiments using contemporary biotechnology in the context of educational theory and application. Prerequisite: BIOL 321. May be repeated for credit.

BIOL 428. Nutrigenomics (5). The interrelationships of genetic variation, nutrition, and diet-related diseases. Topics to be covered include techniques used in the field, disease susceptibility alleles, diet and gene expression, personalized diets, and case studies. Prerequisite: BIOL 321 or CHEM 432 or instructor permission.

BIOL 430. Cell Biology (5). Analysis of cell organization and the processes governing cell function and behavior. Prerequisites: CHEM 361, CHEM 361LAB, and BIOL 182. Four hours lecture and three hours laboratory per week.

BIOL 435. Cell Analysis by Flow Cytometry (4). Acquire flow cytometry skills (fluorochrome selection, sample preparation, data acquisition, data analysis, data interpretation). Design and conduct research projects requiring in-depth analysis of physical and chemical characteristics of cells acquired by flow cytometry. Discuss flow cytometry applications in various scientific fields. BIOL 435 and BIOL 535 are layered courses; students may not receive credit for both. Prerequisites: BIOL 321 and CHEM 361.

BIOL 441. Plant Physiology (5). A critical study of the physiological processes of plants including water relations, photosynthesis, mineral assimilation, and responses to the environment. Prerequisite: BIOL 813. Co-requisites: BIOL 213 and CHEM 362.

BIOL 443. Mycology (5). The biology, morphology, and economic importance of the major groups of fungi including the slime molds. Three hours lecture and four hours laboratory per week. Prerequisites: either BIOL 183 or both BIOL 182 and BIOL 220.

BIOL 444. Algae and Bryophytes (5). Study of the occurrence, evolution, physiology, and ecology of fresh-water and marine algae and non-vascular plants with emphasis on those in the Pacific Northwest. Prerequisite: BIOL 183.

BIOL 445. Field Mycology (5). Stresses taxonomy, morphology, and ecology of mushrooms and related forms with emphasis on Northwest flora. Prerequisites: either BIOL 182 or BIOL 213. Offered fall quarter only.

BIOL 450. Ichthyology (4). An introduction to the biology, taxonomy, and distribution of modern fishes with special reference to the Pacific Northwest. Three hours lecture and two hours laboratory or field work per week. Prerequisites: BIOL 183 and BIOL 213.

BIOL 451. Herpetology (4). An introduction to biology, taxonomy, and distribution of modern amphibians and reptiles with special reference to the Pacific Northwest. Two hours lecture and four hours laboratory or field studies per week. Prerequisite: BIOL 183.

BIOL 452. Ornithology (4). Study of birds with special emphasis on anatomic and behavioral adaptations. Three hours lecture and two hours laboratory or field study per week. Prerequisite: BIOL 183.

BIOL 453. Mammalogy (5). Evolution, taxonomy, and ecology of mammals with laboratory emphasis on Pacific Northwest mammals. Three hours lecture and four hours laboratory per week. Prerequisite: BIOL 183.

BIOL 454. Histology (3). An introduction to the basic tissues of vertebrates, including humans. Three hours of lecture per week. Prerequisites: BIOL 353 or BIOL 356 or EXSC 351 and EXSC 351LAB.

BIOL 455. Integrative Animal Physiology (5). The comparative study of animal physiology, with a broad approach crossing organizational levels. Three hours lecture and four hours laboratory per week. A student cannot use BIOL 355/356 and BIOL 455 in the major.

Prerequisites: BIOL 183 and BIOL 213.

BIOL 457. Fundamentals of Neuroscience (5). The study of integrated neuroscience from the molecular to the systems level. Included is examination of neural plasticity in the developing and adult brain as well as dysfunctions associated with disease states. Prerequisites: BIOL 183 and either CHEM 431 or BIOL 430.

BIOL 459. Winter Biology (4). A field and laboratory course exploring the ecology and physiology of organisms in winter. Activities will include laboratory work, field trips, and an overnight camping trip. Prerequisites: BIOL 183 and BIOL 213.

BIOL 461. Community Ecology (3). Principles of the structure and function of ecological communities. Co- or prerequisite: BIOL 461LAB. Prerequisite: BIOL 360. Three hours lecture/discussion per week.

BIOL 461LAB. Community Ecology Laboratory (2). Laboratory and field study of the structure and function of ecological communities. Corequisite: BIOL 461. Four hours of laboratory/field work per week. Weekend field trips may be required.

BIOL 462. Wildlife and Fisheries Ecology (5). Ecological principles of wildlife and fish populations and communities as they relate to management theory and practice in the Pacific Northwest. Prerequisite: BIOL 360. Three hours lecture/discussion and four hours laboratory/field work per week. Weekend field trips may be required.

BIOL 463. Limnology (5). Chemical, physical, and biological characteristics of inland waters. Prerequisites: CHEM 182 and BIOL 360. Three hours lecture and four hours laboratory per week.

BIOL 464. Terrestrial Plant Ecology (5). The ecological relationships of plant species and plant communities. Three hours lecture and either four hours laboratory. Weekend field trips may be required. Prerequisites: BIOL 213, BIOL 360, and either BIOL 182, or BIOL 183.

BIOL 465. Biology of Animal Behavior (4). Prerequisites: BIOL 213 or PSY 362. Three lectures and two hours of laboratory a week.

BIOL 466. Conservation Biology (5). An introduction to the theory and practice of conservation biology, with emphasis on case studies. Prerequisite: BIOL 360. Two hours lecture, one hour discussion, and four hours lab or field study per week. Weekend field trips may be required.

BIOL 467. Biological Field Techniques (5). Intensive, field-based experience in techniques used by field biologists to sample organisms and their environments, and analyze data collected in the field.

BIOL 470. Mechanisms of Evolution (5). Darwinian evolution and the modern synthesis. Prerequisites: 15 credits of biology, and senior standing.

BIOL 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. By permission. May be repeated for credit. Grade will either be S or U.

BIOL 491. Workshop (1-6). May be repeated for credit.

BIOL 492. Laboratory Experience in Teaching Biological Sciences (2). Experience in planning, managing, and teaching in a laboratory setting. May be repeated for credit.

BIOL 493. Biological Field Practicum (1-15). Individual or group off-campus experience in the field study of biological phenomena. May be repeated for credit.

BIOL 495. Research (1-6). Laboratory research experience. May be repeated up to 6 credits.

BIOL 496. Individual Study (1-6).

BIOL 497. Honors Thesis (1-5). Prerequisite: admission to Departmental Honors Program. This course may be substituted for BIOL 499.1 in any biology baccalaureate program.

BIOL 498. Special Topics (1-6).

BIOL 499. Seminar (1-5).

BIOL 499S. Senior Seminar (1). Biological sciences: reading, writing, and speaking. Either this course or BIOL 497, Honors Thesis, is required in all baccalaureate programs of the biology department. Prerequisite: senior standing.

Business Marketing Education Courses

BME 346. Basic Accounting for Business and Marketing Education (5). For business and marketing education majors to become proficient in secondary level accounting course subject matter. Prerequisite: CTE 310 and conditional admission to the Teacher Certification Program.

BME 450. Curriculum Development for Business and Marketing Education (4).

Curriculum development for business and marketing education. Develop and design curricula based on business and industry standards and accepted current pedagogical and learning standards. Prerequisite: full admission to the major and the Teacher Certification Program.

BME 451. Methods and Materials for Teaching Information Technology (4). Methods and materials for teaching Information Technology curricula. Prerequisite: full admission to the major and the Teacher Certification Program.

BME 452. Methods and Materials for Teaching Basic Business and Marketing (4). Methods and materials for teaching basic business curricula. Prerequisite: full admission to the major and the Teacher Certification Program.

Business Education Courses

BSED 146. Basic Accounting (5). Basic introductory course to accounting concepts. May not be taken for college credit if any other college accounting course or courses have been completed. May be audited.

BSED 296. Individual Study (1-6).

BSED 298. Special Topics (1-6).

BSED 299. Seminar (1-5).

BSED 316. Educational Technology (3). Students will explore a variety of concepts and resources related to the appropriate and effective integration of technology/media in school settings. Prerequisites: CS 101 or IT 101 and full admission to the Teacher Certification Program.

BSED 492. Practicum (5-15). Prerequisite: permission of department chair. Grade will either be S or U.

BSED 493A. Undergraduate Research Practicum (1-3). Conduct research under direct supervision of a professor with specific learning agreement required. Department requirements must be met. ADMG, IT, and RMT 493A are equivalent courses; students may not receive credit for more than one. May be repeated for credit. Grade will either be S or U.

Business Courses

BUS 102. Business Computer Skills (4). This course will develop practical computer skills needed to evaluate and help solve business problems. Students will learn how to use software commonly used in businesses to access, organize and analyze information and present it professionally in presentations and reports. BAS6 Basic Skills F - Computing.

BUS 198. Special Topics (1-6). May be repeated for credit.

BUS 221. Introductory Business Statistics (5). Introduction to inferential business statistics. Using probability distributions and information from samples for business decisions. Prerequisite: ECON 130 or MATH 130 or higher with a minimum grade of C- or higher.

BUS 241. Legal Environment of Business (5). An introduction to legal reasoning, ethics in business, the law of contracts, torts, agency, sales, bailments, and personal property. Prerequisite: sophomore standing or above.

BUS 298. Special Topics (1-6).

BUS 301. Contemporary Issues in Management (3). A survey across the spectrum of industry and management. The interaction of business and society, world affairs and the environment. Focus on functional processes, management responsibilities and implications for career and personal development.

BUS 374. Personal Investments (5). Introduction to investment goals, strategies, and securities, including certificates of deposit, money market instruments, stocks, bonds, and mutual funds. Additional topics introduced are risk analysis, taxes, and portfolio basics. Does not count for credit in the finance specialization.

BUS 396. Individual Study (1-6).

BUS 398. Special Topics (1-6).

BUS 401. Business Boot Camp (1). Supervised field experience seminar. On-location industry engagement. Education, training, and business skills application in industry setting. Prerequisite: instructor permission. May be repeated up to 5 credits. Grade will either be S or U.

BUS 441. Advanced Business Law (5). The law of negotiable instruments, suretyship, business structures including partnerships and corporations, trusts and estates, bankruptcy and government regulations of business. BUS 441 and BUS 541 are layered courses; students may not receive credit for both. Prerequisite: BUS 241 and admission to the College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25. Formerly, BUS 341.

BUS 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prerequisite: 2.8 overall GPA. By permission. May be repeated for credit. Grade will either be S or U.

BUS 495. Directed Research (1-5). Prerequisite: permission of instructor. May be repeated for up to 15 credits. Grade will either be S or U.

BUS 496. Individual Study (1-6).

BUS 498. Special Topics (1-6).

BUS 499. Seminar (1-5).

Chemistry Courses

CHEM 101. Contemporary Chemistry (5). Chemical principles and their application to contemporary problems of human beings and their environment. Four hours of lecture and two hours of laboratory weekly. NS-Applications Natural Science (L).

CHEM 106. Chemistry Inquiry (5). Inquiry-based investigations into chemistry to help students develop understanding of fundamental concepts and the process of scientific investigation. This course is designed for prospective elementary teachers but is open to all students.

CHEM 111. Introduction to Chemistry (4). Chemical principles of the compositions, structure, properties, and changes of matter. Designed for students in certain health science programs. Four lectures weekly. NS-Fund Disc Phys Biological Sciences.

CHEM 111LAB. Introductory Chemistry Laboratory (1). Introduction to basic chemistry techniques. Two hours laboratory weekly. Co- or prerequisite: CHEM 111. NS-Fund Disc Phys Biological Sciences (L).

CHEM 112. Introduction to Organic Chemistry (4). Structure, properties, nomenclature and reactions of carbon compounds. Prerequisites: CHEM 111 or CHEM 183 with a grade of C- or higher.

CHEM 112LAB. Introduction to Organic Chemistry Laboratory (1). Basic techniques in organic chemistry. Two hours of laboratory weekly. Prerequisites: CHEM 111LAB or CHEM 183LAB with a grade of C- or higher. Pre- or Corequisite: CHEM 112.

CHEM 113. Introduction to Biochemistry (4). Structure, properties, and metabolism of biomolecules. Prerequisite: CHEM 112 with a grade of C- or higher.

CHEM 113LAB. Introduction to Biochemistry Laboratory (1). Co- or prerequisite: CHEM 113. Prerequisite: CHEM 112LAB with a grade of C- or higher. Two hours of laboratory weekly.

CHEM 181. General Chemistry I (4). This course introduces chemistry concepts such as atoms and molecules, stoichiometry, solution chemistry, thermochemistry, electronic structure of the atom and periodicity, and chemical bonding. Prerequisites: strongly recommend high school chemistry and qualification for MATH 153 or math placement exam. NS-Fund Disc Phys and Biological (L).

CHEM 181LAB. General Chemistry Laboratory I (1). This laboratory supports hands-on, inquiry-based approaches to exploring topics presented in CHEM 181. Three hours of laboratory weekly. Co- or prerequisite: CHEM 181. NS-Fund Disc Phys Biological Sciences (L).

CHEM 182. General Chemistry II (4). Builds upon concepts from CHEM 181. Introduces molecular geometry and bonding theories, gas laws, solution properties and chemical kinetics. Students planning on taking CHEM 183 are advised that they must be qualified for MATH 154 before enrolling in CHEM 183. Prerequisite: CHEM 181 with a grade of C- or higher.

CHEM 182LAB. General Chemistry Laboratory II (1). Integrates concepts learned in CHEM 181 and supports hands-on, inquiry-based approaches to topics presented in CHEM 182. Co- or prerequisite: CHEM 182. Prerequisite: CHEM 181LAB with a grade of C- or higher. Three hours of laboratory weekly.

CHEM 183. General Chemistry III (4). Builds upon chemical concepts from CHEM 181 and CHEM 182. Introduces chemical equilibria, acid-base chemistry, solubility, entropy, free energy, and electrochemistry. Prerequisite: MATH 153 with a grade of C or higher, or qualification for MATH 154 on COMPASS test.

CHEM 183LAB. General Chemistry Laboratory III (1). Integrates concepts introduced in CHEM 181 and CHEM 182 and supports hands-on, inquiry-based approaches to topics in CHEM 183. Co- or prerequisite: CHEM 183.

Prerequisite: CHEM 182LAB with a grade of C- or higher. Three hours of laboratory weekly.

CHEM 193LAB. General Chemistry III Honors Laboratory (1). As a more advanced version of CHEM 183LAB, this course integrates concepts introduced in CHEM 181 and CHEM 182 and utilizes hands-on, inquiry-based approaches to investigate topics in CHEM 183. Students will work closely with one or more faculty on research-type projects. Prerequisites: CHEM 182LAB with a grade of B or higher and permission of instructor. Co-requisite: CHEM 183.

CHEM 295. Research (1-6). By permission. May be repeated for credit.

CHEM 296. Individual Study (1-6).

CHEM 298. Special Topics (1-6).

CHEM 332. Quantitative Analysis (3). Principles of quantitative analytical chemistry, including statistical treatment of data, complex equilibria, activity, and volumetric, gravimetric, and instrumental analysis. Prerequisites: CHEM 183 and either CHEM 183LAB or CHEM 193LAB with a grade of C- or higher in each. Co-requisite: CHEM 332LAB.

CHEM 332LAB. Quantitative Analysis Laboratory (2). Accompanying laboratory to qualitative chemistry including statistical treatment of data and volumetric, gravimetric, and instrumental analysis. Six hours of laboratory weekly. Prerequisites: CHEM 183 and either CHEM 183LAB or CHEM 193LAB with a grade of C- or higher in each. Co-requisite: CHEM 332.

CHEM 345. Environmental Chemistry (5). Introduction to aquatic, atmospheric, and soil chemistry. Chemical analysis of environmental samples collected on class field trips. Prerequisite: CHEM 183 with a grade of C- or higher. Three lectures and six laboratory hours per week.

CHEM 350. Inorganic Chemistry (3). Bonding in small molecules. Includes a review of basic bonding models and a thorough study of molecular orbital theory. Prerequisites: CHEM 183, and either PHYS 113 or PHYS 183, with a grade of C- or higher.

CHEM 361. Organic Chemistry I (3). An introduction to organic chemistry for students majoring in the sciences or preparing for health related careers. Organic structures, nomenclature, spectroscopy, and chemistry of alkanes, alkenes, and alkynes. Co- or prerequisite: CHEM 183 with a grade of C- or higher.

CHEM 361LAB. Organic Chemistry Laboratory I (2). An introduction to organic chemistry laboratory techniques including melting point determination, recrystallization, extraction, distillation, chromatography, and IR and NMR spectroscopy. Co- or prerequisite: CHEM 361. Six hours of laboratory weekly.

CHEM 362. Organic Chemistry II (3). Part two of the organic chemistry series. Stereochemistry, nucleophilic substitution and elimination, chemistry of alcohols, ethers, and an introduction to the chemistry of the carbonyl group. Prerequisite: CHEM 361 with a grade of C- or higher.

CHEM 363. Organic Chemistry III (3). Part three of the organic chemistry series. Carbonyl alpha-substitutions and condensations and the chemistry of carboxylic acid derivatives, benzene, amines, and carbohydrates. Prerequisites: CHEM 362 and CHEM 361LAB with a grade of C- or higher.

CHEM 363LAB. Organic Chemistry Laboratory II (2). Application of basic laboratory techniques learned in CHEM 361LAB to more advanced functional group transformations. Co- or prerequisite: CHEM 363. Prerequisite: CHEM 361LAB with a grade of C- or higher. Six hours of laboratory weekly.

CHEM 381. Physical Chemistry (Thermodynamics) (5). Prerequisites: (CHEM 183 and either CHEM 183LAB or CHEM 193LAB), (MATH 272), and (either PHYS 113 and 113LAB, or PHYS 183 and 183LAB) with a grade of C- or higher in each.

CHEM 382. Physical Chemistry (Quantum Chemistry) (3). Introduction to quantum mechanics as applied to chemical systems. The electronic structure of atoms and molecules. Prerequisite: CHEM 381 with a grade of C- or higher.

CHEM 382LAB. Integrated Physical/Inorganic Laboratory I (2). Synthesis of inorganic compounds and their characterizations using physical chemistry methods, with additional experiments in thermodynamics, quantum mechanics, and kinetics. Co- or prerequisite: CHEM 382. Six hours of laboratory weekly.

CHEM 383. Physical Chemistry (Quantum, Statistical Mechanics, Kinetics) III (3). Molecular bonding, introduction to statistical mechanics, phenomenological

kinetics. Prerequisite: CHEM 382 with a grade of C- or higher.

CHEM 383LAB. Integrated Physical/Inorganic Laboratory II (2). Synthesis of inorganic compounds and their characterization using physical chemistry methods, with additional experiments in thermodynamics, quantum mechanics, and kinetics. Co- or prerequisite: CHEM 383. Prerequisite: CHEM 382LAB with a grade of C- or higher. Six hours of laboratory weekly.

CHEM 395. Research (1-6). By permission. May be repeated for credit.

CHEM 431. Biochemistry I (3). Chemical structure, physical properties, nomenclature and function of proteins, carbohydrates, lipids, nucleic acids, and biological membranes. Protein function includes membrane transporters and enzyme kinetics, inhibition, and regulation. Prerequisite: CHEM 362 with a grade of C- or higher.

CHEM 431LAB. Biochemistry Laboratory (2). Quantitative and qualitative biochemical techniques applied to proteins and nucleic acids. Co- or prerequisite: CHEM 431. Prerequisite: CHEM 361LAB with a grade of C- or higher. Six hours of laboratory weekly.

CHEM 432. Biochemistry II (3). Metabolism of carbohydrates, lipids, amino acids, and nucleotides, including metabolic regulation and thermodynamics. Prerequisite: CHEM 431 with a grade of C- or higher.

CHEM 433. Biochemistry III (3). In depth coverage of the central dogma of biochemistry, including DNA replication and repair and transcriptional and translational aspects of genetic regulation, with emphasis on common biochemical techniques and data analysis. Prerequisite: CHEM 431 with a grade of C- or higher.

CHEM 433LAB. Biochemistry Lab II (2). Molecular cloning of a gene into a plasmid vector, followed by expression and purification of the encoded protein using modern chromatography techniques. Downstream analysis and experimentation is then conducted on the purified protein. Prerequisite: CHEM 431LAB. Co-or prerequisite: CHEM 433. Six hours of laboratory weekly.

CHEM 452. Instrumental Analysis Lecture (3). Theory and functional aspects of modern analytical instrumentation. Emphasis is on components of instruments, limitations of measurements, and applicability of techniques to specific analytical problems. Prerequisites: CHEM 332 and CHEM 332LAB with a grade of C- or higher. Co-requisite: CHEM 452LAB.

CHEM 452LAB. Instrumental Analysis Laboratory (2). Accompanying laboratory to Instrumental Analysis Lecture providing hands-on experience with a number of instrumental methods used in modern chemical research, analysis, and process control. Co- or prerequisite: CHEM 452 with a grade of C- or higher. Six hours of laboratory weekly.

CHEM 473. Transition Metal Chemistry (3). A survey of the structure, spectroscopy, and characterization of transition metal compounds, and the electronic structures of transition metals and lanthanides. Prerequisites: CHEM 350 and 382 with a grade of C- or higher in each.

CHEM 488. Colloquium (1). Students prepare an oral presentation on a current topic in chemistry. May be from a research experience or from a review of the chemistry literature. Prerequisite: senior standing.

CHEM 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prerequisite: prior approval. May be repeated for credit. Grade will either be S or U.

CHEM 491. Workshop (1-6). May be repeated for credit.

CHEM 492. Laboratory Experience in Teaching Chemistry (2). Integrates both chemistry and education in order to guide teaching assistants into hands-on, inquiry-based approaches to learning in the laboratory environment. Additional time to be assigned. May be repeated for credit. Grade will be either S or U.

CHEM 495. Senior Research (1-6). By permission. May be repeated for credit.

CHEM 496. Individual Study (1-6).

CHEM 498. Special Topics (1-6).

CHEM 499. Seminar (1-5).

Chinese Courses

CHIN 151. First-year Chinese (5). Courses must be taken in sequence. Conversational approach with intensive oral-aural drill. A firm foundation in

basic structural principles of the language is necessary.

CHIN 152. First-year Chinese (5). Courses must be taken in sequence. Conversational approach with intensive oral-aural drill. A firm foundation in basic structural principles of the language is necessary. Prerequisite: CHIN 151.

CHIN 153. First-year Chinese (5). Courses must be taken in sequence. Conversational approach with intensive oral-aural drill. A firm foundation in basic structural principles of the language is necessary. Prerequisite: CHIN 152.

CHIN 251. Second-year Chinese (5). Graduated readings in modern Chinese writings with discussion conducted in Chinese. Courses must be taken in sequence.

CHIN 252. Second-year Chinese (5). Graduated readings in modern Chinese writings with discussion conducted in Chinese. Prerequisite: CHIN 251. Courses must be taken in sequence.

CHIN 253. Second-year Chinese (5). Graduated readings in modern Chinese writings with discussion conducted in Chinese. Prerequisite: CHIN 252. Courses must be taken in sequence.

CHIN 298. Special Topics (1-6).

CHIN 301. Chinese Literature in Translation (4). A survey of Chinese literature in translation. CHIN 301 and AST 301 are equivalent courses; students may not receive credit for both.

CHIN 398. Special Topics (1-6).

CHIN 461. Chinese Cinema (4). An examination of the history, aesthetic achievements, major directors and themes, and cultural explorations of Chinese cinema. Includes films from mainland China, Taiwan, and Hong Kong. Prerequisite: FVS 250.

CHIN 496. Individual Study (1-6).

CHIN 498. Special Topics (1-6).

Construction Management Courses

CMGT 245. Light Commercial Construction (5). Construction of building foundations, commercial carpentry, and enclosing of wood frame structures. Students participate in construction of a building. Prerequisite: CMGT 265.

CMGT 265. Blueprint Reading and Construction Graphics (4). Introduction to plan reading, construction terminology, and the construction process. Extensive work with plans of significant scope. Not open to students with credit in CMGT 266.

CMGT 267. Plane Surveying (3). General surveying theory and practice pertaining to distance, elevation, and angle measurement. Includes traverse calculations and an emphasis on construction applications. Prerequisites: MATH 154 and CMGT 265. Co-requisites: CMGT 267LAB or CMGT 267LABHC.

CMGT 267LAB. Plane Surveying Field Session (1). Co- or prerequisite: CMGT 267. One surveying field session weekly.

CMGT 267LABHC. Heavy Civil Highway Field Session (1). Co- or prerequisite: CMGT 267. One surveying field session weekly.

CMGT 320. Electrical Systems Design (3). Design and specification of building electrical systems including circuit principles, power distribution, and low voltage controls. Prerequisites: MATH 172 and CMGT 265.

CMGT 343. Construction Estimating I (3). Quantity surveying and bid preparation for general construction. Use of cost handbooks, specifications, and bid documents. Prerequisite: CMGT 265. Co-requisite: CMGT 343LAB.

CMGT 343LAB. Construction Estimating I Laboratory (1). Prerequisite: CMGT 343. One estimating computer laboratory session weekly.

CMGT 344. Construction Estimating II (3). Advanced quantity surveying and bid preparation for general construction. Prerequisite: CMGT 343. Co-requisite: CMGT 344LAB.

CMGT 344LAB. Construction Estimating II Laboratory (1). Prerequisite: CMGT 344. One estimating computer laboratory session weekly.

CMGT 345. Heavy Civil Estimating II (3). Advanced estimating techniques and bid preparation for heavy civil and highway construction. Prerequisite: CMGT 343. Co-requisite: CMGT 345LAB.

CMGT 345LAB. Heavy Civil Estimating II Laboratory (1). Co- or prerequisite: CMGT 345. One weekly estimating laboratory session.

CMGT 346. Construction Methods and Materials (4). Materials commonly used and the various methods employed in construction. Introduction to materials testing. Prerequisite: CMGT 265.

CMGT 347. Heavy Civil Methods and Materials (4). Materials commonly used and the various methods employed with an emphasis on heavy, civil, marine, and highway construction. Prerequisite: CMGT 265.

CMGT 440. Temporary Structures (4). An introduction to the materials, methods, and techniques associated with temporary construction facilities such as false work, scaffolding, formwork, and cofferdams. Prerequisites: IET 312 and either CMGT 346, or CMGT 347.

CMGT 441. Wood and Steel Construction (4). A comprehensive study of the materials, design, and erection of wood and steel structures. Prerequisites: IET 312 and CMGT 346.

CMGT 442. Building Service Systems (3). An introduction to building service systems. Study the interfaces and specifications of mechanical and plumbing systems in building construction. Topics include plumbing, fire suppression, storm drainage, heat gain/loss, heating and cooling systems, and elevators. Prerequisite: CMGT 265.

CMGT 443. Heavy Civil Utilities (3). An introduction to the materials, equipment, methods, and safety requirements for the construction of underground and above ground utilities including water, sewer, natural gas, and electrical systems. Prerequisites: CMGT 346 or CMGT 347.

CMGT 444. Codes, Contracts, and Specifications (4). Construction contracts and liability, bonding, arbitration, specifications, and building codes administration. Prerequisites: BUS 241, ENG 102, and CMGT 346 or CMGT 347.

CMGT 445. Heavy Civil Contract Law (4). Construction contracts, liability, bonding, arbitration, and heavy civil highway specifications. Prerequisites: BUS 241, ENG 102, and CMGT 346 or CMGT 347.

CMGT 447. Construction Planning, Scheduling, and Control (4). Project scheduling and evaluation using network scheduling techniques, including critical path scheduling. Includes short interval scheduling and cash flow forecasting. Prerequisite: CMGT 343.

CMGT 450. Soils and Foundations (4). An introduction to soil mechanics and analysis and design of both shallow and deep foundations. Prerequisites: IET 312, GEOL 101, and GEOL 101LAB or GEOL 108, and CMGT 346 or CMGT 347.

CMGT 452. LEED in Sustainable Construction (4). The process using LEED as a measurement for sustainable construction. The course covers benefits and mechanisms of green building, cost analyses, and professional problem solving. CMGT 452 and IET 552 are equivalent courses; students may not receive credit for both. Prerequisite: CMGT 265. Department consent.

CMGT 455. Principles of Construction Management (4). Fundamental tools of construction management. Topics include contract management, scheduling, cost estimating, cost control, conflict management, negotiating, team building, quality control, safety, and a capstone project. Prerequisites: CMGT 447 and either CMGT 444 or CMGT 445.

CMGT 456. Principles of Heavy Civil Construction Management (4). Fundamental tools of heavy civil highway construction management. Topics include contract management, scheduling, cost estimating, cost control, conflict management, negotiating, team building, quality control, safety, and a capstone project. Prerequisites: CMGT 447 and CMGT 344 or CMGT 345.

CMGT 460. Concrete Construction (4). Manufacturing and testing of concrete, field practices, and formwork. Prerequisites: IET 312, CMGT 346 or CMGT 347, and CMGT 440 or CMGT 441. Two hours lecture and two hours laboratory per week.

CMGT 461. Pavement Design and Construction (4). An introduction to flexible and rigid pavement design and construction including pavement types, materials, construction methods, and maintenance concerns. Prerequisites: IET 312, and either CMGT 346 or CMGT 347.

CMGT 485. Construction Accounting, Finance, and Contemporary Topics (4). Project cost accounting principles, applications, and impact on profitability. Includes principles of activity based costing; WBS, earned value, cash management, value engineering, and contemporary topics. Prerequisites: CMGT 444 or CMGT 445.

CMGT 488. Professional Certification (1). A comprehensive review of professional construction management principles and technical skills in preparation for a national certification examination. Prerequisites: CMGT 444 or CMGT 445. Grade will either be S or U.

CMGT 495. Construction Management Competition Preparation (1). Students work in teams to prepare for construction management competition. Teams develop

cost, schedule, site layout, and safety plans for a major construction project. Students will compete in the Associated Schools of Construction competition in Reno, Nevada. Prerequisite: CMGT 344. May be repeated for credit. Grade will either be S or U.

CMGT 499. Seminar (1-5).

Communication Courses

COM 189. Communication Orientation (1). Survey of departmental requirements and fields of study. Required for entry into communication majors.

COM 201. Introduction to Mass Communication (5). This course critically reviews media from historical, societal, cultural and political viewpoints. It examines the impact of mass media on consumers as individuals and on society, and also improves media literacy.

COM 202. Communication Ethics and the First Amendment (5). This class explores the First Amendment freedoms as the foundation of a free, tolerant and democratic society. The communicative rights and responsibilities of citizens in a democracy governed by such an amendment are also examined. SB-Perspectives, Cultures, Experiences of U.S.

COM 207. Introduction to Human Communication (5). Introductory course designed to allow students to develop effective communication skills across a variety of human communication contexts including public speaking, interpersonal relationships, and professional settings.

COM 208. Introduction to Public Relations Writing (4). Integrated approach to media writing emphasizing public relations writing styles.

COM 226. Introduction to Writing and Reporting for Digital Journalism (5). Students will receive an introduction to writing and reporting of journalistic stories for print and online media.

COM 251. Small Group Dynamics (4). Analysis and practice of communication principles affecting effectiveness of small group discussion. Includes theory and practice of leadership and problem solving in small groups. Prerequisite: COM 207.

COM 253. Interpersonal Communication (4). Investigation of theory, research, and practice of the role of communication in effective interpersonal relationships. Prerequisite: COM 207.

COM 255. Emerging Leaders (2). Course is designed to develop student leaders on campus through leadership training, leadership experiences, self analysis, and familiarization with leadership opportunities at CWU.

COM 267. Screenwriting Fundamentals (4). Introduction to the basic script format, the creative story and style elements, and the writing process steps for screenplays and teleplays. Focus on the narrative script development process from idea conception to first draft. COM 321 recommended. COM 267 and ENG 267 are cross-listed courses, students may not receive credit for both. Prerequisites: ENG 102 or FVS 250.

COM 270. Introduction to Public Relations (4). The basic concepts of public relations; the tools and media used in communicating with the variety of publics.

COM 280. Advertising Fundamentals (4). An introductory course that introduces the principles of advertising, including; ethics, social issues, professional practice, and the application of advertising principles to problems of business, non-profit, and political issues. Prerequisite: COM 201.

COM 290. Cooperative Field Experience (1-6). Internship designed to explore career opportunities in the major. Open to all students. May be repeated for credit. Grade will either S or U.

COM 296. Individual Study (1-6).

COM 298. Special Topics (1-6).

COM 300. Media Research (5). Development, understanding and application of media research theories, methodologies and techniques. Prerequisite: admission to either the communication studies, public relations, film & video studies, or journalism major.

COM 302. Intercultural Communication (4). The objective of this course is to give the participants the skills and understanding necessary to improve communication with peoples of other nations and cultures. Prerequisite: sophomore standing or above. SB-Perspectives on World Cultures (W).

COM 305. Advertising Copywriting (4). Students will learn to write for the advertising industry, including a study of effective advertising copy, and the methods of creating project proposals and project assessments. Prerequisite: COM 280.

COM 306. Introduction to Transmedia (4). Combined

lecture and skills development course exploring the creative challenges in mixed media communication for non-fiction and/or fiction contexts; emphasis on matching audience, content and platforms–including social media–and use of multiplatform tools and concepts. Prerequisite: admission to either the communication studies, public relations, film and video studies, or journalism major or instructor permission.

COM 308. Public Affairs Reporting and Writing (5). Students will learn more advanced methods of writing and reporting of journalistic stories for print and online media, with a focus on how to cover public affairs news beats. Prerequisites: COM 226, and COM 306 and admission to the communication department majors.

COM 309. Writing Broadcast Advertising (4). Principles and techniques used in writing effective radio and television commercials, public service announcements, and promotional copy. A writing intensive course. Prerequisite: admission to either the communication studies, public relations, film and video studies, or journalism major.

COM 310. Writing and Reporting for Broadcast Journalism (5). Writing, news gathering, and reporting for the electronic media. Includes on-the-scene coverage and interviewing. Prerequisite: admission to either the communication studies, public relations, film and video studies, or journalism major.

COM 312. Introduction to Non-Profit Leadership (4). This course introduces key elements in nonprofit organization leadership, and makes brief reviews of various nonprofit management topics, such as strategic missions, board development, leadership roles, fundraising, staffing, performance evaluation and accountability, nonprofit marketing and legal issues. Prerequisite: admission to the nonprofit major, minor or certificate, public relations major, comm. major or permission of instructor.

COM 315. Studies in Communication (1). Specialized topics in communication providing depth of knowledge, expand theoretical exposure, and/or practical communication skills. By permission. May be repeated for credit under a different sub-topic. Grade will either be S or U.

COM 321. Visual Storytelling (4). A combined lecture and skills development course introducing the fundamentals of visual composition and storytelling to communicate the emotion of a story; emphasis on the production of visual images in photographic, video, and digital forms. Prerequisite: communication studies, public relations, film and video studies, or journalism major status, or instructor permission.

COM 322. Introduction to Studio Production (4). A combined lecture and skills development course that introduces students to the production elements of a television show with emphasis on the function and operation of studio lighting, audio, and cameras. Prerequisites: COM 321, and journalism or film and video studies major status, or instructor permission. Co-requisite: COM 322LAB.

COM 322LAB. Introduction to Studio Production Lab (1). Introduction to basic television studio production work-flow and production equipment certification. Four lab sessions held over two successive weekends. Prerequisites: COM 321 and journalism or film video studies major status, or instructor permission. Co-requisite: COM 322.

COM 327. Scriptwriter in Development and Production (4). Combined lecture/workshop, overview of the creative, communicative, and collaborative responsibilities expected of a scriptwriter in development and production. Students explore the challenges of this profession, as well as solutions to typical problems. Prerequisites: COM 267 and admission to the communication or film and video studies major.

COM 328. Scriptwriting for Interactive Entertainment (4). An introduction to the basic format, story and style elements for interactive entertainment (multiplot narratives, games, simulations, etc.). Students examine the relationship between interactive design, user navigation and storytelling. Prerequisites: COM 267, and admission to the communication or film and video studies major.

COM 330. Media Aesthetics (5). An examination of the major aesthetic elements involved in visual storytelling for film and television, including; light, color, 2D and 3D space, time/motion, and sound. Prerequisites: COM 321 and admission to a communications major.

COM 333. Communication Ethics (4). The study of ethical issues in communication.

Prerequisite: COM 202 and admission to major.

COM 337. Documentary Scriptwriting (4). Introduction to the format, story and style elements for documentary film. Topics include narrative point-of-view, story structure, camera placement, interviewer presence, narration and voice-over commentary, re-enactment and archival materials. Prerequisites: COM 267, and admission to the communication or film and video studies major.

COM 340. Public Communication: Theory and Practice (4). Survey of rhetorical theory and practice from ancient to modern times. Emphasis on rhetorical application to public speaking settings. Prerequisite: students must be admitted to communication studies, public relations, film and video studies or journalism major in order to register for this course.

COM 341. Introduction to Field Production (4). A combined lecture and skills development course that introduces students to the principles and techniques of location production and visual storytelling for journalism, documentary and narrative film. Prerequisites: COM 321 and journalism or film and video studies major status or instructor permission. Co-requisite: COM 341LAB.

COM 341LAB. Introduction to Field Production Lab (1). Introduction to cameras, lighting, audio and grip equipment used in field production, set etiquette and production work flow including post-production and exporting the finished product. One two-hour laboratory session weekly. Prerequisite: COM 321 and journalism or film and video studies major status or instructor permission. Co-requisite: COM 341.

COM 342. Broadcast News Producing (1). Principles and techniques used in producing newscasts for broadcast news, with emphasis on television medium. Recommended: COM 310.

COM 345. Business and Professional Speaking (4). Oral communication in career and professional settings with focus on public presentations, briefings, and persuasion.

COM 346. Production Management for Film and Video (4). Theory, discussion, and practical application of planning and management fundamentals during preproduction, production, and postproduction of narrative and/or documentary programs. Prerequisites: journalism or film and video studies major status or instructor permission. Co-requisite: FVS 215.

COM 347. Copy Editing (4). Students will learn the editing process, how to edit for mechanics and content, including Associated Press style, as well as how to write headlines and cutlines. Prerequisites: admission to the major (i.e. com studies, public relations, film and video studies, journalism, English writing specialization), or professional writing certificate program or permission of the instructor.

COM 348. Publication Design (4). Publication design, the theories of graphics, headlines, and text. Management of the design process. Prerequisite: admission to either the English writing specialization, communication studies, public relations, film and video studies, or journalism major.

COM 350. Persuasion and Culture (4). Role of persuasion in society, elements of human motivation, techniques, and appeals of the persuader. Prerequisite: admission to either the communication studies, public relations, film and video studies, or journalism major.

COM 351. Visual Anthropology (4). Provides methodological, theoretical, and practical background to produce and evaluate imagery in films and video; guidelines and practice of image presentation/ manipulation in anthropological and social contexts. COM 351 and ANTH 351 are cross-listed courses; students may not receive credit for both. Prerequisites: ANTH 130 or ART 225 or COM 321 or COM 330.

COM 353. History of Narrative Film (4). A history of the development of narrative film as an art form and cultural medium, with primary focus on Hollywood cinema. COM 353 and ENG 353 are cross-listed courses; student may not receive credit for both. Prerequisite: FVS 250.

COM 354. History of Television (4). Historical survey of television as an entertainment, information, and art medium. Emphasis on understanding the cultural, social, political, technological, and economic conditions of production; the examination of television as text itself; and TV's impact on audiences. COM 354 and ENG 354 are cross-listed courses, students may not receive credit for both. Prerequisites: either COM 201 or FVS 250.

COM 355. History of Documentary (4). Survey of documentary history from 1895 to present. Focus on philosophy of documentary approach, overview of the most important topics and issues, and development of critical standards in the genre. COM 355 and ENG 355 are cross-listed courses; students may not receive credit for both. Prerequisites: either COM 201 or FVS 250.

COM 356. Writing for Screen Genre (4). An introduction to the story, style comedic or dramatic elements that distinguish major genres, the role of genre in the Hollywood production system, and the impact of genre on the viewing public as assessed by critical theories. Prerequisites: COM 267 and admission to the communication or film and video studies major.

COM 357. Scriptwriting for Serial Media (4). Scriptwriting for the basic genres of serial television and the web. Includes study of serial script, structure, story, character development, and dialog. COM 357 and ENG 357 are cross-listed classes, students may not receive credit for both. Prerequisites: COM 267 or ENG 267 and admission to the communication, English language and literature or film and video studies major.

COM 362. Conflict and Communication (4). Communication and decision-making strategies for conflict resolution. Negotiating agreement and mediating differences in interpersonal and organizational settings. Prerequisite: admission to either the communication studies, public relations, film and video studies, or journalism major.

COM 365. Organizational Communication (4). Function, forms, and patterns of communication in organizations. Effects of organizational structures and dynamics on communication. Methods of evaluating communication policies and practices as an aid to organizational management. Prerequisite: admission to either the communication studies, public relations, or journalism major or permission of instructor. By permission

COM 367. Narrative Screenwriting (4). Writing screenplays in combination with the study of models and techniques. COM 367 and ENG 367 are cross-listed courses; students may not receive for both. Prerequisites: either COM 201 or FVS 250.

COM 369. Mass Media and Society (4). Relationship of the mass media to social institutions; including philosophy, responsibilities, regulations, and criticism. Variable topic, may be repeated for up to 8 credits under a different title. COM 369 and SOC 369 are cross-listed courses; students may not receive credit for both. May be repeated for credit.

COM 370. Advanced Public Relations Writing (4). Practical instruction in persuasive writing, news releases, broadcast material, speeches, institutional messages, newsletter articles, employer publications, backgrounders, features, and corporate profiles. Prerequisites: COM 208, and COM 270, and admission to the public relations major, or non-profit minor, or instructor permission.

COM 371. Event Planning and Management (4). This course offers a comprehensive study of the event management field. The course will enable participants to develop an innovative and multi-skilled approach to planning and coordination events. Topics include: legal issues in event planning and coordination promotions, design, catering, and other relevant topics. Prerequisite: admission to the communication or recreation and tourism major, minor or certificate program or permission of instructor.

COM 372. Social Media Strategies (4). Students learn the basics of researching, planning and critical analysis of social media in communication campaigns, evaluate strategies and tactics, and analyze past and current campaigns for effective use. Prerequisites: admission to the communication, film video studies, journalism, public relations major, or instructor permission.

COM 375. Interviewing Principles and Techniques (4). Examination of the basic principles and techniques of interviewing and their application in informational, employment, and persuasive/counseling contexts. Extensive in-class and community experience in interviewing provided. Prerequisites: COM 207 and admission to a communication major.

COM 380. Nonverbal Communication (4). Fundamentals of nonverbal communication including codes, relationship to biology and culture, usage, and interrelationships. COM 380

and ANTH 380 are cross-listed courses.

COM 382. History of American Journalism (4). Survey of American journalism since colonial times; emphasis on understanding the evolution of journalism in the United States and the changing technological, social, and cultural trends affecting print and broadcast journalism. Prerequisites: COM 201 and admission to a communication major.

COM 388. Advertising Planning (4). Development of media strategies in advertising campaigns, including analysis of research, making useful media buys, integrating multiple objectives in the media message, and developing an assessment plan for effectiveness of message. Prerequisite: COM 280.

COM 401. Communication Theory (4). Examination of human communication on an individual, interpersonal, and public level. Exploration of the relationship between communication theory and the practice of communication in various professional settings. Prerequisite: admission to either the communication studies, public relations, film and video studies, or journalism major.

COM 402. Gender Communication (4). Analysis of gender role development in females and males with focus on effective relationship development between sexes. Analysis and development of communication skills useful in cross-sex friendships, working relationships, and romantic/family relationships. Prerequisite: admission to either the communication studies, public relations, film & video studies, or journalism major.

COM 403. Family Communication (4). This course is designed to provide an overview of family dynamics and the processes that influence family communication and family functioning. FS 403, COM 403 and FS 503 are cross-listed courses; students may not receive credit for both.

COM 405. Advanced Advertising Copywriting (4). Students develop advanced skills in writing copy, developing visual elements, and constructing advertisements and advertising campaigns. Prerequisite: COM 305. Put on reserve 9/16/2014. Last taught in 2011. Will go inactive 8/24/17.

COM 407. Advanced Intercultural Communication (4). In-depth study of theory and practice of intercultural, cross-cultural, co-cultural and sub-cultural communication. Examination of the communication plays in these groups' interactions with each other and the relevant dominant culture. Prerequisites: COM 302, and admission to the communication studies major, communication minor, organizational communication minor, or instructor permission.

COM 408. Feature Writing (4). Skills needed to conceive, report, and write a wide range of feature stories for newspapers, magazines, and online publications. Prerequisite: COM 226.

COM 409. Magazine Freelancing (4). This entrepreneurial journalism course introduces students to the concepts of how to work as a freelancer, and to the basics of writing for magazines. Prerequisite: COM 226 or instructor permission. Grade will be S or U.

COM 420. Media Buying and Placement (4). Students learn the process by which companies purchase advertising, and how advertising buys are sold at the agency/corporate level. Students develop skills to calculate appropriate media buys. Prerequisite: COM 280.

COM 422. Advanced Multi-camera Production (4). The creative use of multi-camera techniques for studio and remote productions. Emphasis on directing, advanced lighting techniques, sound design, graphics, and remote truck equipment. Focus on dramatic formats, magazine-style, and large event productions. Prerequisites: COM 322 and admission to either the communication studies, public relations, film and video studies, or journalism major.

COM 427. Grant Writing (4). Students will learn how to evaluate nonprofit organizational needs, identify and research foundations and other funding organizations as potential sources of support, and grant proposal writing. Prerequisite: COM 312 and a nonprofit major, minor, or certificate, public relations major, communications major or by permission of instructor.

COM 430. Digital Cinematography (4). Combined lecture and intensive, hands-on camera and lighting skills course focused on the art and technique of cinematic composition; technical emphasis on lighting equipment and strategies, camera systems and operation, distinctions between film and digital formats, and the cinematographer's aesthetic contribution to the story. Prerequisites: COM 330, and COM 341, and film video

studies major status, or instructor permission.

COM 431. Editing for Television and Film (4). History, concepts, and techniques of editing for film and television. Hands-on learning by editing diverse scenes using Final Cut software. Combination of lecture and lab. Prerequisites: COM 341, COM 315, and admission to either the film & video studies, or the broadcast journalism major.

COM 432. Directing TV and Film (4). Examines director's role and responsibilities, process of translating the written word into image and action; basics of camera–actor blocking; editing dialogue scenes; organizing production venues and logistics of in–studio and on–location programs. Prerequisites: senior standing and COM 322 or COM 341. COM 346 is recommended. Combined lecture/workshop.

COM 440. Corporate Media Production (4). A study of methods used in the conceptualization, design, and production of non-broadcast video programs. Consideration of management needs and training requirements. Prerequisites: COM 341 and admission to either the communication studies, public relations, film and video studies, or journalism major.

COM 441. Documentary Production (4). Detailed analysis of the creative and technical elements of documentary production. Emphasizes "hands-on" application of production techniques for documentary storytelling from concept through to final product. Prerequisites: COM 341 and admission to either the communication studies, public relations, film and video studies, or journalism major. COM 363 and ENG 363 is also a recommended prerequisite. Combined lecture/workshop. My be repeated for credit.

COM 442. News Watch Reporting (2). Gather, write, and report news stories for newscasts and public affairs programs on Ellensburg Community Television cable channel 2, and CWU-TV, cable channel 15. Recommended: COM 341. Concurrent enrollment allowed in COM 342. Prerequisites: COM 310 and admission to the communications or film and video study major. May be repeated up to 6 credits.

COM 446. Pulse (2). Gather, write, report and design features and other articles for Pulse, the twice-quarterly student-written and student-run magazine. May be repeated for credit.

COM 447. Narrative Screenwriting I (4). In-depth study of the theory and practice of developing a narrative screenplay. Topics include narratology, symbols and myths, cognition and storytelling, oral tradition and communication, theme, point-of-view, and voice. Prerequisites: COM 267 or ENG 267 and admission to the communication, English language and literature or film and video studies major.

COM 450. Advanced Public Speaking (4). Preparation and delivery of specialized forms of public address. Writing speeches for others, advanced forms of style and support, and speeches for special occasions. Prerequisite: COM 340 or COM 345, and admission to the communications major.

COM 451. Communication Analysis and Research (4). Theory and practice in and study of methodology for gathering and analyzing data on human communication. Behavior identification, instrument types and uses, and assessment strategies. Prerequisites: COM 401 and admission to a communication major.

COM 452. Applied Video Production (1-2). Assist in producing newscasts, public affairs, and/or entertainment programs for Ellensburg Community Television, and KCWU-TV. Prerequisite: COM 322. May be repeated up to 6 credits.

COM 453. Applied Video Management (3). Administrative responsibilities for students involved in the production and scheduling of video programming for Central Access Television (CAT-14), or for live streaming and/or VoD. Prerequisites: COM 452, and instructor approval. May be repeated up to 9 credits.

COM 456. History and Practice of Convergent Gaming (4). Course emphasizes the design and practice of role-playing games with a significant focus on computer-based Massive Multi-user Online Role Play Games (MMORPGs). The course will look at the economics, culture, art, design, and history of the rapidly growing Role Playing Games market. Prerequisite: admission to either the communication studies, public relations, film and video studies, or journalism major.

COM 457. Narrative Screenwriting II (5). Combined lecture/workshop providing in-depth study of the theory and

practice of developing a screenplay and teleplay writing style. Topics include mood and tone, scene structure and description, gender, age, subgroup communication and dialog techniques, non-verbal communication, and rewriting. Prerequisites: COM 447 or permission of instructor.

COM 460. Communication Law (4). Understanding legal issues for the communication professions including libel, slander, privacy, copyright, and First Amendment. Prerequisites: admission to either the communication studies, public relations, film and video studies, or journalism major.

COM 462. NewsWatch Management (2). Administrative responsibilities for the production of NewsWatch and related public affairs programs on Ellensburg Community Television cable channel 2 and CWU-TV cable channel 15. Prerequisites: COM 322, and COM 341, and COM 442 and admission to the communications or film and video study major. May be repeated up to 4 credits.

COM 465. Communication and Organizational Leadership (4). This course builds on COM 365 and provides advanced study of communication within organizations and the role of communication in leadership. The course is designed for senior students who will apply previous course information to advanced projects and study. Prerequisites: COM 365 and admission to the communications major.

COM 466. Investigative Reporting and Writing (3). This class teaches the skills needed to conceive, report, and write investigative stories based on documents, data, interviews to be published in newspapers, magazines, and online publications. Prerequisites: COM 226 and COM 306 and COM 308 and COM 321 and admission to the communication department major status. Co-requisite: COM 466LAB.

COM 466LAB. Investigative Reporting and Writing Lab (2). A lab during which students learn software programs commonly used to analyze data in investigative reporting projects. Prerequisites: COM 226 and COM 308, or instructor permission. Co-requisite: COM 466.

COM 467. Narrative Screenwriting III (5). Combined lecture/workshop providing in-depth study of the theory and practice of adaptations and alternative plots for screenplays and teleplays. Prerequisites: COM 457 and admission to the communication, English language and literature, or film and video studies major.

COM 468. Observer (1-2). Reporting and photo assignments on the campus newspaper. May be repeated up to 8 credits.

COM 469. Media and Cultural Studies (4). Detailed examination of the media from the perspectives and insights of critical theoretical approaches ranging from the Frankfurt School, to cultural studies, to postmodern theory. Emphasis on unlocking the domains of meaning, value, politics, and ideology in the development of entertainment and information technology industries. COM 469 and COM 569 are layered courses; students may not receive credit for both.

COM 470. Public Relations Strategies (4). Creation of a public relations program for an organization, agency, or institution. Prerequisites: COM 370 and admission to either the communication studies, film and video studies, public relations, or journalism major.

COM 471. Corporate Communication in Latin America (4). This course studies business communication in Latin America. It provides a Latin American perspective for business communication theories, strategies and practices. It also investigates the interaction of cultures from social, political, and legal viewpoints. Prerequisite: COM 370 and major status for public relations majors or instructor permission.

COM 472. Global Public Relations (4). This course studies public relations from a global perspective. It provides an international point of view for public relations theories, strategies, and practices. It also compares cultures and investigates the interaction of cultures from a cultural, social, political, and legal perspective. Prerequisites: COM 370 and admission to either the communication studies, film and video studies, public relations, or journalism major. Grade will either be S or U.

COM 473. Crisis Communication Management (4). Crisis communication management is concerned with all of an organization's stakeholders and the multifaceted way in which an organization communicates (customers, investors, employees, etc.). Prerequisites: admission to the communication studies or

public relations major, or instructor permission.

COM 474. Public Opinion (4). Monitoring, assessing, and managing public opinion. Prerequisite: admission to either the communication studies, public relations, film and video studies, or journalism major.

COM 475. Public Relations Management (4). Application of theory and concepts to managing public relations and advertising accounts. Prerequisites: COM 470 and admission to public relations major, or instructor permission.

COM 478. Advanced Newspaper Editing (3-6). Administrative responsibilities for students serving as editors of the campus newspaper. Variable credit with a maximum of 6 credits. Prerequisites: COM 208, COM 347, and COM 468. May be repeated for credit.

COM 481. Central Communication Agency (2). Managing real clients for the student-run, full-service public relations and advertising communication firm. Prerequisite: COM 208 or by permission of instructor. May be repeated up to 6 credits.

COM 483. Advanced Central Communication Agency (3). Administrative responsibilities for teams within Central Communication Agency, the student-run, full-service public relations and advertising communication firm. Prerequisite: COM 208 and COM 481 or by permission of instructor. May be repeated up to 9 credits.

COM 485. Senior Seminar (4). A research project leading to a thesis. Prerequisites: admittance to a communication major and COM 401.

COM 486. Advanced Journalism Seminar (4). Issues and skills in specialized journalistic situations. Seminar topics will change from quarter to quarter. Prerequisites: COM 308 and admission to either the communication studies, public relations, or journalism major. May be repeated for up to 8 credits under a different subtitle.

COM 487. Advanced Public Relations Seminar (4). Advanced public relations seminar topics will change from quarter to quarter. Prerequisites: COM 470 and admission to either the communication studies, public relations, or journalism major. May be repeated for credit under a different title .

COM 489. Portfolio Assessment (1). End-of-program assessment activities. Preparation, presentation, and evaluation of a professional portfolio of work produced during the major. Prerequisites: senior standing and admission to either the communication studies, public relations, or journalism major.

COM 490. Cooperative Education (1-12). Individual contract arrangement involving student, faculty, and cooperating agency to gain practical experience in communication. May be repeated for credit. Grade will either be S or U.

COM 491. Workshop (1-6). May be repeated for credit.

COM 492. Communication Practicum (2). Faculty supervised applied and/or service learning experience for students pursuing a major or minor in the communication department. Prerequisites: students must be admitted to communication studies, public relations, film & video studies or journalism major or minor. May be repeated for up to 6 credits. Grade will either be S or U.

COM 496. Individual Study (1-6).

COM 498. Special Topics (1-6). May be repeated up to 12 credits.

COM 499. Seminar (1-5).

Craft Brewing Courses

CRBW 312. Brewing Microbiology (4). An introduction to the biology of yeasts and other organisms important in the craft brewing industry. Includes the application of laboratory methods useful in brewing and quality control. Prerequisites: CHEM 101 or CHEM 111 or CHEM 181 and MATH 153 with a grade of C or higher and acceptance to the Certificate Program or Brewing Program. Students must be 21 years of age or older.

CRBW 317. Principles and Biochemistry of Brewing (4). An introduction to the principles of brewing and biochemistry of fermentation processes important in the craft brewing industry. Includes the application of laboratory methods useful in product evaluation and quality control. Prerequisites: CHEM 101 or CHEM 111 or CHEM 181 and MATH 153 with a grade of C or higher and acceptance to the Certificate Program or Brewing Program. Students must be 21 years of age or older.

CRBW 450. Sensory Analysis for Brewing (5). Advanced sensory analysis of beer styles for quality control, recipe development, and identification of ingredients in the brewing process. Must be 21 years old. Prerequisite: CRBW 317,

acceptance to the Craft Brewing Program.

CRBW 490. Cooperative Education (1-12). An individualized contracted field experience in the brewing industry. A learning agreement is created to identify and plan the directed and supervised study. Must be 21 years old. Prerequisite: CRBW 317, acceptance to the Craft Brewing Program. May be repeated up to 18 credits.

CRBW 498. Special Topics (1-6). Prerequisite: acceptance to the Craft Brewing Program. May be repeated up to 12 credits.

CRBW 499. Seminar (1-5). Prerequisite: acceptance to the Craft Brewing Program. May be repeated up to 12 credits.

Computer Science Courses

CS 101. Computer Basics (4). Integrated, project-based course using student-produced working materials in the form of a mini thesis. Microsoft Office tools are learned in a web-based practical application environment. Basic Skills 6 - Computer Fundamentals.

CS 105. The Logical Basis of Computing (4). Problem solving, algorithm development, complexity, computability. Representation of algorithms as computer programs, data, decisions and control inherent sources of error. Basic Skills 5 - Reasoning.

CS 110. Programming Fundamentals I (4). Fundamental concepts of programming from an object-oriented perspective. Classes, objects and methods, algorithm development, problem-solving techniques, basic control structures, primitive types and arrays.

CS 111. Programming Fundamentals II (4). Continuation of object-oriented programming concepts introduced in CS 110. Inheritance, exceptions, graphical user interfaces, recursion, and data structures. Prerequisites: CS 110 and MATH 153.

CS 112. Foundations of Computer Science (4). Overview of the computer science profession including basic computer organization, algorithm development and analysis, computer data representation, computer applications, and social issues.

CS 250. Web Development Technologies I (4). Techniques for web software development including XHTML, style sheets, scripting languages, web databases, PHP, and ethical issues. Prerequisite: CS 110.

CS 290. Cooperative Education (1-5). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student-learning plan, cooperating employer supervision, and faculty coordination. By permission. May be repeated for credit. Grade will either be S or U.

CS 298. Special Topics (1-6).

CS 301. Data Structures (4). Introduction to data structures, simple list processing, basic searching and sorting techniques, stacks, queues, and trees. Prerequisites: CS 111 and MATH 154.

CS 302. Advanced Data Structures and File Processing (4). Sequential, random access and indexed file organizations; B-trees; external searching and sorting; I/O buffering. Prerequisites: CS 301 and MATH 172.

CS 311. Computer Architecture I (4). Introduction to computer architecture, data representations, assembly language, addressing techniques. Prerequisite: CS 110.

CS 312. Computer Architecture II (4). Introduction to the structure of computers. Digital circuits, central processing units, memory, input/output processing, parallel architectures. Prerequisites: CS 301 and CS 311.

CS 325. Technical Writing in Computer Science (3). Writing and editing technical material in computer science. Prerequisites: ENG 102 and CS 301.

CS 351. Web Development Technologies II (4). Server-side technologies for web software development including programming languages, database access, e-commerce, testing, and ethical issues related to the web. Prerequisite: CS 250.

CS 352. Web Development Technologies III (4). Advanced technologies for web software development, including XML and its related technologies: DTD, XML Schema, XSL, and XSLT, and other emerging technologies. Prerequisite: CS 351.

CS 361. Principles of Language Design I (4). Topics will include evolution of programming languages, syntax and semantics, bindings, scoping, data types, assignment, control, and subprograms. Prerequisite: CS 302.

CS 362. Principles of Language Design II (4). Topics will include abstract data types, parallel processing, object-oriented programming, exception handling functional

programming, and logic programming. Prerequisite: CS 361. Co-requisite: MATH 260.

CS 367. Advanced Visual Basic Programming (4). Visual Basic programming and applications. Topics will include advanced data structures, error trapping and debugging, advanced VB and ActiveX controls, macros and databases. Not intended for CS majors. Prerequisites: CS 105 and CS 110.

CS 370. Introduction to the UNIX Operating System (4). The fundamental requirements, features and functions of the UNIX operating system. A UNIX-compatible OS will be used as a working model. Installation, configuration, setup, shell operations, and program development with the UNIX operating system. Prerequisites: CS 301 and CS 311. Put on reserve 9/16/2014. Last taught in 2009. Will go inactive 8/24/17.

CS 380. Introduction to Software Engineering (4). An introduction to the principles and practices of software engineering, including object-oriented analysis and design, design patterns, and testing. Prerequisite: CS 302.

CS 392. Lab Experience in Teaching Computer Science (1). Supervised experience in developing procedures and techniques in teaching computer science. Grade will either be S or U.

CS 420. Database Management Systems (4). Logical aspects of database processing; concepts of organizing data into integrated databases; hierarchical, network, and relational approaches. Prerequisites: CS 302, CS 325, and MATH 330.

CS 427. Algorithm Analysis (4). Topics will include basic algorithmic analysis, algorithmic strategies, fundamental computing algorithms, basic computability, the complexity classes P and NP, and advanced algorithmic analysis. Prerequisites: CS 302, CS 325, and MATH 330 (minimum grade of C).

CS 440. Computer Graphics (4). Graphic I/O devices, two-dimensional and three-dimensional display techniques, display processors, clipping and windowing, hidden line removal, data structures for graphics. Prerequisites: CS 302 and 325.

CS 441. Computer Graphics II (4). Advanced graphics in 3-D with vector tools. Topics include: transformations, affine transformations, changing coordinate system, drawing scenes, modeling shapes, solid modeling, and smooth objects. Prerequisite: CS 440.

CS 442. Computer Vision (4). Computer vision includes image acquisition, preprocessing, segmentation (thresholding, edge- and region-based segmentation), shape representation, object recognition, motion analysis, object tracking, and 3-D scene reconstruction. Prerequisite: CS 302.

CS 445. Data and Information Visualization (4). Data visualization includes the visualization pipeline, basic and advanced visual data representations, fundamental and advanced visualization algorithms, visualization on the web, applications and software tools. CS 445 and CS 545 are layered courses; students may not receive credit for both. Prerequisite: CS 302.

CS 446. User Interface Design and Development (4). The relationship of user interface design to human-computer interaction. Types of user interfaces, methods of evaluation, user-centered design and task analysis, programming tools and environments, and hardware devices.

CS 450. Computer Network and Data Communications (4). Device protocols; network configurations; encryption; data compression and security; satellite networks. Prerequisites: CS 301, CS 311, and CS 325.

CS 455. Artificial Intelligence (4). Introduction to the principles of artificial intelligence. Pattern matching, knowledge representation, natural language processing, expert systems. Prerequisites: CS 302, CS 325, CS 362 and MATH 330.

CS 456. Data Mining (4). Introducing concepts, models, algorithms, and tools for solving data mining tasks; decision trees, time series, Bayesian methods, k-nearest neighbors, and relational databases. CS 456 and CS 556 are layered courses; students may not receive credit for both. Prerequisites: CS 420 and either MATH 311 or BUS 221.

CS 457. Computational Intelligence (4). Introducing concepts, models, algorithms, and tools for development of intelligent systems: artificial neural networks, genetic algorithms, fuzzy systems, swarm intelligence and hybridizations of these techniques. CS 457 and CS 557 are layered courses; students may not receive credit for both. Prerequisites: CS 302, CS 325, CS 362 and MATH 330.

CS 458. Artificial Intelligence Project (2). Implementation of a

significant project relating to artificial intelligence. Prerequisites: CS 325 and CS 455. Put on reserve 9/16/2014. Last taught in 2009. Will go inactive 8/24/17.

CS 460. Software Engineering for Mobile Devices (4). Development of stand-alone applications (apps) intended to be downloaded onto and run on mobile devices. Android and iOS is taught. Topics include XML, data and control flow diagrams, IDEs, layout design, etc. Prerequisite: CS 301.

CS 470. Operating Systems (4). Topics will include principles of operating systems, concurrency, scheduling and dispatch, memory management, processes and threads, device management, security and protection, and file systems. Prerequisites: CS 302, CS 312, and CS 325.

CS 473. Parallel Computing (4). Major parallel architectures and languages. Parallel programming methodologies and applications. CS 473 and CS 573 are layered courses; students may not receive credit for both. Prerequisites: CS 325 and CS 470.

CS 475. Programming for Distributed Environments (4). An introduction to technologies used for creating applications that run in a distributed computing environment, such as across local/wide area networks (LAN/WAN) and the internet. Prerequisite: CS 302.

CS 476. Social Informatics for Computer Science (4). Prerequisite: CS 301.

CS 480. Advanced Software Engineering (4). Advanced principles and practices of software engineering, including project management, requirements gathering and specification, design, coding, testing, maintenance and documentation. Students work in teams to develop a large software project. Prerequisites: CS 325, and CS 380 and either CS 420 or CS 446, and senior standing.

CS 481. Software Engineering Project (4). Continuation of coding, testing, and implementation phases of project begun in CS 480. Prerequisites: CS 325 and CS 480.

CS 489. Senior Colloquium (1). Introduction to research in computer science through investigation of ethical and historical topics in the field. End-of-major assessment activities. Prerequisites: CS 325 and senior standing.

CS 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. By permission. May be repeated for credit. Grade will either be S or U.

CS 491. Workshop (1-6). Yes GRD

CS 492. Laboratory Experience in Teaching Computer Science (1-2). Supervised progressive experience in developing procedures and techniques in teaching computer science. May be repeated up to 15 credits. Grade will either be S or U.

CS 493. Practicum (1-5). Supervised progressive experience in management, operation, programming, or systems work in one of the university's computing centers. May be repeated for credit.

CS 495. Directed Research (1-6). By permission. May be repeated up to 12 credits.

CS 496. Individual Study (1-6).

CS 498. Special Topics (1-6).

CS 499. Seminar (1-5).

Center for Excellence in Science and Math Education Courses

CSME 484. Noyce SMART Seminar (1). Must be a Noyce SMART fellow. By permission.

CSME 499. Seminar (1-5). Grade will be either S or U.

Career and Technical Education Courses

CTE 292. Work-site Learning Practicum (1-12). One university credit is awarded for every 40 hours of work experience. Practicum may be paid or unpaid. Prerequisite: Successful acceptance into a CTE work-site learning program.

CTE 310. Introduction to Career and Technical Education (4). An entry-level course that introduces students to career and technical education careers, the assessment process, and requirements for program completion. Grade will either be S or U.

CTE 460. Business and Marketing Education Exit Assessment (4). During the last quarter of their program, students are assessed on writing skills, speaking skills, visual/graphic skills, and knowledge of theory and research. Prerequisites: CTE 310, BME 450, BME 451 and BME 452, and full admission to the major and the Teacher Certification Program.

Douglas Honors College Courses

DHC 140. Humanistic Understanding I (5). Variable topic. Courses in the humanities focuses on the analysis and interpretation of human stories of the past, present, and future in order to understand the processes of continuity and change in individuals and cultures through both documented and imaginative accounts. Prerequisite: admission to the Douglas Honors College. May be repeated for credit.

DHC 141. Humanistic Understanding II (5). Variable topic. Courses in the humanities focuses on the analysis and interpretation of human stories of the past, present, and future in order to understand the processes of continuity and change in individuals and cultures through both documented and imaginative accounts. Prerequisite: admission to the Douglas Honors College. May be repeated for credit.

DHC 150. Aesthetic Experience I (5). Variable topic. Courses in this area explore questions about the nature of art; to understand, interrogate, and engage in the creative process; and to explore the connections between art, culture, and history. Prerequisite: admission to the Douglas Honors College. May be repeated for credit.

DHC 151. Aesthetic Experience II (5). Variable topic. Courses in this area explore questions about the nature of art; to understand, interrogate, and engage in the creative process; and to explore the connections between art, culture, and history. Prerequisite: admission to the Douglas Honors College. May be repeated for credit.

DHC 160. Physical and Biological Systems I (5). Variable topic. Courses in this area study physical and life systems, provide basic methods for rigorously describing the natural world, or treat social, economic, technological, ethical, or other implications of natural phenomena. Prerequisite: admission to the Douglas Honors College. May be repeated for credit.

DHC 161. Physical and Biological Systems II (5). Variable topic. Courses in this area study physical and life systems, provide basic methods for rigorously describing the natural world, or treat social, economic, technological, ethical or other implications of natural phenomena. Students will perform scientific inquiry and experimentation in a laboratory setting. Prerequisite: admission to the Douglas Honors College. May be repeated for credit.

DHC 250. Social and Behavioral Dynamics I (5). Variable Topic. Courses focus on how individuals, cultures, and societies operate and evolve and introduce disciplined ways of thinking about individuals and groups. Prerequisite: admission to the Douglas Honors College. May be repeated for credit.

DHC 251. Social and Behavioral Dynamics II (5). Variable topic. Courses focus on how individuals, cultures, and societies operate and evolve and introduce disciplined ways of thinking about individuals and groups. Prerequisite: admission to the Douglas Honors College. May be repeated for credit.

DHC 260. Cultural Studies I (5). Variable topic. Courses focus on negotiating cultural differences by applying appropriate patterns of understanding and behavior in culturally diverse settings. Courses focus on one or more non-dominant cultures or peoples of the United States. Prerequisite: admission to the Douglas Honors College. May be repeated for credit.

DHC 261. Cultural Studies II (5). Variable topic. Courses focus on negotiating cultural differences by applying appropriate patterns of understanding and behavior in culturally diverse settings. Courses focus on comparative cultures across national and continental boundaries. Prerequisite: admission to the Douglas Honors College. May be repeated for credit.

DHC 270. Integrated Learning (5). Variable topic. Courses take an interdisciplinary approach to examining social, economic, technological, ethical, cultural, or aesthetic implications of knowledge. In addition to department courses that embrace multiple disciplines, these opportunities include learning community service learning and international studies courses. Prerequisite: admission to the Douglas Honors College. May be repeated for credit.

DHC 290. Cooperative Education (1-6). An individualized contracted field experience with business, industry, government, or social service agencies. Requires a student learning plan, cooperating employer supervision, and faculty coordination. By permission. May be repeated for credit. Grade will either be S or U.

DHC 296. Individual Study (1-6).

DHC 298. Special Topics (1-6).

DHC 301. Honors Seminar: Elements of Arts and

Humanities Research (2). An exploration of arts and humanities research from a multidisciplinary perspective, including the formulation of a research question, organization of a research process, and preparation of DHC thesis or creative project proposal. Prerequisite: admission to the Douglas Honors College. By permission. Yes

DHC 380. History of Science (5). Introduction to major themes in the history of science. Investigation of historical and scientific methods through the study of particular historical cases. Prerequisite: admittance to the Douglas Honors College. May be repeated for credit.

DHC 396. Individual Study (1-6).

DHC 398. Special Topics (1-6).

DHC 399. Interdisciplinary Honors Seminar (5). Interdisciplinary approach to examining current social, economic, ethical, and cultural issues. Prerequisite: admission to the Douglas Honors College. May be repeated for credit.

DHC 401. Honors Capstone Seminar (3). Skills and techniques for the presentation of the results of arts and humanities research. Students prepare drafts of their DHC thesis or artist's statement for their creative project as part of their coursework. Prerequisites: DHC 301 and admittance to the Douglas Honors College. By permission. Yes

DHC 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. Requires a student learning plan, cooperating employer supervision, and faculty coordination. By permission. May be repeated for a total of 12 credits. Grade will either be S or U.

DHC 496. Individual Study (1-6).

DHC 497. Honors Thesis and/or Creative Project (2). Completion of honors thesis or creative project. Students must complete a thesis or creative project approved by their faculty advisor and the DHC director and present at the DHC presentation event to receive credit for the course. Prerequisites: DHC 301, DHC 401 and admission to the Douglas Honors College. By permission.

DHC 498. Special Topics (1-6).

Economics Courses

ECON 101. Economic Issues (5). For the student who desires a general knowledge of economics. Applications of economic principles to current social and political problems. ECON 101 cannot be substituted for either ECON 201 or 202. SB-Perspectives, Cultures, Experiences of U.S.

ECON 102. World Economic Issues (5). An introduction to current international issues related to international trade and finance, economic development, and comparative economic systems. SB-Perspectives on World Cultures (W).

ECON 130. Foundations for Business Analytics (5). Role of mathematics, statistics and software to business and economic decision making; business and economics applications including indexing, percentage changes, compounding, financing, and accounting; probability theory and descriptive statistical analysis; modelling. Includes a lab component. Prerequisites: either at least 500 on the SAT, 19 on the ACT, a Compass test score of either 50-Pre-Algebra, 26-Algebra, 31-College Algebra, or 31-Trigonometry, or completed MATH 100B or a higher level math class. Basic Skills 5 - Reasoning.

ECON 201. Principles of Economics Micro (5). The function of the market system in the allocation of scarce resources, determination of prices and output in competitive and monopolistic markets, and distribution of income. The role of government in the market economy. SB-Perspectives, Cultures, Experiences of U.S.

ECON 202. Principles of Economics Macro (5). Organization of the U.S. economy, structure, and role of the monetary system, problems of employment and inflation, overall impact of government spending and taxation on the economy. Economic growth, world economic problems, and a comparison of capitalism with other economic systems. Prerequisite: ECON 201.

ECON 298. Special Topics (1-6).

ECON 310. International Economics (5). International trade and monetary theories; analyzing economic relationships and adjustments within and among trading nations; specialization, tariffs, balance of payments, and international monetary systems. Prerequisite: ECON 202.

ECON 325. Introduction to Forecasting (5). An introduction to methods employed in business and econometric forecasting. Topics include time series modeling, Box-Jenkins models, and seasonal adjustments. Covers data collection methods, graphing,

model building, model interpretation, and presentation of results. Prerequisites: ECON 202 and either MATH 153, MATH 154, MATH 170, MATH 172, or MATH 173.

ECON 330. Money and Banking (5). The supply of money and the Federal Reserve System; financial intermediaries and financial instruments; macroeconomic theory and policy. Prerequisite: ECON 202.

ECON 332. Public Finance (5). Rationale of public sector; effect of government expenditure and taxation on resource allocation and income distribution; structure of federal, state, and local tax systems. Emphasis is on current policy problems. Prerequisite: ECON 202.

ECON 348. Economic Development of the United States (5). Economic factors in the development of the American nation from the European background to the present.

ECON 349. Economic Development of Asia (5). This course analyzes the post-war economic development of Asia. Dubbed the "Economic miracle of the 20th century" by the World Bank, the rapid economic rise of China, Taiwan, Japan, South Korea, India, and Singapore will be covered. Topics will include industrialization, state-society relations, labor migration, and the environment.

ECON 352. Managerial Economics (5). Application of microeconomic theories to managerial decisions and planning utilizing the case method. Prerequisites: ECON 202 and BUS 221.

ECON 355. Economics of Labor (5). Economics of the labor market, labor, productivity, investment in human capital, manpower problems, and public policy. Prerequisite: ECON 202.

ECON 356. Government and Business (5). The development and current status of relations between the U.S. government and business firms. Government regulation of competition and monopoly; subsidies and public enterprise. Prerequisite: ECON 201.

ECON 398. Special Topics (1-6).

ECON 401. Intermediate Microeconomic Analysis (5). Markets as mechanisms for organizing and directing human activities; production of goods and services; the allocation of labor, capital, and natural resources to various productive activities; and the distribution of income. Relationship between microeconomics theory and contemporary thought, practical problems and government policies. Prerequisite: ECON 201.

ECON 402. Intermediate Macroeconomic Analysis (5). Analysis and measurement of U.S. national income and product accounts; determinants of income, employment and prices under the Classical and Keynesian systems; problems of inflation, economic growth and stabilization policy. Prerequisite: ECON 202.

ECON 406. Economics Assessment (5). End-of-program assessment activities including the taking of the Educational Testing Service exam in Economics. Preparation of resumes for future entry into the job market. Co- or prerequisites: ECON 401 and ECON 402 and senior standing and acceptance to the economics major.

ECON 424. Introduction to Econometrics (5). Evaluation of economic models and forecasting of economic variables using multiple regression techniques and cross sectional data. Brief introduction to advanced techniques which may include IV, time series, logit and probit, or panel data methods. Formerly ECON 324, students my not receive credit for both. Prerequisites: BUS 221 or MATH 311 or PSY 362 or SOC 363.

ECON 426. Economic Research (5). Students will undertake several applied economics research projects, drawn from the entire spectrum of economic fields (including, potentially, general business and finance.) Project results will be presented both in writing and orally. Prerequisites: ECON 202 and BUS 221.

ECON 462. Environmental and Resource Economics (5). Economics of environmental issues and natural resource management; economic implications of environmental policies and regulations. Topics in economics of pollution, land, water, recycling, and benefit-cost analysis. Prerequisite: ECON 201.

ECON 463. Energy Economics (5). Theoretical and empirical perspectives on economics of energy; political economy of energy supply and demand; regulation in energy sector; analysis of prevalent market structures; economics of oil, coal, electricity generation, natural gas and alternative energies. Prerequisite: ECON 201.

ECON 490. Cooperative Education (1-12). An individualized, contracted field

experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. By permission. May be repeated for credit. Grade will either be S or U.

ECON 496. Individual Study (1-6).

ECON 498. Special Topics (1-6).

ECON 499. Seminar (1-5).

Education Center for Teaching and Learning Courses

ECTL 201. CWU Youth Mentoring I (3). Compass 2 Campus (C2C) is a class designed as an introduction to service-learning. Students participate in a campus wide mentoring initiative designed to encourage under-represented, low-income, first generation, and diverse fifth-twelfth grade students to graduate from high school and consider post-secondary education. May be repeated up to 9 credits.

ECTL 470. Alternative Pathways to Teaching: Seminar Series (3). Reserved for candidates in Alternative Pathways to Teaching (APT). Introduces candidates to the technical skills of teaching by using case studies with embedded problems encountered in Washington public schools. Students will solve the problems through individual online research and group discussion. Seminar topics include online learning, inquiry-based learning, assessment, professional, legal and ethical requirements, special education and English language learners. Department Consent Required Grade will either be S or U.

ECTL 480. Alternative Pathways to Teaching: Curriculum Planning (3). Course reserved for candidates admitted into the APT Regional Consortia Program. Candidates will learn about and develop practical lesson planning, management, and assessment strategies, as well as methods and models of teaching, including reflection and analysis. Prerequisite: full admission to CWU, and the APT Regional Consortia Program. Grade will either be S or U.

ECTL 490. Alternative Pathways to Teaching: Internship (6). Must be repeated for 3 quarters for a total of 18 credits. Course reserved for Alternative Pathways to Teaching (APT) Program. Candidates will be required to complete a school year-long internship in a public school setting to satisfy legislative requirements using a co-teaching model. The final quarter the candidate must take and pass the Teacher Performance Assessment before exiting the program and applying for certification. Department Consent Required. May be repeated up to 18 credits. Grade will either be S or U.

Education Bilingual Courses

EDBL 296. Individual Study (1-6).

EDBL 298. Special Topics (1-6).

EDBL 299. Seminar (1-5).

EDBL 312. Foundations in Bilingual Education (3). Education of students whose primary language is other than English. Research on linguistic, social and community issues pertaining to bilingualism and bilingual education. Prerequisite: admission to the Teacher Certification Program.

EDBL 318. Culture in the Classroom (3). The importance of culture-based curriculum to children, families and communities, and its creation, use and evaluation. ANTH 130 recommended. Prerequisite: admission to the Teacher Certification Program.

EDBL 396. Individual Study (1-6).

EDBL 398. Special Topics (1-6).

EDBL 401. Principles and Practices for Educating Linguistically Diverse Students (3). Required coursework that provides the fundamental background in language and learning theories needed to educate linguistically diverse students. The basics of sheltered instruction are introduced. Prerequisites: EFC 340 and admission to the Teacher Certification Program.

EDBL 430. Sheltering Instruction for Linguistically Diverse Students (3). This course provides teacher candidates the basic competencies and skills needed to make appropriate modifications and accommodations for linguistically diverse students in content area instruction. Prerequisites: students must be admitted to the bilingual education/TESL minor or teaching English as a second language minor.

EDBL 433. Educational Linguistics (3). Phonology, syntax, and semantics applicable to speech and learning situations in the school. Not recommended for undergraduates with no teaching experience. Prerequisite: full admission to the Teacher Certification Program.

EDBL 435. Bilingual Education in the Content Areas (3).

Designed to develop teacher competency related to the bilingual instruction of coursework in language arts, social studies, science and mathematics in both English and Spanish. The use of ESL in these content areas is emphasized. Taught in English and Spanish. Prerequisite: admission to the Teacher Certification Program.

EDBL 438. Teaching English as a Second Language (3). Prepares teachers in the development and practice of research-based methods and techniques used to assist K-12 English Language Learners in acquiring academic English. Prerequisite: admission to the Teacher Certification Program.

EDBL 439. Assessment of Linguistically Diverse Students (3). This course prepares students to use effective assessment programs and techniques with linguistically diverse students in order to improve identification, reclassification, and teaching of such students. Prerequisite: admission to the Teacher Certification Program.

EDBL 440. Development of Literacy with Linguistically Diverse Students (3). Reading instruction for K-12 students who are speakers of a language other than English. Linguistic theory and information for developing and implementing strategies and techniques for literacy acquisition in English. Prerequisite: full admission to the Teacher Certification Program.

EDBL 492. Practicum (1-15). This course will provide students with experience working in bilingual education and/or English as a second language settings. Students may accumulate no more than 15 hours of practicum credit. Prerequisite: students must have completed four courses in the Bilingual Ed or Teaching ESL minor, and admission to the Teacher Certification program and current WSP/FBI fingerprint clearance. May be repeated up to 15 credits. Grade will either be S or U.

EDBL 496. Individual Study (1-6).

EDBL 498. Special Topics (1-6).

EDBL 499. Seminar (1-5).

Education Curriculum and Supervision Courses

EDCS 312. Educational Statistics (4). Use and interpretation of elementary statistical techniques.

EDCS 392. Practicum (3-5). Practical experience in a state-approved K-12 educational setting. Grade will either be S or U.

EDCS 492. Practicum (1-15). Experience working in educational settings. Students may accumulate no more than 15 hours of practicum credit. May be repeated for credit. Grade will either be S or U.

Education Early Childhood Courses

EDEC 232. Child Development (3). Developmental characteristics of children with emphasis from conception to eight years. Includes observation techniques. EDEC 232 and FS 232 are cross-listed courses; students may not receive credit for both.

EDEC 292. Assisting in the Child-centered Classrooms (5). Students work with children in ECE classrooms, learning and practicing the fundamentals of guidance, curriculum implementation, and maintaining the physical environment. Students participate in a two-hour seminar each week. May be taken twice for credit with the permission of the division head. Grade will be either S or U.

EDEC 296. Individual Study (1-6).

EDEC 298. Special Topics (1-6).

EDEC 299. Seminar (1-5).

EDEC 306. Professional Growth and Expectations (2). This initial course in the Early Childhood Education sequence is a survey of the profession. Students begin a professional growth and development plan, develop philosophical underpinnings, and systematically organizing resources that will be used throughout the program. Co-requisite: EDEC 307.

EDEC 307. Equity, Culture, and Anti-bias in ECE (3). Principles of equity, cultural relevancy, and anti-bias approaches appropriate for programs serving children from birth through eight years of age. Co-requisite: EDEC 306.

EDEC 312. Childhood Learning (3). Childhood Learning is an exploration of the specific content knowledge and processes, such as reading, math, science, language arts, etc. that are found in preschool through third grade developmentally appropriate programs. Prerequisites: EDEC 306 and EDEC 307. Co-requisites: EDEC 313 and EDEC 314.

EDEC 313. Materials and Manipulatives in ECE (3). Strategies are investigated for developing games and learning opportunities through the use of classic ECE manipulatives. The potential for fostering teaching knowledge and skills is

emphasized. Prerequisites: EDEC 306 and EDEC 307. Co-requisites: EDEC 312 and EDEC 314.

EDEC 314. Learning through Play (3). Learning through play is a dynamic look at how to introduce and solidify skills through play based emergence curriculum. The use of play to developmentally explore in depth reading, math, emotions, etc. Prerequisites: EDEC 306 and EDEC 307. Co-requisite: EDEC 312 and EDEC 313.

EDEC 321. Curriculum I (3). Historical influences and knowledge of child development/psychological theories/contemporary models will form the basis for curriculum development, implementation, and interactions with children from birth to preschool age. Prerequisites: EDEC 312 and EDEC 313, and EDEC 314. Co-requisite: EDEC 412.

EDEC 322. Parent Involvement (3). Parent-child and parent-school interactions as educational and developmental aids. Emphasis upon the school's use of the home and community for educational purposes. Prerequisites: EDEC 321 and EDEC 412. Co-requisite: EDEC 411.

EDEC 396. Individual Study (1-6).

EDEC 398. Special Topics (1-6).

EDEC 401. Comparative Education Models in Early Childhood (1). Students in this class will do an in-depth study of 2 curriculum models (i.e. Montessori, Waldorf, Froebel, etc.) and then visit programs that exemplify the two models. Prerequisite: admission to the early childhood education major or minor. May be repeated up to 3 credits.

EDEC 411. Curriculum II (3). Historical influences and knowledge of child development, psychological theories, and contemporary models as bases for curriculum development and implementation in pre-kindergarten settings. Prerequisites: EDEC 321 and EDEC 412. Co-requisite: EDEC 322.

EDEC 412. Responsible Childhood Assessment (3). Exploration and application of childhood assessment, birth-elementary with emphasis on responsibility, ethics, purpose, decision-making, and alignment; designed to impact individual learning outcomes, professional implementation, and program improvement. Prerequisites: EDEC 321 and EDEC 322. Co-requisite: EDEC 411.

EDEC 422. Classroom Management in an ECE Classroom (3). This course provides students the opportunity to explore, apply, synthesize and evaluate techniques and strategies for creating positive classroom climates through organization and management techniques. Prerequisites: EDEC 411 and EDEC 412. Co-requisite: EDEC 421.

EDEC 424. Curriculum III (3). Historical influences and knowledge of child development/ psychological theories/contemporary models will form the basis for curriculum development, implementation, and interactions with children from kindergarten through primary grades. Prerequisites: EDEC 322 and EDEC 411. Co-requisite: EDEC 422.

EDEC 432. Theories in Child Development (3). Assists the student in formulating his or her own general assumptions about the nature of child development through study of various theoretical viewpoints and current issues. EDEC 432 and FS 432 are cross-listed courses, students may not receive credit for both. Prerequisites: EDEC 422 and EDEC 424 or permission. Co-requisite: EDEC 492 and EDEC 493 or permission.

EDEC 447. Curriculum Exploration (3). Guided exploration of curriculum or guidance needs as identified by student self-evaluation. Consistency with the student's personal philosophy and child development will be emphasized. Prerequisites: EDEC 331 or FCSF 331.

EDEC 465. Directing ECE Programs (3). Budgeting, governmental requirements, staffing, nutritional and health care, parental involvement, community and agency liaison, and the integration of developmental/educational curriculum.

EDEC 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval. May be repeated for credit. Grade will either be S or U.

EDEC 492. Senior Seminar (3). This capstone seminar integrates the hands-on experiences from the EDEC 493 practicum with the ECE major course content. Students will

actively problem solve, develop professional resources, compile a portfolio and career growth plan. May be repeated with or without EDEC 493 practicum. Corequisite: EDEC 493 and EDEC 432 must be taken concurrently. Department Consent Required May be repeated up to 6 credits.

EDEC 493. Professional Educators Field Experience (3-18). Students will work in ECE settings 20 hours per credit. Classroom interactions will include group instruction, individual tutoring, assessing students' learning, classroom management, classroom maintenance, as well as other duties determined by the site supervisors. May be repeated a second time without the EDEC 492 senior seminar. Prerequisites: EDEC 422, and EDEC 424, and current WSP/FBI fingerprint clearance. Corequisite: EDEC 432 and EDEC 492 required for the initial experience. Department Consent Required. May be repeated up to 30 credits. Grade will either be S or U.

EDEC 494. Professional Educators Advanced Field Experience (3-10). A course designed to meet special needs as determined by the student, his/her advisor and the director. Prerequisite: EDEC 493. Grade will be S or U.

EDEC 496. Individual Study (1-6).

EDEC 498. Special Topics (1-6).

EDEC 499. Seminar (1-5).

Education Elementary Courses

EDEL 296. Individual Study (1-6).

EDEL 298. Special Topics (1-6).

EDEL 299. Seminar (1-5).

EDEL 320. Integrated Arts in the Elementary School (5). This course contains content and methodology for elementary majors preparing to teach all of the arts (dance, drama/theatre arts, music and visual arts) with connections to pedagogy, artistic expression, and the other content area of elementary education. Prerequisites: conditional admission to the Teacher Certification Program and current WSP/FBI clearance.

EDEL 323. Teaching Elementary School Mathematics (4). Methods and materials for helping children learn mathematics with emphasis on the use of manipulatives, problem solving, cooperative learning, and communication. Prerequisites: MATH 164, MATH 250, and full admission to the Teacher Certification Program, and current WSP/FBI fingerprint clearance .

EDEL 396. Individual Study (1-6).

EDEL 420. Social Sciences in the Elementary School (4). Methods, techniques, content, and materials for the various grade levels with an emphasis on history, geography, economics, civics, political science, and social studies skills, through the use of inquiry, primary source documents, and integration of content within the elementary school curriculum. Prerequisite: full admission to the Teacher Certification Program and senior level status or by permission.

EDEL 423. Integrated Methods for the Elementary School (3). In this capstone course, elementary teacher candidates will explore interdisciplinary instruction and design standards-based unit plans that incorporate best teaching practices for specific teaching assignments. Prerequisites: EDEL 323 and EDEL 420 and EDLT 409 and EDLT 422 and SCED 322 and complete four of the following courses: EDEL 320 or EDLT 321 or HED 446, or PE 334 and full admission to the Teacher Certification Program.

EDEL 476. Integrated Humanities at the Middle-level Grades (5). This course focuses on integrated instructional strategies and methods for working with middle-level (grades 4-9) students in the humanities (English, reading, social studies, history, civics, economics, and geography) content areas. EDEL 476 and ENG 476 are cross-listed; students may not receive credit for both. Prerequisites: ENG 320 and admission to the teacher education or hold a valid Washington teaching certificate.

EDEL 477. Middle School Students and Their Environment (4). An in-depth exploration of the developmental learning needs of 5th-8th grade students and the physical, social, and management systems utilized by middle-level education programs. The major focus of this course is to create developmentally appropriate classroom practices that merge educational developmental needs. Prerequisites: full admission to the Teacher Certification Program and current WSP/FBI fingerprint clearance.

EDEL 478. Developmentally Responsive Curriculum in the Middle Grades (3). An in-depth exploration of research-based middle school curriculum that meets the development needs of young adolescents. This course focuses on middle school

curriculum and its process by which it is designed, integrated, and evaluated. Prerequisite: full admission to the Teacher Certification Program and current WSP/FBI fingerprint clearance.

EDEL 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prerequisites: prior approval and conditional or full admission to the Teacher Certification Program. May be repeated for credit. Grade will be either S or U.

EDEL 493. Professional Educators Field Experience (1-15). Experience working in educational settings. Application must be submitted before registration - see department of TEACH office. Students may accumulate no more than 15 hours of practicum credit. Formerly EDEL 492 students may not receive credit for both. Prerequisite: full admission to the Teacher Certification Program and current WSP/FBI fingerprint clearance. Grade will either be S or U.

EDEL 496. Individual Study (1-6).

EDEL 498. Special Topics (1-6).

EDEL 499. Seminar (1-5).

Education Foundation Courses

EDF 296. Individual Study (1-6).

EDF 298. Special Topics (1-6).

EDF 396. Individual Study (1-6).

EDF 398. Special Topics (1-6).

EDF 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval. May be repeated for credit. Grade will either be S or U.

EDF 496. Individual Study (1-6).

EDF 498. Special Topics (1-6).

Education Library Media Courses

EDLM 410. Introduction to Library Media Issues (3). This courses will provide an introduction to relevant issues related to library media studies; including diversity, legal issues, curriculum development, librarian roles, connectivity issues, technology and instruction.

EDLM 414. Technology Tools for the Library (3). Provides an introduction to design and production of various instructional materials from manual to more complex computer techniques. Technology tools for the library, and storage media will be explored. Projects will be developed to explore the various technologies. EDLM 414 and EDLM 514 are layered courses, students may not receive credit for both.

EDLM 416. Application of Technology Resources (3). This course provides an introduction to technology tools, processes, and web applications that support information literacy. Web 2.0 and other collaboration tools will be explored. Projects will be developed to explore the application of these technologies. EDLM 416 and EDLM 516 are layered courses, students may not receive credit for both.

EDLM 426. Instructional Methods in the Library (3). Apply instructional strategies in teaching information literacy skills and motivating students to read. Explore collaborative learning techniques which will integrate information literacy skills into the standards based curriculum. EDLM 426 and EDLM 526 are layered courses, students may not receive credit for both.

EDLM 436. Survey of Children's and Young Adult Literature (3). Considers the field of children's and young adult literature; literary genres, major literary awards, leading representative authors, historical and recent trends. Includes topics of cultural diversity and reading promotion. EDLM 436 and EDLM 536 are layered courses, students may not receive credit for both.

EDLM 448. Collection Development/Library Media (3). Explore the methods used and the issues and solutions involved in developing a collection in a school library media center. EDLM 448 and EDLM 548 are layered courses; students may not receive credit for both.

EDLM 458. Cataloging and Classification for Library Media (3). Cataloging and classification of library media materials with an emphasis on MARC records. Includes Dewey Decimal classification system, authorized subject headings, and assigning MARC tags using original and copy cataloging of book and non-print items. EDLM 458 and EDLM 558 are layered courses, students may not receive credit for both.

EDLM 468. Research and Information Fluency (3). Reference tools, information sources, search strategies, research models, and evaluative techniques will be explored as tools to enable students to be more information literate. EDLM 568 and EDLM 468 are layered courses, students may not receive credit for both.

EDLM 478. Administration of Library Media Programs (3). Develops competency in administering materials, equipment, and services of library media program as integral part of the school. Focus on leadership, personnel, budgets, facility planning, state and national standards in planning, evaluation and program development. EDLM 478 and EDLM 578 are layered courses, students may not receive credit for both.

EDLM 492. Library Media Practicum (1-4). An individualized field experience in a public/private school setting supervised/coordinated by CWU faculty. Prerequisite: permission to register only be the department.

Education Literacy Courses

EDLT 296. Individual Study (1-6).

EDLT 298. Special Topics (1-6).

EDLT 299. Seminar (1-5). May be repeated for credit.

EDLT 308. Literacy I (3). First of two courses designed to prepare prospective teachers to teach literacy in elementary school classrooms. Deals with processes and products of the literacy act, methods and materials, assessment procedures, and instruments.

EDLT 315. Literacy Strategies for Struggling and Advanced Learners (3). Techniques for identifying and differentiating instruction for both struggling and advanced literacy learners. Prerequisite: current WSP/FBI fingerprint clearance .

EDLT 317. Early Literacy (3). Aspects of early literacy acquisition and instruction including language development, phonemic awareness, writing, play and socio-cultural contexts are emphasized. Prerequisite: current WSP/FBI fingerprint clearance .

EDLT 319. Storytelling Techniques (3). Storytelling in the integrated curriculum. Students become familiar with a variety of stories and demonstrate the ability to tell stories. Prerequisite: current WSP/FBI fingerprint clearance.

EDLT 321. Teaching Children's Literature (3). The types of literature suited to children in grades 1-6; includes reading and evaluation of material from early folklore to present day books for children. Prerequisite: current WSP/FBI fingerprint clearance.

EDLT 324. Literacy Across the Curriculum (3). For K-12 school teachers, administrators. Focuses on knowledge, strategies and skills needed by K-12 students for efficient and effective use of print and non-print materials across the curriculum. Prerequisite: current WSP/FBI fingerprint clearance.

EDLT 396. Individual Study (1-6). By permission. May be repeated for credit.

EDLT 398. Special Topics (1-6). May be repeated for credit.

EDLT 409. Literacy II (5). Content and methodology of early literacy, vocabulary development, phonic and structural analysis, comprehension and study skills. Field experience in a local school embedded. Prerequisites: EDLT 308, current WSP/FBI fingerprint clearance, and admission to the Teacher Certification Program.

EDLT 410. Teaching Word Recognition Skills (3). Methods for teaching word recognition skills will be developed. Decoding as an aid to comprehension, including phonetic analysis, context clues, structural analysis, and sight vocabulary. Prerequisites: EDLT 308 and EDLT 409, admission to the Teacher Certification Program, and current WSP/FBI fingerprint clearance .

EDLT 411. Teaching Comprehension (3). Comprehension strategies and techniques; techniques for vocabulary development. Prerequisites: EDLT 308 and EDLT 409, admission to the Teacher Certification Program, and current WSP/FBI fingerprint clearance .

EDLT 412. Assessment of Literacy Skills and Processes (3). Assessment instruments, procedures, and interpretive skills for determining student reading levels and needs. Emphasizes the selection, administration, and interpretation of evaluation tools. Prerequisites: EDLT 308 and EDLT 409, admission to the Teacher Certification Program, and current WSP/FBI fingerprint clearance .

EDLT 413. Methods and Materials for Literacy Instruction (3). Strategies for classroom management, implementation of learning theories. Prerequisites: EDLT 308 and EDLT 409, admission to the Teacher Certification

Program, and current WSP/FBI fingerprint clearance .

EDLT 414. Teaching Literacy in a Multi-Cultural, Multi-Lingual Setting (3). Strategies for teaching literacy and developing language skills in a multi-cultural, multi-linguistic setting. Prerequisites: EDLT 308 and EDLT 409, current WSP/FBI fingerprint clearance, and admission to the Teacher Certification Program.

EDLT 418. Literacy and Linguistics (3). This course is intended to provide literacy teachers with a general introduction to the major fields of linguistics, including phonology and phonetics, morphology, syntax, semantics, discourse analysis, language acquisition, and dialects. Prerequisites: EDLT 308 and EDLT 409, admission to the Teacher Certification Program, and current WSP/FBI fingerprint clearance .

EDLT 422. Teaching the Language Arts (4). Primarily for prospective elementary school teachers. Listening, writing, speaking, spelling, and handwriting development. Emphasizes curriculum, methods, materials, and research. Experienced teachers see EDEL 531. Prerequisites: EDLT 308, current WSP/FBI fingerprint clearance, and admission to the Teacher Certification Program.

EDLT 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prerequisite: admission to the Teacher Certification Program. By permission. May be repeated for credit. Grade will either be S or U.

EDLT 493. Literacy Practicum (6). Practical experience working with children in classroom settings. Prerequisite: EDLT 409, and 5 required courses in the literacy minor. By permission. Grade will either be S or U.

EDLT 496. Individual Study (1-6). By permission. May be repeated for credit. Grade will either be S or U.

EDLT 498. Special Topics (1-6). May be repeated for credit.

EDLT 499. Seminar (1-5). May be repeated for credit.

Education Special Education Courses

EDSE 296. Individual Study (1-6).

EDSE 302. Introduction to Students with Exceptionalities (3). Designed to introduce effective teaching strategies and strategies for adapting standard instruction to meet the needs of a range of students found in the typical classroom. This course provides information about students considered disabled as well as gifted and students with multicultural heritages. Prerequisites: EFC 340 and admission to the Teacher Certification Program. Through spring 2012 the course is 4 credits, and effective summer 2012 it changes to 3 credits.

EDSE 310. Introduction to Special Education (4). Prerequisite to a Special Education course of study. Junior or senior class standing required or permission of instructor. Designed to introduce prospective teachers to the legal requirements of special education including eligibility, programming, and instruction. Skills necessary for collaborative relationships in the multidisciplinary team process will also be emphasized. Prerequisite: current WSP/FBI fingerprint clearance, and conditional or full admission to the Teacher Certification Program.

EDSE 311. Foundations of Special Education (1). Designed to provide prospective teachers with the necessary foundations for successful completion of the special education course of study including end-of-program assessment, undergraduate research, and written and oral communication skills. This course should be taken at the beginning of the special education course of study.

EDSE 396. Individual Study (1-6).

EDSE 398. Special Topics (1-6).

EDSE 410. Behavior Management for Students with Disabilities (3). Fundamentals of behavior change related to the education of students with disabilities. Monitoring individual student progress and utilizing data collected for program instructional change. Prerequisites: EDSE 310, EDSE 311, current WSP/FBI fingerprint clearance, and conditional or full admission to the Teacher Preparation Program.

EDSE 411. Assessment of Students with Disabilities (4). Selecting, administering, scoring, and interpreting formal assessment tools. Designing and using informal testing techniques. Prerequisites: EDSE 310, 311, and conditional or full admission to the Teacher Certification Program.

EDSE 422. Teaching Strategies, Curriculum, and Materials for Students with Disabilities (5). Individual, small, and large group teaching strategies essential to individualized education programs, and selection, evaluation, and adaptation of commercially available materials, including computer applications. Prerequisites: EDSE 310 and EDSE 311, either EDSE 410 or EDSE 411, and admission to the Teacher Certification Program.

EDSE 423. Instructional Practices/Strategies in Literacy and Math for Students with High Incident Disabilities (4). Specially designed instructional strategies and programming considerations for students with high incidence special needs in reading, written expression and mathematics. Prerequisites: EDSE 310, EDSE 311, EDSE 410, EDSE 411, current WSP/FBI fingerprint clearance, and admission to the Teacher Certification Program.

EDSE 426. The Child with Language Disabilities (3). An exploration of the child with language disabilities (age birth-6) from the perspective of normal language development, assessment strategies, and remedial techniques. Recommended for teachers of children with mild and severe disabilities. Prerequisites: EDSE 311, current WSP/FBI fingerprint clearance, and application or admission to the Teacher Certification Program.

EDSE 431. Individualized Educational programs for Students with Disabilities (4). Designed to introduce prospective students to the legally and professionally supported process for creating IFSP's and IEP's. Perquisites: EDSE 310, EDSE 311, EDSE 410, EDSE 411 and EDSE 422 and admission to the Teacher Certification Program.

EDSE 432. Strategies for Working with Students with Low Incidence Disabilities (3). Designed to introduce prospective teachers to the research supported strategies necessary for effective implementation for students with low incidence disabilities. Prerequisites: EDSE 310, EDSE 311, EDSE 410, EDSE 411, and admission to the Teacher Certificate Program.

EDSE 433. Pre-school for Students with Developmental Delays (3). An overview of services for children with disabilities, aged birth-6, including legislation, risk factors, educational development, alternative delivery systems and intervention approaches and environments. Prerequisites: EDF 302 or EDSE 310, current WSP/FBI fingerprint clearance, and admission to Teacher Certification Program.

EDSE 460. Collaboration with Parents, Paraprofessionals, and Community Agencies (4). Designed to introduce prospective teachers to the legal requirements of special education including eligibility, programming and instruction. Also emphasizing skills necessary for collaborative relationships in the team process. Prerequisite: conditional or full admission to the Teacher Certification Program.

EDSE 489. Research and Inquiry (2). Course designed to enhance understanding of research and inquiry skills related to disability topics and issues for prospective special educators. Prerequisites: EDSE 310, EDSE 311, EDSE 410, EDSE 411, EDSE 422, and admission to the Teacher Certification Program. By permission.

EDSE 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. Prerequisite: current WSP/FBI fingerprint clearance, and admission to the Teacher Certification Program. May be repeated for credit. Grade will either be S or U.

EDSE 491. Workshop (1-6). Prerequisite: admission to the Teacher Certification Program or permission of the instructor. May be repeated for credit.

EDSE 495. Practicum (5-16). Practical experience with children having learning, behavioral or physical disabilities; using behavioral management techniques in an effort to bring the child up to maximum potential as determined by his/her flexibility, sociality and capacity. Prerequisite: current WSP/FBI fingerprint clearance. May be repeated up to 16 credits. Grade will either be S or U.

EDSE 496. Individual Study (1-6).

EDSE 498. Special Topics (1-6).

EDSE 499. Seminar (1-5).

Electronics Engineering Technology Courses

EET 221. Basic Electricity (4). The fundamental principles of DC and steady state AC circuit

analysis are introduced. Analysis techniques include series/parallel equivalence, nodal, mesh, and phasor analysis. Prerequisite: MATH 154.

EET 231. Introduction to Electrical Power (4). An introduction to electrical power and energy conversion in DC, single phase AC and balanced three phase AC systems. Prerequisite: EET 221 and MATH 172.

EET 271. Digital Circuits (4). Introduction to number systems, Boolean algebra, combinational logic, and the analysis and design of digital logic circuits. Formerly, EET 371.

EET 312. Basic Electronics (4). Analysis of semiconductor devices and their application in power supplies, amplifiers, and control circuits. Prerequisite: EET 221.

EET 323. Active Linear Circuits (4). Analysis and design of operational amplifier circuits including amplifiers, comparators, active filters, controls, and instrumentation devices. Prerequisites: EET 312 and MATH 172.

EET 325. Electrical Networks (4). Introduction to continuous-time linear signals and systems. Topics include differential-equation models, convolution, and Fourier analysis. Prerequisite: EET 221 and MATH 173. Formerly, EET 313.

EET 332. Generation of Electrical Power (4). An introduction to the generation of electrical power. the economic considerations associated with power plant operation will be introduced as well as methods used to analyze three phase systems. Theory is re-enforced with field trips to power generation sites. Prerequisite: EET 324 or permission of instructor.

EET 343. Process Control (4). Application of analog and digital controller principles to process control systems. Prerequisites: EET 324 and IET 242. Three hours lecture and two hours laboratory per week.

EET 363. Lab View Applications (1). An introduction to Lab VIEW instrumentation software. Techniques used to simulate instrumentation systems will be introduced.

EET 372. Advanced Digital Circuits (4). Introduction to sequential logic, state machines, digital interfacing techniques and memory devices. Programmable logic devices introduced as time permits. Prerequisite: EET 271.

EET 373. Introduction to Embedded Programming (4). Introduction to embedded programming using C and C++. Programming proficiency, algorithm development and hardware considerations in software design are emphasized. Prerequisites: CS 110 and MATH 154. Formerly, EET 373.

EET 374. Microprocessors (4). Study of microprocessor system components, functions, and programming methods using the assembly programming language. Prerequisites: CS 110 and EET 372. Formerly, EET 375.

EET 376. Advanced Microprocessors (4). Study of microprocessor system configuration, design, integration of input and output devices, and program development in C/C++. Prerequisite: EET 373 and EET 374.

EET 426. Advanced Electrical Network (4). Analysis of continuous-time linear time-invariant systems using Laplace transforms. Topics include the forward and inverse Laplace transform, system response and stability, transfer functions, and state variable modeling. Prerequisite: EET 325. Formerly, EET 324.

EET 433. Transmission and Distribution of Electrical Power (4). A study of the transmission and distribution of electrical power. Includes techniques used by electric utilities for the protection of generation equipment and transmission lines during switching of loads. Prerequisite: EET 332. Formerly, EET 432.

EET 444. Supervisory Control Networks (4). An introduction Supervisory Control and Data Acquisition (SCADA), network interfacing techniques and data transfer between industrial controller systems. Prerequisite: EET 343 and EET 374.

EET 452. Computer Networks (4). A study of computer network protocols, topologies, and device configurations. Prerequisite: EET 375. Three hours lecture and two hours laboratory per week.

EET 455. Electronic Communications (4). An introduction to electronic communications circuits. Prerequisite: EET 312. Two hours lecture and four hours laboratory per week.

EET 475. Microcontrollers (4). Use and programming of microcontrollers in the design and implementation of embedded controller systems.

EET 477. Robotics (4). Microprocessor applications in robotics, automated systems,

and digital control. Prerequisites: IET 242 and EET 375. Three hours lecture and two hours laboratory per week.

EET 487. Senior Project I (2). Research, planning, and conceptual section of a capstone analysis and design project. Collaborative group endeavors in cooperation with industry, community, or government entities are encouraged. Senior standing. Formerly, EET 478.

EET 488. Senior Project II (2). Development section of a capstone analysis and design project where the creation of a prototype or method for the advancement of a concept takes place. Senior standing. Prerequisite: EET 487. Formerly, EET 479.

EET 489. Senior Technical Presentations (2). Written and oral presentation section of a capstone analysis and design project where communication of technical concepts takes place. Prerequisite: EET 478.

Education Foundation and Curriculum Courses

EFC 210. Seminar (1). Discussion of field observation and program planning for prospective teachers. Prerequisite: prior completion of pre-admission observation, sophomore standing.

EFC 310. Orientation to Teaching (3). Teaching as a career and essential features of preparation. Study of the teacher's role and function in the school; characteristics of good teachers; preparation for professional competencies and certification; the American public school system; and the responsibilities of schools in a democratic society. Co- or prerequisite: EFC 210.

EFC 315. Educational Assessment (3). The assessment/planning/instruction cycle. Standards-based assessment. Reliability, validity, bias. Basic statistics used in test construction and interpretation. Construction of classroom tests: multiple-choice, short answer, essay, etc. Performance assessment, portfolio assessment, affective assessment. Prerequisites: EFC 210 and PSY 314 and admission to the Teacher Certification Program.

EFC 320. Multicultural Education (3). Exploration of marginalized groups and the implications for change in education. Examination of foundational elements of and approaches to Multicultural Education as the underpinning to the development of cultural competence. Prerequisites: grade of C or higher in EFC 310 and PSY 314, current WSP/FBI fingerprint clearance and admission to the Teacher Certification Program or the Instructional Foundations Program.

EFC 330. Field Experience (2). A laboratory experience for prospective teachers. The opening of school, professional relationships, school/community relationships, school district organization, instructional support, and resource services. Students are assigned in off-campus centers for approximately two weeks prior to fall quarter. Prerequisites: grade of C or higher in EFC 310 and PSY 314, and current WSP/FBI fingerprint clearance and full admission to the Teacher Certification Program or the Instructional Foundations Program. By permission only. Grade will either be S or U.

EFC 340. Methods of Instruction (3). Introduction to basic methods of classroom instruction. Development of a comprehensive curriculum unit plan. Methods appropriate for subject and grade level in lab and field experience. Prerequisites: grade of C or higher in EFC 310 and full admission to the Teacher Certification Program or the Instructional Foundations program. Co-requisite: EFC 315, EFC 320, and EFC 330.

EFC 350. Classroom Management (3). Development of values, confidence, assertiveness skills, and decision-making skills in classroom management. Development of a comprehensive management plan for first year teaching. Includes a field experience component. Prerequisites: EFC 340 and PSY 314, and admission to the Teacher Certification Program.

EFC 416. Educational Technology (3). Concepts and resources related to appropriate and effective integration of technology and media in school settings. CS 101 or IT 101 recommended prior to enrollment. Prerequisites: grade of C or higher in EFC 340 and full admission to the Teacher Certification Program or the Instructional Foundations Program.

EFC 440. Education Law (3). Major legal issues confronting educators, including students and teacher rights, due process, torts, and the identification and reporting of child abuse. Prerequisites: EFC 340 and admission to the Teacher Certification Program.

EFC 480. Student Teaching (16). Teacher candidates must demonstrate their competence by student teaching a full quarter in their major endorsement area. Includes 20 hours of seminar at a time and place designated by the university supervisor. See Student Teaching Requirements in this catalog, and the Student Teaching Handbook for other requirements and policies. SCED 325 may be substituted for EFC 350, and SCED 487, may be substituted for EFC 416. Prerequisites: admission to the Teacher Certification Program, and completion of the Professional Education Program with grades of C or higher, and current WSP/FBI fingerprint clearance . Grade will either be S or U.

EFC 491. Workshop (1-6). May be repeated for credit. Grade will either be S or U.

Emergency Medical Services Courses

EMS 245. First Aid (3). American Red Cross First Aid course for which standard certificate may be granted.

EMS 250. Emergency Medical Technician Lecture (9). Emergency Medical Technician (EMT) is a course that enables the successful student to become eligible for certification as an EMT with the National Registry. This course provides the didactic instruction in basic life support in accordance with the National EMS Education Standards. Attendance in all sessions is expected. Co-requisite: EMS 250LAB.

EMS 250LAB. Emergency Medical Technician Lab (3). The Emergency Medical Technician (EMT) lab provides instruction in the practical skills application of the EMT didactic content, including patient assessment, airway management, oxygen delivery, medication assistance, ambulance operations, lifting and moving patients, bleeding control, fracture immobilization, spinal cord injury management, emergency childbirth, and much more. Co-requisite: EMS 250. Grade will either be S or U.

EMS 335. Paramedicine I (4). This course provides the foundational knowledge in paramedicine education in areas of preparatory elements of paramedicine, advanced airway management, history-taking, and physical examination, communications, documentation, ethics, and more. Prerequisite: admission to the paramedical major or program. Co-requisite: EMS 335LAB.

EMS 335LAB. Advanced Clinical Practice I (2). This course provides practical lab instruction in paramedicine including advanced airway procedures, patient assessment, history-taking, physical examination, medication administration, intravenous therapy, and other related emergency procedures. Co-requisite: EMS 335 and admission to the paramedical major or program. Grade will either be S or U.

EMS 336. Paramedicine II (4). This course provides the foundational knowledge in paramedic education in areas of emergency obstetrics and gynecology, pulmonology, neurology, endocrinology, allergies, environmental, infectious diseases, psychiatric, toxicological, and more. Prerequisites: EMS 335 and admission to the paramedical major or program. Co-requisite: EMS 336LAB.

EMS 336LAB. Advanced Clinical Practice II (2). Accompanying laboratory to Paramedicine II, providing intensive training in obstetrical emergencies, pulmonary assessment and treatment, management of cardiovascular emergencies, cardiac arrest team management, and leadership development. Prerequisite: admission to the paramedical major or program. Co-requisite: EMS 336. Grade will either be S or U.

EMS 337. Paramedicine III (3). This course provides the foundational knowledge in paramedic education in areas of assessment-based management, neonatology, geriatrics, pediatrics, abuse and assault, rural EMS, and more. Prerequisites: EMS 336 and admission to the paramedical major or program.

EMS 337LAB. Advanced Clinical Practice III (2). Accompanies EMS 337 lecture providing practical skill education in a laboratory setting in the therapeutic paramedical interventions of pediatrics, geriatrics, and advanced medical emergencies. Prerequisite: EMS 337. By permission. Grade will either be S or U.

EMS 350. Paramedicine Instructional Methodologies (2). This course provides instruction and opportunities to learn and apply techniques and methods of instruction in principles of EMS. Students will provide practical skill instruction to EMT student under the supervision of the program faculty. Prerequisite: admission to the paramedical

major or program. Grade will be either S or U.

EMS 398. Special Topics (1-6). Prerequisite: admission to the paramedical major or program. May be repeated for credit.

EMS 430. Problem-based Learning I (4). This course introduces case-based presentation of pathology, symptomatology, presentation, and treatment of clinical scenarios through life-span development, group discussion, and research. Co- or prerequisites: EMS 455 and admission to the paramedical major or program.

EMS 431. Problem-based Learning II (4). This course continues case-based presentation of pathology, symptomatology, presentation, and treatment of clinical scenarios through life-span development, group discussion, and research. Prerequisites: EMS 430 and admission to the paramedical major or program.

EMS 440. Medical Mathematics and Terminology (2). This course provides instruction in various methods of medical drug calculations and dosing of medications commonly utilized in emergency settings, as well as an introduction to medical terminology. Prerequisite: admission to the paramedical major or program.

EMS 441. General Pharmacology for Paramedics (3). Mechanism of action, indications, and contraindications of drugs, their side effects, and dosage of administration. Prerequisites: EMS 440 and admission to the paramedical major or program.

EMS 443. Myocardial Disease and Basic Electrocardiography (4). This course provides instruction in the basic elements of bipolar limb-lead electrocardiography, beginning with a review of cardiovascular A and P, a brief discussion of cardiac pathologies, and focuses on EKG interpretation and dysrhythmia recognition. Prerequisite: admission to the paramedical major or program.

EMS 444. Twelve-lead Electrocardiography (4). This provides instruction in the advanced elements of 12-lead EKG analysis. It begins with a review of the essentials of EKG interpretation and introduces ACLS concepts following with a comprehensive approach to 12-lead EKG analysis. Prerequisites: EMS 443 and admission to the paramedical major or program.

EMS 450. Human Anatomy-cadaver Lab (1). This course provides instruction in the human anatomy and physiology with practical lab examination, exploration, and limited dissection of the human body. Two hours laboratory per week. By permission.

EMS 451. Advanced Trauma Care (3). This course provides instruction in the advanced elements of trauma care, including trauma triage, fluid resuscitation, trauma arrest management, multi-system management, and trauma of the head, neck, thorax, abdomen, and extremity. Prerequisite: admission to the paramedical major or program.

EMS 455. Introduction to Pathophysiology (3). This course introduces fundamental pathologies common to all age groups. It establishes concepts and foundational basis of disease from the cellular perspective to the fully developed organism. Prerequisite: admission to the paramedical major or program.

EMS 459. Emergencies in Pediatric/Geriatric Care (3). Emergency training in assessing, treating, and transporting pediatric/geriatric patients. Prerequisite: admission to the paramedical major or program.

EMS 460. Research in EMS I (3). This course introduces research design and methodologies common to medicine and paramedicine. It establishes the foundation for EMS research projects and possible publication. Prerequisite: admission to the paramedical major or program.

EMS 461. Research in EMS II (3). This course continues education in research design and methodologies common to medicine and paramedicine. It provides the student the opportunity to complete EMS research projects and possible publication. Prerequisites: EMS 460 and admission to the paramedical major or program.

EMS 465. Educational Methodologies in EMS (3). This course introduces common educational methodologies applied in EMS education with focuses on didactic, psychomotor, and affective education domains. Additional content include curricula development, evaluation methods, test construction, and critical psychometric parameters. Prerequisite: admission to the paramedical major or program.

EMS 470. Current Topics in Emergency Medicine (3). This course instructs students how to conduct medical literature searches and to critically review peer-reviewed articles and surveys the contemporary

literature for relevant concepts and issues germane to EMS. Prerequisite: admission to the paramedical major or program.

EMS 475. EMS Response to Terrorism (3). This course examines contemporary thought on the philosophical basis and motivation for terrorism and discusses currently prevalent issues, principles of mitigation for EMS providers, and strategies to prevent terroristic threats. Prerequisite: admission to the paramedical major or program.

EMS 480. Financial Analysis of EMS Systems (3). This course introduces basic financial analytical processes as they apply to EMS, with emphasis on interpreting financial statements, assessing financial burden, cost projection, cost-benefit analysis, and formulas for evaluating financial performance. Prerequisite: admission to the paramedical major or program.

EMS 481. Quality Improvement and Administration of EMS (3). This course introduces elemental concepts to continuous quality improvement with application to EMS systems. It also introduces how CQI data can be used to inform EMS administration. General principles of management will be reviewed. Prerequisite: admission to the paramedical major or program.

EMS 482. Systems Analysis of EMS (4). This course integrates previously learned concepts into a systematic approach of EMS system problem-identification, prioritization, and solutions proposals. It incorporates research design, financial analysis, and policy analysis into an integrated approach. Prerequisites: EMS 460, EMS 480, EMS 481 and admission to the paramedic major or program.

EMS 485. Strategic Planning for EMS (3). This course introduces foundational concepts of strategic planning into EMS development. It enables the student to apply strategic principles of management to real-life EMS systems. Prerequisite: admission to the paramedical major or program.

EMS 488. Health Policy in EMS (3). This course introduces policy development and agenda-setting at the state and national levels. It provides basic instruction in policy analysis and surveys current health policies that may impact EMS. Prerequisite: admission to the paramedical major or program.

EMS 489. Leadership in EMS (3). This course examines various leadership styles, assesses student aptitude for leadership style, and develops a foundational structure to develop superior leadership abilities in EMS systems. Prerequisite: admission to the paramedical major or program.

EMS 490. Cooperative Education Internship (1-12). An individualized field experience internship with medical agencies for the purposes of basic and advanced clinical skills development in EMS paramedicine. Each course will have an individual learning plan and faculty coordinator. Acceptance into the EMS paramedicine major.

EMS 493A. Paramedicine Internship I (3). This course provides clinical and field instruction in principles of paramedicine under the supervision of clinical and field preceptors. Prerequisite: admission to the paramedical major or program. May be repeated for credit. Grade will either be S or U.

EMS 493B. Paramedicine Internship II (4). This course provides clinical and field instruction in principles of paramedicine under the supervision of clinical and field preceptors. Prerequisite: EMS 493A. Grade will either be S or U.

EMS 493C. Paramedicine Internship III (5). This course provides clinical and field instruction in principles of paramedicine under the supervision of clinical and field preceptors. Prerequisite: EMS 493B. Grade will either be S or U.

English Courses

ENG 100T. Transitional English (4). A study of academic written English with review of sentence and paragraph-level skills, such as word usage, sentence structure, organization, grammar, and mechanics with a reading component to improve comprehension of academic English; students will learn to write unified, coherent paragraphs and short compositions. Credits will not be allowed toward meeting bachelor's degree requirements.

ENG 101. Composition I: Critical Reading and Responding (4). Develops skills necessary for academic writing, including summarizing, reading sources critically and responding to them, synthesizing multiple perspectives, and using academic writing conventions. Required of all students except those who have passed an exemption examination. Students must earn a minimum grade of C- or above to enroll in

ENG 102. Prerequisite: appropriate test scores or have satisfactorily completed Transitional English. Basic Skills 2 - English Comp I.

ENG 102. Composition II: Reasoning and Research (4). Develops skills in research-based academic argument through assignments involving evaluation, analysis, and synthesis of multiple sources. Prerequisite: ENG 101 with a grade of C- or higher. Basic Skills 3 - English Comp II.

ENG 105. The Literary Imagination: An Introduction to Literature (5). Human experience as it is imagined, interpreted, and made significant in the poetry, prose, fiction, and drama of the major writers of the world. Prerequisite: ENG 101 with a grade of C- or higher. AH-Literature and Humanities (W).

ENG 180. Introduction to Linguistics (5). Backgrounds, developments, and relation to other fields of study. ANTH 180 and ENG 180 are cross-listed courses; students may not receive credit for both.

ENG 220. Grammar for Writers (2). Intermediate study of English grammar and strategies for improving clarity and coherence in writing. Prerequisite: ENG 101.

ENG 222. Multicultural Literature for Teachers (5). Prospective secondary English language arts teachers will read and respond to various genres of multicultural/world literature and develop methods and assignments for teaching texts that invite students to think critically and use evidence to support their viewpoints. Prerequisites: ENG 101, ENG 102, ENG 105 and admission to the English/language arts teaching major.

ENG 247. Multicultural Literature (5). Literary themes examined through the comparison of works from various cultures. Prerequisite: ENG 101 with a grade of C- or higher. AH-Literature and Humanities (W).

ENG 250. Reading and Writing Enrichment (3). This class offers sophomores and juniors augmented instruction in reading and writing, building on concepts and skills learned in ENG 101 and ENG 102. Prerequisites: ENG 101 and ENG 103 and sophomore or junior standing and GPA 2.5.

ENG 263. Introduction to Creative Writing (5). An introduction to the creative writing genres: poetry, fiction, screenwriting, and creative nonfiction. Examines the rhetorical forms and expectations of each in a workshop format.

ENG 267. Screenwriting Fundamentals (4). Introduction to the basic script format, the creative story and style elements, and the writing process steps for screenplays and teleplays. Focus on the narrative script development process from idea conception to first draft. COM 267 and ENG 267 are cross-listed courses, students may not receive credit for both. Prerequisites: ENG 102 or FVS 250.

ENG 296. Individual Study (1-6).

ENG 298. Special Topics (1-6).

ENG 299. Seminar (1-5).

ENG 301. Introduction to Professional Writing (5). Study in writing purposes, styles and genres. Prerequisites: ENG 101 and ENG 102.

ENG 302. Poetry and Poetics (5). Offers practice in the interpretive reading of poetry, focusing on the elements of poetry and poetic theory.

ENG 303. Principles of English Studies (5). Provides critical reading and writing strategies necessary to studies in English; introduces the expectations and requirements of the major.

ENG 304. English Linguistics (5). Students learn to perform linguistic analysis of aspects of English and to use linguistic concepts to examine literary texts.

ENG 310. Technical Writing (4). Practice in writing and editing technical reports. Prerequisites: ENG 101, ENG 102, and at least junior standing.

ENG 312. Research Methods for Workplace Writers (5). This course introduces students to a variety of workplace writing research methods and practices. Prerequisites: ENG 301 and ENG 310.

ENG 320. English Grammar (5). A review of the concepts, terminology, and historical development of traditional grammar, the parts of speech and their functions in sentences, the elements of the sentence, and its various patterns.

ENG 323. Writing and Editing for Publication (5). This class addresses writing for publication, prepares students with publication strategies, as well as examines what editors look for and what their job entails. Prerequisite: ENG 320.

ENG 330. African American Literature (5). Study of literature by African Americans.

ENG 331. Latina/o Literature (5). Study of literature by Latina/o writers.

ENG 332. American Indian Literature (5). Study of literature by American Indians.

ENG 333. Asian American Literature (5). Study of literature by Chinese, Japanese, Korean, Vietnamese, and other Asian/American writers.

ENG 334. American Indian Oral and Nonfiction Literature (5). An examination of American Indian oral and nonfiction literature, including myth, legend, oratory, ritual and ceremony, and forms of autobiography, including coup tales, boarding school narratives, etc.

ENG 335. Women's Literature (5). Examines women's literature in light of contemporary feminist literary theories. Prerequisites: ENG 302 and ENG 303.

ENG 344. Film Theory and Criticism (5). The study of film as an art form, a technological system, an industry, and a social force. Prerequisite: FVS 250.

ENG 347. Global Perspectives in Literature (5). An introduction to contemporary non-western and third world literature. Prerequisites: sophomore standing or above and ENG 101 with a grade of C- or higher. AH-Literature and Humanities (W).

ENG 353. History of Narrative Film (4). A history of the development of narrative film as an art form and cultural medium, with primary focus on Hollywood cinema. ENG 353 and COM 353 are cross-listed courses; students may not receive credit for both. Prerequisite: FVS 250.

ENG 354. History of Television (4). Historical survey of television as an entertainment, information, and art medium. Emphasis on understanding the cultural, social, political, technological, and economic conditions of production; the examination of television as text itself; and TV's impact on audiences. ENG 354 and COM 354 are cross-listed courses; students may not receive credit for both. Prerequisites: either COM 201 or FVS 250.

ENG 355. History of Documentary (4). Survey of documentary history from 1895 to present. Focus on philosophy of documentary approach, overview of the most important topics and issues, and development of critical standards in the genre. ENG 355 and COM 355 are cross-listed courses; students may not receive credit for both. Prerequisites: COM 201 or FVS 250.

ENG 357. Scriptwriting for Serial Media (4). Scriptwriting for the basic genres of serial television and the web. Includes study of serial script, structure, story, character development, and dialog. COM 357 and ENG 357 are cross-listed classes, students may not receive credit for both. Prerequisites: COM 267 or ENG 267 and admission to the communication, English language and literature or film and video studies major. No Special Consent Required N Graded

ENG 360. World Cinema (5). An overview of world cinema, with attention to the national film cultures of important film-producing countries (such as India, France, Japan), and a comparison of international films with mainstream Hollywood cinema.

ENG 363. Shakespeare (5). Intensive study of selected Shakespeare plays and poetry. May be repeated under a different subtitle. Prerequisites: ENG 302 and ENG 303. May be repeated for 10 credits.

ENG 364. Fiction Writing (5). An introduction to the varieties of literary fiction being written today, the techniques and strategies for writing fiction, as well as developing criteria for evaluating the effectiveness of student stories. Prerequisite: ENG 263.

ENG 365. Poetry Writing (5). A workshop that introduces the varieties of forms, styles, voices, and strategies for writing poetry. Emphasizes reading professional models and the development and application of criteria for evaluating and revising poems. Prerequisite: ENG 263.

ENG 366. Creative Nonfiction Writing (5). A workshop that considers the varieties and forms of the creative essay and its historical evolution. Emphasizes reading professional models, the uses of research, and the development and application of criteria for evaluating and revising essays. Prerequisite: ENG 263.

ENG 367. Narrative Screenwriting (4). Writing screenplays in combination with the study of models and techniques. COM 367 and ENG 367 are cross-listed courses; students may not receive credit for both. Prerequisites: COM 201 or FVS 250.

ENG 368. Multi-Genre Writing Workshop (5). This online class will build creative writing skills in fiction writing, poetry writing, and creative nonfiction writing through writing exercises, reading of focused examples of published work, and individual and group workshops using discussion board. Prerequisite: ENG 263.

ENG 369. Variable Topics Writing Workshop (5). A workshop focusing on a specific

genre or topic in creative writing. Emphasizes reading professional models and the development and application of criteria for evaluating and revising texts appropriate to the topic. Prerequisite: ENG 263. May be repeated for up to 10 credits under a different subtitle.

ENG 371. Literature and History I (5). Historical and critical studies in literature from the classical era through the Renaissance. Prerequisites: ENG 302 and ENG 303. May be repeated up to 10 credits under a different subtitle.

ENG 372. Literature and History II (5). Historical and critical studies in literature from the mid-17th century through the mid-19th century. Prerequisites: ENG 302 and ENG 303. May be repeated up to 10 credits under a different subtitle.

ENG 373. Literature and History III (5). Historical and critical studies in literature from the nineteenth century through the mid-twentieth century. Prerequisites: ENG 302 and ENG 303. May be repeated up to 10 credits under a different subtitle.

ENG 374. Literature and History IV (5). Historical and critical studies in literature from the 20th century through the present. Prerequisite: ENG 302 and ENG 303. May be repeated up to 10 credits under a different subtitle.

ENG 380. Studies in Drama (5). Intensive study of representative examples of drama. ENG 380 and TH 380 are cross-listed courses; students may not receive credit for both. Prerequisites: ENG 302 and ENG 303. May be repeated up to 15 credits.

ENG 391. Workshop (1-5). May be repeated for credit.

ENG 398. Special Topics (1-6).

ENG 402. Writing Center Theory and Practice (1-5). Explore the benefits and techniques of one-on-one peer consulting. Study language skills and improve understanding of writing in various genres, contexts, and cultures. Consult with student writers in the University Writing Center, observing others consultations, reflecting, and improving one-on-one skills. Prerequisite: ENG 102 with a grade of B or higher. May be repeated for credit.

ENG 404. Advanced Technical Writing (5). Practice in designing, constructing, evaluating, and testing technical documents for specific purposes and organizational cultures. Prerequisite: ENG 310.

ENG 415. Critical Studies in American Literature (5). Intensive study of a group of texts focused by theme, author, theoretical approach, or social and historical context. Prerequisites: ENG 302 and ENG 303. May be repeated for credit under different subtitle.

ENG 417. Critical Studies in World Literature (5). Intensive study of a group of texts focused by theme, author, theoretical approach, or social and historical context. Prerequisites: ENG 302 and ENG 303. May be repeated for credit under a different subtitle.

ENG 418. Literary and Critical Theory (5). An investigation of the theory and practice of various critical perspectives and strategies as they inform the study of literary texts. Prerequisites: ENG 302 and ENG 303.

ENG 419. Critical Studies in British Literature (5). Intensive study of group texts focused by theme, author, theoretical approach, or social and historical context. Prerequisites: ENG 302 and ENG 303. May be repeated for credit under a different subtitle.

ENG 422. Teaching Young Adult Literature (5). A study of literature written for middle-level and early-high-school students. Prerequisites: EFC 340 and PSY 314 and ENG 302 and ENG 303, and admission to the Teacher Certification Program. This class is required prior to student teaching.

ENG 423. History of the English Language (5). In this course, students examine the systematic, evolutionary nature of language by focusing on the development of the English language.

ENG 429. Teaching Writing in Middle-level Humanities (5). Teacher candidates prepare as teachers of writing for the middle grades. Candidates align standards, content pedagog, and developmentally responsive teaching in middle level humanities. Course requires intensive writing in the humanities across Common Core genres.

ENG 430. Teaching Writing in the Secondary School (5). Theory into practice seminar on teaching writing, including writing process strategies, content pedagogy, instructional planning, assessment, best practices, and standards-based instruction. Co-requisites: Must enroll concurrently in ENG 488 and ENG 492. Prerequisites: EFC 340, 28 credits of English courses.

ENG 432. Phonetics and Phonology (5). Study of English phonetics and phonology as well as pronunciation

pedagogy. Prerequisites: ENG 304 and ENG 320.

ENG 435. Linguistics, Literature, and TESOL (5). Linguistic approaches to literature with an emphasis on poetry and prose. Prerequisites: ENG 304 and ENG 320.

ENG 437. Pedagogical Grammar and Discourse (5). Study of English grammar, grammar instruction, and discourse analysis. Prerequisites: ENG 304 and ENG 320.

ENG 453. Studies in Fiction (5). Extensive reading and analysis of prose fiction. Prerequisites: ENG 302 and ENG 303, or permission of instructor. May be repeated up to 15 credits under a different subtitle.

ENG 454. Studies in Nonfiction (5). Extensive reading and analysis of literary nonfiction. Prerequisites: ENG 302, ENG 303, or permission of instructor. May be repeated up to 15 credits under a different subtitle.

ENG 455. Studies in Poetry (5). Intensive study of representative example of poetry. Prerequisites: ENG 302 and ENG 303. May be repeated up to 15 credits.

ENG 461. Studies in Film and Culture (5). A critical examination of how American films both construct and appropriate images of American racial, ethnic, and cultural minorities. Course explores images of minorities created by the dominant culture from silent film era to contemporary movies and compares these constructions to those created by minority filmmakers. May be repeated for credit.

ENG 462. Studies in Film and/or Television Genres (5). An examination of a film and/or television genre: history, aesthetics, cultural context, social significance, and critical methodologies. Prerequisite: FVS 250. May be repeated for credit.

ENG 463. Studies in the Film Auteur (5). In-depth examination of the major cinematic works of a selected auteur director, such as Hitchcock, Chaplin, Kurosawa, W. Allen, Zhang Yimou, etc., with attention to major stylistic and thematic practices. Prerequisite: FVS 250. May be repeated for credit.

ENG 464. Advanced Fiction Writing (5). Intensive workshop further developing the techniques of writing literary fiction: weaving together character development, plot, dialogue, exposition, setting, and thematic structure. Emphasizes the development of criteria for evaluating and improving literary fiction, as well as reading professional models to learn technique. Prerequisite: ENG 364.

ENG 465. Advanced Poetry Writing (5). Intensive workshop further examining the genres within poetry, as well as experimenting with forms, discursive structures, and voice; revising for economy and precision; exploring metrical effects. Prerequisite: ENG 365.

ENG 466. Advanced Creative Nonfiction Writing (5). Intensive workshop further developing the techniques of writing creative nonfiction: researching, editing, assimilating features of fiction and poetry, and experimenting with structure, voice, and style. Reading professional models to learn technique. Prerequisite: ENG 366.

ENG 467. Advanced Narrative Screenwriting (4). Intensive workshop oriented toward techniques for creating or rewriting an original or adapted script for film/TV. Emphasizes narrative development, detailed script analysis and character motivation. Creation of a feature-length script for film or TV using the craft of the screenwriter to convey mood, energy, character, structure, and intent. Prerequisites: either COM 309 or ENG 367. Put on reserve 9/16/2014. Last taught in 2010. Will go inactive 8/24/17.

ENG 468. Contemporary Writers Colloquium (5). Genre specific seminar (poetry or fiction) with writing workshop element, featuring a schedule of visiting writers. Students will read work by visiting writers, develop critical thinking about craft, attend readings, explore contemporary publishing issues, and write both analytical papers and creative work. Prerequisites: ENG 364 or ENG 365. May be repeated up to 16 credits.

ENG 476. Integrated Humanities at the Middle-level Grades (5). This course focuses on integrated instructional strategies and methods for working with middle-level (grades 4-9) students in the humanities (English, reading, social studies, history, civics, economics, and geography) content areas. EDEL 476 and ENG 476 are cross-listed; students may not receive credit for both. Prerequisites: ENG 320 and admission to the teacher education or hold a valid Washington teaching certificate.

ENG 480. Survey of Linguistics (4). Linguistic concepts and the relation between linguistics and other fields of study. Open to seniors and graduate students only. ANTH 480 and ENG 480

are cross-listed courses; students may not receive credit for both. Prerequisite: senior standing.

ENG 484. Manastash: Literary Editing (3). Students will select and edit manuscripts for publication in the Manastash Literary Journal. Prerequisites: ENG 301 and ENG 303. May be repeated up to 6 credits.

ENG 485. Manastash: Literary Design and Production (2). Students will select and edit manuscripts for publication in, as well as design and construct, the Manastash literary journal. Prerequisites: ENG 301 and ENG 303. May be repeated up to 4 credits.

ENG 488. Teaching Portfolio (2). Students prepare an end-of-program E-Portfolio which illustrates their mastery of major program and professional sequence competencies. Prerequisite: current WSP/FBI fingerprint clearance, and admission to the Teacher Certification Program. Grade will either be S or U.

ENG 489. Senior Colloquium (2). Students prepare an end-of-major portfolio which illustrates their competence in interpreting and composing. Prerequisite: 48 credits of English courses. Grade will either be S or U.

ENG 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. Requires a student learning plan, cooperating employer supervision, and faculty coordination. Prerequisite: prior approval. May be repeated for a total of 12 credits. Grade will be either S or U.

ENG 491. Workshop (1-10). May be repeated for credit.

ENG 492. Practicum (3). Practicum accompanying intensive training in the pedagogy of writing presented in ENG 429 and ENG 430. Students connect teaching, learning, and assessment strategies to current research and practice and apply ELA endorsement competencies to specific learning situations. Co-requisite: ENG 429 or ENG 430. Prerequisites: completed 15 ENG credits for ML majors and minors or 28 ENG credits for English LA Teach majors, and full admission to the Teacher Certification Program, and current WSP/FBI fingerprint clearance. Grade will either be S or U.

ENG 496. Individual Study (1-6).

ENG 498. Special Topics (1-6).

ENG 499. Seminar (1-5).

Environmental Studies Courses

ENST 201. Earth as an Ecosystem (5). Introduction to the concept of our planet as a finite environment with certain properties essential for life. The dynamic nature of the earth's physical, chemical, geological, and biological processes and their interrelated "systems" aspects furnishes the thrust of this treatment. NS-Patterns and Connection Natural.

ENST 202. Environment and Society (5). The physical and cultural dimensions of environmental problems with particular emphasis given to the interaction between ecosystems, basic resources, population dynamics, and culture. NS-Application Natural Science.

ENST 210. Global Environment from a Local Perspective (4). Students will collect, analyze, and synthesize original field data in natural and social sciences on environmental issues relevant to global and local communities. Prerequisites: ENST 201 or ENST 202. Two hours lecture and three hours laboratory per week.

ENST 298. Special Topics (1-6).

ENST 303. Environmental Management (5). Development of attitudes and perceptions of our environment. Examination of the economic, political, and legal mechanisms and philosophical perspectives useful in managing the environment. Prerequisites: ENST 201 or ENST 202.

ENST 304. Environmental Methods and Analysis (5). Introduction to qualitative and quantitative methods in the social and natural sciences with emphasis on practical application to a variety of examples in the environment. Prerequisite: ENST 210. Three hours lecture and three hours laboratory per week.

ENST 310. Energy and Society (5). Through classroom and field experience, students will examine society's use of, and dependence upon, energy. Students will become more discerning citizens, able to take part in local, national, and global energy discussions. Prerequisite: sophomore standing or above. NS-Application Natural Science (W)

ENST 330. Environmental Leadership and Advocacy (5). Examines environmental groups, leadership models, and methods of environmental advocacy. Prerequisite: junior standing or above.

ENST 398. Special Topics (1-6).

ENST 444. Environmental Policy Formulation (4). Students will work together in interdisciplinary teams to

formulate and justify policy measures they think appropriate to meet some environmental problem investigated. Prerequisites: ENST 201 or ENST 202, and ENST 303.

ENST 455. Environmental Literature (3). Survey of literary works that thematically explore human relationships with place and environment. Sampling of various themes and genres, with a focus on Pacific Northwest.

ENST 460. Environmental Law (5). Introduction to the content of U.S. environmental law and the principal legal approaches to deal with environmental problems including common-law, statutory, regulatory, and economic-incentive systems. Prerequisite: junior standing or above.

ENST 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. By permission. May be repeated for credit. Grade will either be S or U.

ENST 491. Workshop (1-6). May be repeated for credit.

ENST 495. Senior Research (3-5). Independent student research in environmental studies project under supervision of faculty sponsor. By permission. May be repeated for credit up to 12 credits.

ENST 496. Individual Study (1-6).

ENST 498. Special Topics (1-6).

ENST 499. Seminar (1-5).

Ethnic Studies Courses

ETS 101. Ethnic Awareness (5). Awareness and understanding of the problems facing the American people in the area of race and ethnic relations, primarily focusing on ethnic minorities. The nature and scope of relationships between minority groups and the majority in the United States. SB1 S&B-Perspectives on U.S. (W).

ETS 296. Individual Study (1-6).

ETS 298. Special Topics (1-6).

ETS 299. Seminar (1-5).

ETS 350. Survey of Chicano Studies (5). A historical, economic, and political survey of the Chicano experience in the U.S. from 1540 to the present with regional emphasis on the American Southwest.

ETS 354. Minority Experiences (5). Explanations will be identified for institutional racism common to the history and character of American minorities. ETS 354 and SOC 354 are cross-listed courses; students may not receive credit for both.

ETS 398. Special Topics (1-6).

ETS 446. Sociology of Immigration (5). This course will serve sociology and ethnic studies students by covering the topic of immigration, it's impact on the people immigrating, as well as the citizens of the country they are immigrating to. ETS 446 and SOC 446 are cross-listed; students may not receive credit for both.

ETS 490. Contracted Field Experience (1-12). An educational plan designed to integrate classroom study with planned, supervised, and evaluated employment experience linking academic programs with students' career goals and interests. By permission. May be repeated for credit. Grade will either be S or U.

ETS 491. Workshop (1-6). May be repeated for credit.

ETS 496. Individual Study (1-6).

ETS 498. Special Topics (1-6).

ETS 499. Seminar (1-5).

Engineering Technologies Safety and Construction Courses

ETSC 101. Modern Technology and Energy (5). A study of how basic scientific principles are applied daily in industrial societies through a survey of transportation, energy and power, construction, and consumer product technologies. NS-Application Natural Science.

ETSC 145. Machine Woodworking (4). Machine and tool operations, wood technology, designing and construction principles, finishing methods and materials. Two hours lecture and four hours laboratory per week.

ETSC 160. Computer-aided Design and Drafting (4). Hands-on training in the operation of AutoCAD's design and drafting software system with emphasis on features, limitations, and dimensioning strategy.

ETSC 161. Architectural Computer Aided Design (3).

ETSC 201. Bio-related Technologies (5). Agriculture, medicine, fuel production, waste management, and other technologies in which living organisms are used to solve problems and modify products and systems. Includes problem-solving, design, and research activities for understanding bio-related technologies.

ETSC 210. Energy Sources and Power (3). A study of the

various forms of power, its generation, application, and implications for technology and a technological society.

ETSC 215. Small Engines (4). Maintenance and repair of one- and two-cylinder internal combustion engines. Two hours lecture and four hours laboratory per week. Prerequisite: IET 210.

ETSC 241. Programmable Logic Controller Applications (4). A study of programmable logic controller concepts, components, systems, programming and applications.

ETSC 242. Instrumentation (4). Analysis of instrumentation systems including data collection, transmission and conversion, sensor operation, signal conditioning, and application techniques. Prerequisite: EET 221.

ETSC 260. NURBS Modeling (4). Hands-on training in the production of 3-D models using Rhinoceros' NURBS (non-uniform rationale B-splines) geometry. Prerequisite: IET160.

ETSC 265. Three-dimensional Modeling (4). Design of parts, assemblies, and working drawings using 3-D solid modeling software, basic theory of threaded fasteners and gears, wielding representation, geometric dimensioning, and tolerancing. Two hours lecture and four hours laboratory per week. Prerequisites: IET 160.

ETSC 277. Introduction to Robotics (4). An applied introduction to robotics with focus on programming pre-configured robotic systems using LabVIEW. Prerequisites: IET 242 and EET 371 or permission of instructor.

ETSC 290. Cooperative Education (1-15). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. By permission. May be repeated for credit. Grade will either be S or U.

ETSC 296. Individual Study (1-6).

ETSC 298. Special Topics (1-6).

ETSC 299. Seminar (1-5).

ETSC 301. Engineering Project Cost Analysis (4). Techniques of economic cost analysis applied to engineering projects: interest, present value, annual equivalence, rate of return, payout criteria, and break even modeling. Prerequisite: MATH 153.

ETSC 311. Statics (4). Introductory statics including forces and equilibrium. Principles of structures including trusses, beams, frames, machines and friction. Prerequisites: MATH 173 and PHYS 111 or PHYS 181.

ETSC 312. Strength of Materials (4). Strength of materials, including stress analysis of axially loaded members, torsional members, beams, and indeterminate structures. Prerequisite: IET 311.

ETSC 353. Pattern Making (4). Two hours lecture and four hours laboratory per week. Prerequisite: MET 257.

ETSC 360. Brewing Process Technology (3). Study of brewing technology including equipment and processes from the brewhouse through packaging and distribution. Topics include factors that affect product quality. Prerequisites: CHEM 101, CHEM 111 or CHEM 181 and MATH 153 with a grade of C or higher. Student must also be admitted to the Craft Beer Trade Certificate Program.

ETSC 380. Quality Control (4). Provides the foundation necessary to understand and apply statistical quality control techniques, product reliability procedures, and the management aspects of quality assurance. Prerequisites: BUS 221 or MATH 311 or PSY 362 or permission.

ETSC 385. Product Design and Development (4). Methodology for the design and development of industrial and commercial products from conceptual stage to product introduction into the marketplace. Project based instructional structure. Three hours lecture per week.

ETSC 389. Technical Presentations (3). Written and oral presentations based on technical reference material utilizing the library, technical society publications, and the Internet.

ETSC 398. Special Topics (1-6).

ETSC 430. Methods of Teaching Technology Education (3). This course examines teaching techniques, content, and program requirements as they relate to teaching exploratory technology education in the public schools. Prerequisite: current WSP/FBI fingerprint clearance, and conditional or full admission to the Teacher Certification Program.

ETSC 433. Technology Education Laboratory Planning (3). Planning, management, and safety of school shops and labs in STEM related fields. Prerequisite: current WSP/FBI fingerprint clearance .

ETSC 435. Technology Education Exit Assessment (1). This is a senior level course designed to measure student competencies

in meeting state and national standards for program exit. Students are evaluated on their portfolio as presented in LiveText. Prerequisites: ETSC 430 and ETSC 433, and senior standing taken last quarter at CWU prior to graduation. Grade will either be S or U.

ETSC 442. Alternative Energy Resources and Technology (5). Overview of energy systems, with focus on wind, biomass, solar, biodiesel, geothermal, and sustainable energy systems. Includes energy production and conversion. Field trips. ETSC 442 and GEOG 442 are cross-listed courses; students may not receive credit for both. Prerequisite: junior standing or above.

ETSC 455. Engineering Project Management (4). Project-based synthesis used in engineering project management. Topics; bidding, contract management, scheduling, cost estimating and control, logistics, conflict management, team building, negotiating, and risk assessment. ETSC 455 and ETSC 555 are layered course; students may not receive credit for both. By permission.

ETSC 457. Advanced Foundry (4). Two hours lecture and four hours laboratory per week. Prerequisites: ETSC 353 and MET 257.

ETSC 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. By permission. May be repeated for credit. Grade will either be S or U.

ETSC 491. Workshop (1-6).

ETSC 496. Individual Study (1-6).

ETSC 498. Special Topics (1-6).

ETSC 499. Seminar (1-5).

Exercise Science Courses

EXSC 254. Foundations of Fitness (3). Overview of the fitness industry, components of fitness, and strategies to improve the health and well-being of the individual.

EXSC 298. Special Topics (1-6).

EXSC 318. Aerobic Fitness (3). This class provides the fitness and sports management major with an in-depth exploration of various cardiovascular exercise activities and equipment. Prerequisites: EXSC 350 and EXSC 350LAB.

EXSC 350. Gross Anatomy (3). Gross anatomy of all systems of the human.

EXSC 350LAB. Gross Anatomy Laboratory (2). Cadaver study of all anatomical systems of the human. Co- or prerequisite: EXSC 350.

EXSC 351. Physiology (4). Comprehensive study of the physiology of humans. Prerequisites: EXSC 350 and EXSC 350LAB.

EXSC 351LAB. Physiology Laboratory (1). Laboratory procedures that assess physiologic functioning of humans. Co- or prerequisite: EXSC 351.

EXSC 352. Assessment and Treatment of Athletic Injuries (4). Prevention and treatment of injuries and rehabilitation of injured athletes. Formerly EXSC 348; students may not receive credit for both. Prerequisites: EXSC 350 and EXSC 350LAB. Three hours lecture and two hours laboratory per week.

EXSC 370. Biomechanics (5). Physical laws and mechanical principles that govern human motion including internal and external forces and their effects, along with the measurement of kinematic, kinetic, and mechanics of movement. Prerequisites: EXSC 350 and EXSC 350LAB and PHYS 111 or PHYS 181.

EXSC 398. Special Topics (1-6).

EXSC 438. Therapeutic Exercise (3). This course covers the understanding, design, and development of rehabilitation exercises for acute, chronic and post operative injuries. Prerequisite: EXSC 350, EXSC 350LAB, and EXSC 352.

EXSC 446. Sports Nutrition (3). Integration and application of scientifically based nutrition and exercise physiology principles that support and enhance performance and good health. EXSC 446 and NUTR 446 are cross-listed courses; students may not receive credit for both. Prerequisite: NUTR 101 and (CHEM 113 or EXSC 450).

EXSC 450. Physiology of Exercise (4). Acute and chronic responses of the metabolic, muscular, cardiovascular, pulmonary, endocrine, and thermoregulatory systems to physical work. Prerequisites: EXSC 351 and EXSC 351LAB with a grade of C or higher, and admission to the exercise science or clinical physiology major.

EXSC 450LAB. Physiology of Exercise Laboratory (1). Accompanying laboratory to EXSC 450, includes data collection and laboratory write-ups on responses of the metabolic, muscular, cardiovascular, pulmonary, endocrine, and thermoregulatory systems to physical work. Prerequisites:

EXSC 351 and EXSC 351LAB with a grade of C or higher, and admission to the exercise science or clinical physiology major.

EXSC 452. Therapeutic Modalities (3). A detailed examination of injuries, therapeutic modalities, and rehabilitation in athletic training. Prerequisite: EXSC 352 with a grade of C or higher.

EXSC 455. Fitness Assessment and Exercise Prescription (4). Concepts and principles of appraising level of fitness, evaluating the results and designing physical fitness/exercise programs. Four hours lecture. Prerequisites: EXSC 351 and EXSC 351LAB.

EXSC 455LAB. Fitness Assessment and Exercise Prescription Laboratory (1). Accompanying laboratory to EXSC 455, includes techniques for assessing aerobic fitness, muscular strength and endurance, body composition and flexibility. Two hours laboratory. Prerequisites: EXSC 351 and EXSC 351LAB.

EXSC 456. Clinical Physiology (4). Pathophysiologic basis of non-communicable disease, screening procedures for severity, prescriptive guidelines. Prerequisites: EXSC 455 and EXSC 455LAB, and admission to the exercise science or clinical physiology majors.

EXSC 457. Exercise Adherence Strategies (3). Review of psychological factors involved in the exercise treatment of normal and special populations.

EXSC 461. Professionalism in Exercise Science (2). Overview of professional associations and their certifications, career opportunities and critical soft skills of the professions.

EXSC 463. Pediatric Issues in Exercise Science (5). Essential principles of growth, development, and exercise science and the application of these principles to children and youth. Prerequisites: EXSC 350 and EXSC 351 with grades of C or higher. Four hours of lecture and two hours of laboratory per week.

EXSC 464. Management of Fitness Facilities and Programs (4). This course covers conventional business management principles and operational guidelines to the unconventional business of health and fitness facilities.

EXSC 470. Clinical Biomechanics (3). Biomechanical characteristics in clinical populations, Investigation of specific biomechanical and clinical interventions and devises to improve functional movement abilities. Two hour lecture 2 hours lab per week. Prerequisites: EXSC 370, grade of C or higher.

EXSC 471. Sports Biomechanics (3). Physical laws and biomechanical principles that govern high-level human functioning: running, ballistic-power movements, striking and impacting, resistance factors, and sports engineering. Two hours lecture and two hours lab per week. Prerequisites: EXSC 370, grade of C or higher.

EXSC 480. Science of Resistance Exercise (4). This course addresses the scientific and theoretical bases of program design in resistance training. Prerequisites: EXSC 370, and EXSC 450, and EXSC 450LAB. Formerly EXSC 360, students may not receive credit for both.

EXSC 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, medical, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prerequisites: satisfactory completion of all courses in the major and a minimum major GPA of 2.7. May b repeated for credit. Grade will either be S or U.

EXSC 495A. Practicum: Fitness Centers/Clubs (2). Observation, monitoring, and supervised assistance of fitness assessment and exercise prescription in community fitness center/club setting. Grade will either be S or U.

EXSC 495B. Practicum: Clinical (2). Observation, monitoring, and supervised activity in clinical rehabilitation and athletic training setting. Grade will either be S or U.

EXSC 495C. Practicum: Management (2). Observation, monitoring, and supervised leadership activity in fitness, health, and sport management settings. Grade will either be S or U.

EXSC 495D. Practicum: Laboratory Assessment (2). Laboratory techniques for assessment of body composition, cardiovascular, strength, and flexibility components of fitness. Grade will either be S or U.

EXSC 498. Special Topics (1-6).

Family and Consumer Science Consumer Management Courses

FCSC 298. Special Topics (1-6).

FCSC 371. Consumer Awareness (3). Consumer aids, protection, and information; problems of quality and quantity. Consumer

decisions, how consumption influences the market.

FCSC 398. Special Topics (1-6).

FCSC 472. Life Management (5). Study of family in human ecosystem. Emphasis on physiological and psychological well-being and management of resources. Solve practical family problems.

FCSC 491. Workshop (1-6). May be repeated for credit.

FCSC 498. Special Topics (1-6).

FCSC 499. Seminar (1-5). May be repeated for credit.

Family and Consumer Science Education Courses

FCSE 298. Special Topics (1-6).

FCSE 326. Curriculum in Career and Technical Education for Family and Consumer Sciences. (3). Instructional organization and classroom procedure in vocational family and consumer sciences programs.

FCSE 398. Special Topics (1-6).

FCSE 422. Impact of Education Reform on FCS (2). Student will use program of study content knowledge to improve a community situation. Prerequisite: FCSE 326.

FCSE 426. Methods and Materials of Teaching Family and Consumer Sciences (3). Application of the philosophy, purposes, teaching techniques, and assessment of family and consumer sciences programs in the secondary schools. Prerequisites: FCSE 326 and EDCS 311.

FCSE 491. Workshop (1-6). Course content identified by title in the university class schedule. May be repeated for credit under different titles.

FCSE 498. Special Topics (1-6).

FCSE 499. Seminar (1-5).

Family and Consumer Science General Courses

FCSG 205. FCS Entry Assessment (1). This course consists of self-assessment and assessment by the faculty of writing skills, speaking skills, visual/graphic skills, and knowledge of theory and research. Grade will either be S or U.

FCSG 220. Leadership in Human Development (4). This highly interactive (challenge course, community service) course focuses on developing students' leadership skills that provide a base for improved communication in both personal and professional situations.

FCSG 230. Program and Event Budgeting (2). Budget processes, terminology, and formats will be covered along with the preparation of basic budgets for events and programs.

FCSG 296. Individual Study (1-6).

FCSG 305. Family and Consumer Sciences Student Leadership (1). Students engage in leadership development through identifying, organizing, conducting and assessing course activities. Elective credit for major. May be repeated up to 6 credits. Grade will either be S or U.

FCSG 320. Program Management and Planning (4). A holistic approach to program management. Content deals with planning, organizing, and controlling programs. For example: special events, recreation, product development, construction, and business.

FCSG 379. Professional Development and Internship Planning (3). Students will explore career options and networks within their industry, develop materials for a job search, and acquire skills related to professionalism.

FCSG 405. FCS Exit Assessment (1). During last quarter of their program, students are assessed on writing skills, speaking skills, visual/graphic skills, and knowledge of theory and research. Prerequisite: FCSG 205. Grade will either be S or U.

FCSG 419. Applied Research and Evaluation (3). Basics of research design including problem identification, research and evaluation similarities and differences, sampling, survey development, methods and application, implementation, data analysis, and review of published research.

FCSG 420. Program Promotion and Advertising (5). Provides students with skills through practical exercises, lectures, demonstrations, and examples to enable them to use marketing concepts and tools to develop effective campaigns.

FCSG 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. By permission. May be repeated for credit. Grade will either be S or U.

FCSG 496. Individual Study (1-6).

Family and Consumer Science Housing and Interior Courses

FCSH 166. Applied Creativity (3). The creative process; blocks to creativity, creative problem solving, principles and elements

of design in housing and interiors.

FCSH 298. Special Topics (1-6).

FCSH 366. History of Housing and Furniture I (3). Survey of historic interiors, cabinetmakers, decorative arts, furniture from the antiquity to the middle of the 1700s. Put on reserve 9/16/2014. Last taught in 2009. Will go inactive 8/24/17.

FCSH 367. Family Housing (3). An evaluative study of the design, quality, and cost of housing environment.

FCSH 392. Housing Practicum (6-12). Work study experience in various aspects of the housing profession. Prerequisite: FCSH 265. May be repeated up to 12 credits.

FCSH 398. Special Topics (1-6).

FCSH 465. History of Housing and Furniture II (3). Survey of historic interiors, cabinetmakers, decorative arts, furniture from the late 1700s to the present. Put on reserve 9/16/2014. Last taught in 2009. Will go inactive 8/24/17.

FCSH 491. Workshop (1-6). May be repeated for credit.

FCSH 492. Housing Practicum (6-12). A work study course including practical experience in a phase of housing of the student's choice, accompanied with a seminar. Prerequisite: FCSH 265. May be repeated up to 12 credits.

FCSH 498. Special Topics (1-6).

FCSH 499. Seminar (1-5).

Finance Courses

FIN 174. Personal Finance (5). Broad spectrum course covering financial issues encountered by individuals throughout their lives. Topics include but are not limited to: Preparing a personal budget, money management, investments, retirement planning, and insurance. Basic Skills 4 - Math.

FIN 370. Introductory Financial Management (5). An introduction to financial decision making. Topics include financial statement analysis, time value of money, risk and return, securities valuation, capital budgeting, cost of capital, and capital structure. Prerequisites: (ACCT 251 and BUS 221 and ECON 201 and admission to a College of Business; or admission to a College of Business Graduate Program); or (admission to an Actuarial Science major who has completed ACCT 251 and ECON 201 and MATH 172 and MATH 173 and BUS 221 or MATH 311 with grades no lower than a C (2.0). MATH 311 may be taken concurrently.

FIN 466. Working Capital Management (5). Course covers the management of current assets and current liabilities, describes the nature and types of short-term credit instruments, and incorporates a significant use of Excel. Prerequisite: a grade of C or higher in FIN 370 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25.

FIN 470. Intermediate Financial Management (5). A review, consolidation, and extension of the FIN 370 class. Additional focus on the theory, practice, and analysis of the firm's investing and financing activities as these activities relate to the value creation process. Prerequisites: (a grade of C or higher in FIN 370 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25) OR (FIN 370 with a minimum grade of C AND admission to an Actuarial Science major).

FIN 474. Personal Financial Planning (5). Introduction to full range of financial planning decisions, including: budgeting, investing, tax planning, risk management, employee benefits, retirement, and estate planning. Prerequisites: a grade of C or higher in FIN 370 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25.

FIN 475. Investments (5). Principles of investment valuation. Topics include a survey of securities and securities markets, analysis of risk, expected return, timing, and selection of stocks and bonds in a portfolio context. Prerequisites: (a grade of C or higher in FIN 370 and admission to a College of Business major AND completion of the College of

Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25) OR (FIN 370 with a minimum grade of C AND admission to an Actuarial Science major).

FIN 477. International Finance (5). Financial decision making in an international setting. Explores both traditional areas of finance and recent innovations in financial management from the perspective of the multinational corporation. Prerequisites: a grade of C or higher in FIN 370 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25.

FIN 478. Management of Financial Institutions (5). Asset-liability management process; investment and financing activities of banks, savings and loans, and credit unions. Prerequisites: a grade of C or higher in FIN 370 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25.

FIN 479. Derivative Securities and Risk Management (5). Survey of characteristics, markets, and pricing of options, futures, and other derivative securities and their use in managing risk for large and small businesses and investors, domestically and internationally. Prerequisites: a grade of C or higher in FIN 370 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25.

French Courses

FR 151. First-year French (5). Conversational approach with intensive oral-aural drill. Firm foundation in the basic structural principles of the language. Courses must be taken in sequence.

FR 152. First-year French (5). Conversational approach with intensive oral-aural drill. Firm foundation in the basic structural principles of the language. Prerequisite: FR 151. Courses must be taken in sequence.

FR 153. First-year French (5). Conversational approach with intensive oral-aural drill. Firm foundation in the basic structural principles of the language. Prerequisite: FR 152. Courses must be taken in sequence.

FR 181. Rapid Review of First Year French (5). Intense review of first-year French for people with the equivalent for two years of school French who wish to hone their listening, speaking, reading, writing, and cultural skills and possibly continue with second-year French. Prerequisite: two years of high school French or equivalent.

FR 251. Second-year French (5). Thorough review of French grammar and graduated readings in modern French prose with discussions conducted in French. Courses must be taken in sequence.

FR 252. Second-year French (5). Thorough review of French grammar and graduated readings in modern French prose with discussions conducted in French. Prerequisite: FR 251. Courses must be taken in sequence.

FR 253. Second-year French (5). Thorough review of French grammar and graduated readings in modern French prose with discussions conducted in French. Prerequisite: FR 252 . Courses must be taken in sequence.

FR 298. Special Topics (1-6).

FR 301. Introduction to French Literature (3). This course is designed as a transition course to prepare students for the advanced literature courses. Appreciation of literature and methods of analysis will be taught on a basic level through the careful examination of specific texts. Prerequisite: FR 253.

FR 341. Intermediate Composition and Grammar (3). Prerequisite: FR 253. Should be taken in sequence with FR 441.

FR 343. Intermediate Conversation (2). Prerequisite: FR 253.

FR 351. French Civilization I: Pre-history to the Revolution

(4). An overview of continental French history and culture from pre-history to the 1789. Prerequisite: FR 253.

FR 352. French Civilization II: Revolution to 1968. (4). An overview of continental French history and culture from the French Revolution to cultural revolution of 1968. Prerequisite: FR 253.

FR 353. French Civilization III: Contemporary France (4). An overview of contemporary French culture through readings and viewings of French media with emphasis on topics such as immigration, religion, globalization, and politics of the family. Prerequisite: FR 253.

FR 361. Cultures of the French Caribbean (4). A survey of the history and cultures of the French Caribbean from the colonial era to the present. Prerequisite: FR 253.

FR 362. Cultures in French Canada (4). A survey of the history and cultures of francophone Canada from the colonial era to the present. Prerequisite: FR 253.

FR 363. Cultures of Francophone Africa (4). A survey of the history and cultures of francophone Africa, including the Maghreb and Sub-Saharan Africa, from the colonial era to the present. Prerequisite: FR 253.

FR 380. Topics in French Language, Literature and Culture (4). This course will offer different topics on a rotating basis: these topics will include French language (grammar and conversation), French and Francophone literature and cinema, and French and Francophone cultures. Prerequisite: FR 253 or by permission of instructor. May be repeated up to 12 credits.

FR 398. Special Topics (1-6).

FR 442. Translation and Interpretation (2). Prerequisite: FR 342.

FR 460. French Cinema (4). Students will view and analyze French films as a backdrop to the discussion of the history of French cinema.

FR 491. Workshop (1-6). May be repeated for credit.

FR 496. Individual Study (1-6).

FR 498. Special Topics (1-6).

Family Studies Courses

FS 101. Skills for Marriage and Intimate Relationships (4). Designed to provide preparation for marriage and other long-term committed relationships. Teaches skills in budgeting, conflict resolution, and establishing a fulfilling sexual relationship in the context of marriage.

FS 232. Child Development (3). Developmental characteristics of children with emphasis from conception to eight years. Includes observation techniques. FS 232 and EDEC 232 are cross-listed courses; students may not receive credit for both.

FS 234. Contemporary Families (4). Origins and historical development of families; cultural variations, contemporary trends. Draws upon information and insight from numerous root disciplines to explore family structure and function.

FS 235. Relationships and Personal Development (3). Development of interpersonal relationships from initial encounters to stable commitments. Major focus on interaction patterns in intimate relationships. FS 235 and PSY 235 are cross-listed courses; students may not receive credit for both.

FS 298. Special Topics (1-6).

FS 305. Junior Seminar (1). Preparation for practicum/internship and service learning. This course is required of any family studies major in a volunteer, practicum, or internship experience. Prerequisite: family studies majors only.

FS 310. Family Issues in the 21st Century (4). An introduction to social issues that impact family life. Current issues pertaining to individual and family relationships are assessed from an interdisciplinary perspective. SB-Found Human Adaptations (W)

FS 320. Theories of Family Dynamics (4). Internal dynamics of family functioning, including processes by which families deal with change, stress, and conflict. Major theoretical orientations to the study of family, and an introduction to the scientific process. Prerequisite: FS 101 and FS 234, and admission to a family studies major.

FS 333. Culture and Marriage (4). The reciprocal relationships between the biophysical and cultural components in mating, nurturing and sexual access. Cross-cultural patterns in marriage. FS 333 and ANTH 333 are cross-listed courses; students may not receive credit for both.

FS 334. Family Problems and Mediation (4). Problems arising out of the interaction of family members. Mediation techniques, family policy, and theories and ethics in studying families. FS 334 and FS 554 are layered courses; students may not receive credit for both.

FS 335. Divorce and Remarriage (3). Personal, family, and legal aspects of divorce and remarriage; historical antecedents and trends.

FS 336. Parent Education and Guidance (3). Study of parent education models and methods of teaching parent education in community and school settings. Prerequisite: FS 234.

FS 337. Human Sexuality (4). The biophysical, psychosocial, and behavioral aspects of sexuality with emphasis on making responsible sexual decisions and promoting healthy relationships. Prerequisite: sophomore standing or above. SB3-Found Human Adaptations.

FS 338. Attachment Theory and Practice (4). Attachment theory and strategies, parenting practices to facilitate attachment, and the impact of trauma on attachment. Reviews attachment trends and research and provides practical application of attachment in work with children and families. Prerequisite: FS 232 or permission of instructor.

FS 344. Foundations of Marriage and Family Therapy (4). Introduction to Marriage and Family Therapy (MFT) including systems theory, MFT as a profession, and requirements for entry into MFT graduate programs. Basic skills and interventions that can be applied in many social service settings. Prerequisite: FS 101.

FS 398. Special Topics (1-6).

FS 403. Family Communication (4). This course is designed to provide an overview of family dynamics and the processes that influence family communication and family functioning. FS 403, COM 403 and FS 503 are cross-listed courses; students may not receive credit for both.

FS 405. Senior Seminar (2). Seminar on professionalism, ethics, and professional networking within the family studies profession. Family studies majors only.

FS 415. Therapeutic Play (4). Application of play theories to intervene with children and families. Content will include classical and contemporary theories of play, play across child development, assessment using play, and skills to facilitate play sessions in various contexts. Prerequisite: FS 232 or permission of instructor.

FS 416. Child Life I: Child Life Scope of Practice (4). Introduction to the child life profession taught by a Certified Child Life Specialist. Content includes the history and scope of practice of child life, ethical issues, multi-cultural perspectives, and therapeutic intervention with medically fragile children. Prerequisite: FS 232 or permission of instructor.

FS 417. Childhood Diseases and Disorders (4). Understanding of common pediatric diseases and diagnoses, medical terminology, childhood hospitalization, corrective pediatric care, hospital technology, and medical documentation relevant to work as a child life specialist. Prerequisites: FS 232 and FS 416, or permission of instructor.

FS 418. Child Life II: Impact of Child Hospitalization (4). Advanced understanding of the child life profession including current research, communication and therapeutic relationships in a hospital context, program administration and supervision, and the impact of hospitalization on children and families. Prerequisites: FS 232 and FS 416, or permission of instructor.

FS 419. Research in Family Studies (4). Methods of research used in studying families and relationships, including measurement, research design, ethics, sampling, and casual inference. Students will complete a research project emphasizing application of material. FS 419 and FS 519 are equivalent courses; students may not receive credit for both. Prerequisites: FS 101 and FS 234.

FS 432. Theories in Child Development (3). Assists the student in formulating his or her own general assumptions about the nature of child development through study of various theoretical viewpoints and current issues. EDEC 432 and FS 432 are cross-listed courses, students may not receive credit for both.

FS 433. Family Life Education (4). The broad objectives, trends, methods and materials of family life education programs in various settings. FS 433 and FS 533 are layered courses; students may not receive credit for both. Prerequisites: FS 101 and FS 234 and FS 235. Family studies majors only.

FS 434. Diversity in Families (4). Students will gain strategies for working with a broad range of families with diverse structures, backgrounds and circumstances. Emphasis on applying conceptual frameworks to families' situations, communicating and collaborating with families, and supporting families' goals. Prerequisite: FS 234.

FS 435. Family Gerontology (4). A review of the research literature on families in later life, focusing on family

interactions and building family strengths. FS 435 and FS 545 are layered courses; students cannot receive credit for both.

FS 439. Families and Public Policy (4). Impact of governmental policies on families; policy implications of changes in the structure and composition of families. FS 439 and FS 539 are equivalent courses; students may not receive credit for both. Prerequisites: FS 101 and FS 234.

FS 440. Teaching for Family Studies (1-3). Supervised teaching assistant experience in family studies courses. Prerequisite: permission of instructor. By permission only. May be repeated up to 6 credits.

FS 490. Cooperative Education (1-12). A contracted field experience with business, industry, government, or social service agency. Requires a cooperative learning agreement. By permission. May be repeated up to 20 credits. Grade will either be S or U.

FS 491. Workshop (1-6).

FS 492. Family Studies Practicum (1-6). Supervised practicum experience for family studies major. Prerequisite: family studies major only. May be repeated up to 15 credits.

FS 498. Special Topics (1-6).

FS 499. Seminar (1-5).

Film and Video Studies Courses

FVS 215. Production Technology Skills (1). Specialized hands-on skills course in film and television software and/or equipment. Topics may include: animation, compositing, audio techniques, video editing, image editing, production equipment, or pre-production software. Prerequisite: check with major advisor for topic availability. May be repeated for credit up to 6 credits, under a different sub-topic. Grade will be S or U.

FVS 250. Introduction to Film and Video Studies (5). Learning and applying motion picture vocabulary and aesthetic concepts through screenings, discussions, and writing. Emphasis on the social context, cultural influences, and aesthetic qualities of film. Prerequisite: ENG 101 and ENG 102 with a grade of C- or higher. AH-Aesthetic Experience (W)

FVS 256. Sound and Mixing - Aesthetics and Essentials (3). Students will gain an understanding of how to mix on a digital console. Audio/sound aesthetics and fundamentals will also be the focus of this course. FVS 256 and TH 256 are cross-listed; students may not receive credit for both.

FVS 398. Special Topics (1-6).

FVS 489. Senior Colloquium (2). Students prepare end-of-major portfolios, which illustrate the competence in critical and theoretical analysis of film and video production. Grade will either be S or U.

FVS 490. Cooperative Education (1-12). Practical experience in career fields in Film and Video Studies. Individual contract field experience with business, industry, government, or non-profit organization. Requires a student learning plan, cooperating employer supervision, and faculty coordination. May be repeated for a total of 12 credits. Grade will either be S or U.

FVS 491. Workshop (1-6).

FVS 492. Practicum (2). Focused, practical application of classroom skills-sets to the production of film projects under faculty direction and/or supervision, and/or practice planning instruction, teaching and assessing learning in film/video related course(s). Prerequisites: film and video studies major status, and senior status, and permission of program director. May be repeated up to 6 credits. Grade will either be S or U.

FVS 496. Individual Study (1-6).

FVS 498. Special Topics (1-6).

FVS 499. Seminar (1-6).

Geography Courses

GEOG 101. World Regional Geography (5). Regions and nations of the world together with the changing elements of the physical and human environment that support them. SB-Perspective on World Culture.

GEOG 107. Our Dynamic Earth (5). The complex weather, climate, water, landforms, soils, and vegetation comprising Earth's physical environments over space and time. Incorporates map interpretation and scientific analysis in understanding various landscapes and human impacts upon those landscapes. NS-Patterns and Connection Natural.

GEOG 108. Introduction to Human Geography (5). Distribution and spatial variation of population, settlement patterns, cultural elements of language, religion, and lifeways, and the economic and political organization of the planet. SB-Found Human Adaptations.

GEOG 203. Introduction to Maps and Cartography (4). Basic introduction to the principles of cartographic communication. Emphasis on using and understanding a wide variety of general purpose, topographic, and thematic map types.

GEOG 250. Resource Exploitation and Conservation (4). How increased global populations extract, use, recycle, or conserve natural resources. The class will concentrate on resource consumption throughout the United States and the world with a focus on history, sustainability, management, policy, and economics.

GEOG 273. Geography of Rivers (5). Global, regional, and local physical and cultural patterns and processes within river basins. NS-Application Natural Science.

GEOG 279. Geography of the West (1-12). In-depth field examination of the complex, physical, human, and resource issues of one or more of the varied sub regions of western North America. May be repeated for up to 12 credits under a different topic.

GEOG 290. Cooperative Education Field Experience (1-5). Individualized field experience with business, industry, government, or other agency. Requires a student learning plan, cooperating employer supervisors, and faculty coordinator. Prerequisite: sophomore standing or above. By permission. May be repeated for up to 10 credits. Grade will either be S or U.

GEOG 303. Introductory GIS (5). Applications, scope, and benefits of Geographic Information Systems (GIS), classification and components of GIS; data acquisition; data management; data errors; implementation considerations; applied experience using GIS software. Students will be given a computer literacy test during the first week of class. Continued enrollment is dependent upon passing the test. Prerequisites: computer literacy, and GEOG 203, or GEOG 210, or ANTH 323, or BIOL 360.

GEOG 304. Economic Geography (5). Geographic survey of human livelihood and interaction with the environment. Agriculture, industry, and urbanization are examined in the context of an increasingly interdependent world system.

GEOG 305. Introduction to Land Use Planning (5). Investigation into the process and practice of urban and regional planning. Emphasis on historical development, legal foundations, and techniques of planning in the United States.

GEOG 306. Transportation Geography and Planning (4). Introduction to the planning and spatial analysis of transportation networks. Evaluation of the economic, environmental, and social consequences of major transportation modes. Application of transportation planning principles at the local, regional, and national scales.

GEOG 308. Cultural Geography (5). Consequences of cultural diversity in the human occupation of the Earth and the interactions of human and natural systems.

GEOG 311. Qualitative Methods in Geography (4). Introduces students with qualitative research methods in geography with particular attention to participatory observation, interviews, data transcription, oral histories, focus groups, descriptive narrative, archival research, document analysis, data coding and interpretation strategies.

GEOG 315. Geography of Oceania (4). Examination of the physical and cultural geography, human-environment interactions, landscapes, and regional diversity of Australia, New Zealand, and the Pacific Islands. Formerly, GEOG 415.

GEOG 325. Field Methods in Geography (5). Theory of, and practice in, geography field methods via in-depth field research projects. Topics include field observation, data collection, and data interpretation. Formerly GEOG 425, students may not receive credit for both. Two hours lecture and five hours field per week.

GEOG 330. Airphoto Interpretation (5). Introduction to airborne photography and the tools and techniques to apply this photography to geographical issues. Three hours lecture and two hours laboratory per week. Course fee required. Prerequisites: GEOG 203, or GEOL 210.

GEOG 346. Political Geography (4). The spatial structure of political units. The effect of political, economic, social, and Earth resource factors on the areas, shapes, and boundaries of these units, and on the distribution of populations and institutions.

GEOG 352. Geography of North America (4). Examination of the physical and cultural geography, human-environment interactions, landscapes, and regional diversity of the United States, Canada, and Mexico.

GEOG 355. Geography of the Pacific Northwest (4). Examination of the physical and cultural geography, human-environment interactions,

landscapes, and regional diversity of the Pacific Northwest.

GEOG 361. Soils (5). Properties, factors, processes, and classification of Earth's soils, past and present. Four hours lecture and three hours of laboratory or field trips each week. GEOG 361 and GEOG 461 are layered courses; students may not receive credit for both. Prerequisite: GEOG 107.

GEOG 366. Geography of the Middle East (4). Examination of the physical and cultural geography, human-environment interactions, landscapes, and regional diversity of the Middle East.

GEOG 368. Geography of Middle America (4). Examination of the physical and cultural geography, human-environment interactions, landscapes, and regional diversity of Mexico, Central America, and the Caribbean.

GEOG 370. Geography of South America (4). Examination of the physical and cultural geography, human-environment interactions, landscapes, and regional diversity of South America.

GEOG 371. Geography of Europe (4). Examination of the physical and cultural geography, human-environment interactions, landscapes, and regional diversity of Europe.

GEOG 372. Geography of Russia (4). Examination of the physical and cultural geography, human-environment interactions, landscapes, and regional diversity of Russia.

GEOG 373. Water Resources (4). Foundation course for understanding the physical and social dimensions of water resource use on a global scale. Special attention paid to issues in the American West. GEOG 107 is recommended.

GEOG 375. Geography of Asia (4). Examination of the physical and cultural geography, human-environment interactions, landscapes, and regional diversity of Asia. Formerly, GEOG 475.

GEOG 379. Geography of the West (1-12). In-depth field examination of the complex physical, human, and resource issues of one or more of the varied sub-regions of western North America. May be repeated for up to 12 credits under a different topic.

GEOG 381. Urban Geography (4). The spatial and size distribution of cities as explained by their historical development and major functions. Analysis of the internal structure of cities and the results of urban growth.

GEOG 382. Hydrology (5). Provides a comprehensive introduction to both the global and local hydrologic cycle. Covers constituent processes, their measurements and quantitative relationships, plus basic water quality parameters. GEOG 382 and GEOG 482 are layered courses; students may not receive credit for both. Prerequisite: GEOG 107.

GEOG 386. Geomorphology (5). Descriptive and interpretive examination of the Earth's landforms and the processes and factors that shape these features over space and time. Four lectures and three hours laboratory or field trips each week. GEOG 386, GEOG 486, and GEOL 386 are cross-listed courses; students may not receive credit for more than one. Prerequisites: (GEOL 101 or GEOL 102 or GEOL 103 and GEOL 101LAB) or GEOG 107.

GEOG 387. Biogeography (5). Investigates the functional relationships between biophysical processes and their spatial and temporal patterns at various scales. Introduces approaches to land systems analysis focusing upon ecosystems. GEOG 387 and GEOG 487 are layered courses, students may not receive credit for both. Prerequisite: GEOG 107.

GEOG 388. Weather and Climate (5). Elements, factors and processes affecting Earth's climates, present, past, and future. Four hours lecture and two hours laboratory/field per week. Course fee required. GEOG 388 and GEOG 488 are equivalent courses, students may not receive credit for both. Prerequisite: GEOG 107.

GEOG 398. Special Topics (1-6).

GEOG 399. Seminar (1-5).

GEOG 401. Advanced Topics in Regional Geography (3). Detailed examination of selected topics in regional geography. Topics will vary; consult with instructor. Prerequisite: 300-level regional geography course in area of course emphasis or permission of instructor. May be repeated up to 6 credits.

GEOG 404. Intermediate GIS (5). Applied concepts, principles, and operation of fundamental GIS applications, including raster-vector data models, topology, digitizing, and various analytical techniques such as overlay, buffers, and Boolean queries. Lecture and practical applications. ANTH 404, GEOL 404, and GEOG 404 are cross-listed courses; students may not receive credit for more than one. Prerequisites: either GEOG 303, GEOL 303, or ANTH 303.

GEOG 405. Advanced Topics in Land Use Planning (3). Selected issues and problems in land use planning and environmental control. Topics may include growth management, small town and rural planning, or coastal zone management. Prerequisite: GEOG 305. May be repeated for credit under a different subtitle.

GEOG 407. Advanced Topics in Physical Geography (3). Topics will vary; consult with instructor. May be repeated for credit under a different topic. May be repeated up to 6 credits.

GEOG 408. Advanced Topics in Human Geography (3). Focuses on the content of GEOG 308 in greater detail with particular emphasis on land use in non industrial societies. Topics will vary; consult with instructor.

GEOG 409. Quantitative Methods in Geography (5). Quantitative analysis assessment in geography and resource management. Emphasis on spatial statistics. Prerequisite: MATH 130 or post-baccalaureate/graduate student standing. Formerly GEOG 309.

GEOG 417. Advanced GIS (4). Advanced GIS principles, techniques, analysis, and application. Lecture and practical hands-on experience. Applied experience using GIS software. GEOG 417, ANTH 417 and GEOL 417 are cross-listed courses; students may not receive credit for more than one. Prerequisites: GEOG 404, GEOL 404, or ANTH 404.

GEOG 422. Geography of Food and Agriculture (4). Overview of food and agriculture as it relates to specific geographic regions, production regimes, trade, and cuisine. Domestic and international issues explored through lecture and field study. Prerequisite: junior standing or above.

GEOG 427. Environmental Archaeology (4). Analyses of sediments and plant and animal remains from archaeological sites are used to explore relationships between humans and their environments. Case studies combine natural and physical sciences to study long-term change in landscapes and ecosystems. ANTH427/527 AND GEOG427/527 are cross-listed courses. Graduate credit requires an additional research paper to be specified in syllabus. Prerequisites: ANTH 120 or GEOG 107.

GEOG 430. Remote Sensing (5). Principles of acquisition, analysis, and use of remotely sensed data (LANDSAT, SPOT, Ikonos, etc.). Applied experience using image processing software. Three hours lecture and three hours laboratory per week. GEOG 430, GEOL 430, and GEOL 530 are cross-listed courses; students may not receive credit for more than one course. Prerequisites: GEOG 410 or GEOL 210.

GEOG 432. Heritage Preservation (4). Students will discuss the merits of preserving heritage buildings and landscapes, and question what is deemed worth of heritage designation. Techniques will be developed for investigating a building's history and experience gained in writing proposals and policies to preserve heritage resources. ANTH 432 and GEOG 432 are cross-listed courses; students may not receive credit for both. Prerequisite: GEOG 305 or enrollment in REM Program or permission of instructor.

GEOG 440. Ecology and Culture (4). Investigation into interdependent environmental and human cultural systems. Traditional agroecologies and subsistence strategies; contemporary problems of resource management, social equity, political ecology, and sustainable development. GEOG 440 and ANTH 440 are cross-listed courses; students may not receive credit for both.

GEOG 441. Climate Change: Human and Biophysical Dimensions (4). A critical analysis and examination of past, contemporary and future scenarios of climate change with a particular focus on the biophysical environment and human societies.

GEOG 442. Alternative Energy Resources and Technology (5). Overview of energy systems, with focus on wind, biomass, solar, biodiesel, geothermal, and sustainable energy systems. Includes energy production and conversion. Field trips. GEOG 442 and IET 442 are cross-listed courses; students may not receive credit for both. Prerequisite: junior standing.

GEOG 443. Energy Policy (5). Legal, institutional, and economic frameworks for regional, national, and international energy decisions.

GEOG 444. Mineral Resources (4). Foundation course for understanding the physical, social, economic, and legal dimensions of mineral resource use on a global scale. Emphasis paid to issues in the American West. Prerequisite: GEOG 107 or GEOL 101 or GEOL 103 or ENST 201. Available Winter 2015.

GEOG 445. Natural Resources Policy (4). Development and significance of policies affecting

resource management in the United States.

GEOG 448. Geographic Approaches to Environmental Resource Analysis (5). Examination of the techniques and methodologies used for the evaluation and sustainable management of environmental resources from a variety of perspectives. Prerequisites: GEOG 107 and GEOG 250.

GEOG 449. Environmental Hazard Analysis and Management (5). Physical, human and resource geography of environmental hazards. Includes examination of the techniques and methodologies used for the assessment, and management of environmental hazards from a variety of perspectives. Prerequisite: GEOG 107.

GEOG 450. Arid Environments (5). Physical, human, and resource geography of Earth's arid settings. Prerequisite: GEOG 107.

GEOG 451. Mountain Environments (5). Physical, human, and resource geography of mountain settings. Prerequisite: GEOG 107.

GEOG 452. Coastal Environments (5). Physical, human, and resource geography of coastal environments. Emphasis on physical processes, resource issues, and environmental management of coastal environments. Prerequisite: GEOG 107.

GEOG 453. Riparian and Wetlands Analysis (5). Physical, human, and resource geography of wetland environments. Emphasis on physical processes, resource issues, and environmental evaluation and management of wetland environments. Prerequisite: GEOG 107.

GEOG 454. Forest Environments (5). Examinations of topics related to global forest including forest ecology, disturbance regimes, biogeography, and management issues. Case studies will focus on western U.S. forest and highlight the use of geospatial techniques to study forest change. Prerequisites: GEOG 107.

GEOG 455. Pyrogeography (4). An investigation of patterns of fire on Earth: past, present, and future. Topics covered include fire ecology, the history of fire, ecosystem impacts, human use of fire, fire management, and fire and climate change. Prerequisites: GEOG 107 and upper-division standing, or permission of instructor.

GEOG 456. Recreation Geography (5). Provides a geographically-based understanding of recreational resource use and management in diverse outdoor environments. Includes study of factors influencing supply and demand of recreational resources, recreational land use, socio-economic and ecological impacts, and introduction to resource management and analytical techniques. Prerequisite: GEOG 250 or permission by instructor.

GEOG 458. People, Parks, and Protected Areas (4). This course explores historical and contemporary, scientific, and socio-ecological principles associated with parks and protected areas in the world. Concepts explored will include: biodiversity, sustainability, resilience, conservation techniques and methodologies for establishing protected area boundaries, adaptive management, and park-people conflicts.

GEOG 460. Geography of International Trade (5). Geographic basis of international trade with special emphasis on the Pacific Northwest. Prerequisite: GEOG 304. Field trips required.

GEOG 461. Soils (5). Properties, factors, processes, and classification of Earth's soils, past and present. Four hours lecture and three hours of laboratory or field trips each week. GEOG 361 and GEOG 461 are layered courses; students may not receive credit for both. Prerequisite: GEOG 107.

GEOG 479. Geography of the West (1-12). In-depth field examination of the complex physical, human, and resource issues of one or more of the varied sub regions of western North America. May be repeated for credit under a different title by permission of department chair.

GEOG 482. Hydrology (5). Provides a comprehensive introduction to both the global and local hydrologic cycle. Covers constituent processes, their measurements and quantitative relationships, plus basic water quality parameters. GEOG 382 and GEOG 482 are layered courses; students may not receive credit for both. Prerequisite: GEOG 107.

GEOG 485. Topics in GIS and Remote Sensing (4). Special topic classes in GIS and remote sensing. Applied experience using GIS or image processing software. Prerequisites: GEOG 303 and 430. Put on reserve 9/16/2014. Last taught in 2011. Will go inactive 8/24/17.

GEOG 486. Geomorphology (5). Descriptive and interpretive examination of Earth's

landforms, and the processes and factors that shape these features over space and time. Four lectures and three hours laboratory or field trips each week. GEOG 386, GEOG 486, and GEOL 386 are cross-listed courses; students may not receive credit for more than one. By permission only.

GEOG 487. Biogeography (5). Investigates the functional relationships between biophysical processes and their spatial and temporal patterns at various scales. Introduces approaches to land systems analysis focusing upon ecosystems. GEOG 387 and GEOG 487 are layered courses, students may not receive credit for both. Prerequisite: GEOG 107.

GEOG 488. Weather and Climate (5). Elements, factors and processes affecting Earth's climates, present, past, and future. Four hours lecture and two hours laboratory/field per week. Course fee required. GEOG 388 and GEOG 488 are equivalent courses, students may not receive credit for both. Prerequisite: GEOG 107.

GEOG 489. Geography Capstone (2). Assessment of past coursework and exploration of future opportunities. Prerequisites: senior standing and admission to a geography major.

GEOG 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prerequisite: prior approval required. May be repeated for credit. Grade will either S or U.

GEOG 491. Workshop (1-6).

GEOG 492. Geography Teaching Experience (1-3). Experience in classroom, laboratory, and/or field teaching. May be repeated for credit with permission of department chair.

GEOG 493. Geography Field Experience (1-12). Individual or group off-campus experience in the field study of geographical phenomena. May be taken more than once by permission of department chair under a different title.

GEOG 494. Applied GIS Project (2-6). GIS projects in anthropology, biology, geography, geology, and resource management. ANTH 494, GEOL 494 and GEOG 494 are cross-listed courses; students may not receive credit for more than one.

GEOG 496. Individual Study (1-6).

GEOG 498. Special Topics (1-6).

GEOG 499. Seminar (1-5).

Geological Science Courses

GEOL 101. Physical Geology (4). An introduction emphasizing the origin and nature of the common rocks and the continually changing features of the earth's crust. Four lectures per week. Co- or prerequisite: GEOL 101LAB. NS-Fund Disc Phys and Biological.

GEOL 101LAB. Physical Geology Laboratory (1). Application of map study to geological processes and land forms, identification of rocks and minerals, and local field trips. Two hours laboratory per week. Co-requisite: GEOL 101 or GEOL 102 or GEOL 103. NS-Fund Disc Phys and Biological (L).

GEOL 102. Geology of National Parks (4). Fundamentals of geology applied to selected national parks in North America. Four lectures per week. Co- or prerequisite: GEOL 101LAB.

GEOL 103. Geology of Washington (4). Fundamentals of geology applied to the state of Washington. Topics include Washington's volcanic, earthquake, tectonic, and glacial activity. Four lectures per week. Corequisite: GEOL 101LAB. NS-Patterns and Connection Natural.

GEOL 106. Earth Science Inquiry (5). Inquiry-based investigations into Earth science to help students develop understanding of fundamental concepts and the process of scientific investigation. This course is designed for prospective elementary teachers but is open to all students.

GEOL 107. Volcanoes, Earthquakes, and Civilization (5). The role of natural geologic processes such as volcanoes, earthquakes, and climate change in shaping the earth, the environment and human civilization. Four hour lecture per week plus required field trips. NS-Patterns and Connection Natural.

GEOL 108. Introduction to Environmental Geology (5). Interaction between human activity and geological processes. Scientific discussion of global environmental issues such as ozone depletion, climate change, geologic hazards, natural resources, and water use. NS-Application Natural Science.

GEOL 188. Geology and Environmental Geology Field Trips (1). Afternoon and weekend field trips to introduce

students to the geology and environment of the Pacific Northwest as well as the breadth of study options in the geological sciences. May be repeated up to three credits.

GEOL 200. Earth's Evolution and Global Change (5). Evolution of Earth, plate tectonics, life, and climate over the last 4.5 billion years. Three lectures, four hours laboratory per week. Prerequisites: (either GEOL 101 OR GEOL 102 OR GEOL 103) and GEOL101LAB, OR GEOL 106.

GEOL 210. Introduction to Geologic Field Methods (4). Introduction to the basic methods of geologic field investigation. Emphasis on constructing geologic maps. The class will consist of two weeks in the field, primarily along the eastern front of the Sierra Nevada, California, or other regions in the western United States. The class will be offered during the summer break or as arranged by the instructor. Students will register for the class during the immediately subsequent academic year quarter. Extra fees required. Prerequisites: (GEOL 101 or GEOL 102, or GEOL 103) and GEOL101LAB, or GEOL 106, or instructor permission. GEOL 200 recommended.

GEOL 302. Oceans and Atmosphere (4). Introduction to Earth's climate and the hydrologic cycle through study of the ocean-atmosphere system. Chemical and physical changes will be studied over time scales ranging from millions of years to days. Will include a field trip. Prerequisite: sophomore standing or above. NS-Patterns and Connection Natural.

GEOL 305. Quantitative Reasoning for Geoscientists (4). An introduction to quantitative methods commonly used for observation, analysis, and interpretation of geologic features and processes. Prerequisites: (either GEOL 101 OR GEOL 102, OR GEOL 103) and GEOL101LAB, and MATH 100C or above.

GEOL 306. Communicating Geoscience (4). Exploration of effective communication skills in the geosciences. Includes readings from the primary and popular literature, writing, making figures, and oral presentation. Emphasis on peer review and revision. Prerequisites: (GEOL 101 or GEOL 103) and GEOL101LAB and ENG 102.

GEOL 320. Rocks and Minerals (5). Identification, classification, and evolution of common igneous and metamorphic rocks. Includes recognition and interpretation of rocks in typical field exposures. Prerequisites: (GEOL 101 or GEOL 103) and GEOL101LAB and CHEM 111 or CHEM 181. Three hours lecture and three hours laboratory per week plus required field trips.

GEOL 346. Mineralogy (5). Physical, chemical, and crystallographic properties, and occurrence of minerals. Examination and description of hand specimens and crystal models. Theory and practice in optical mineralogy and X-ray diffraction. Prerequisites: GEOL 305, and GEOL 320, and MATH 154. Co-requisite: MATH 154 or instructor permission. Four lectures and three hours laboratory per week.

GEOL 351. Geology of the Pacific Northwest (3). Fundamentals of geology applied to the Pacific Northwest. Case studies in lecture will build toward extended field experiences. Two lectures per week. Field trips required. Prerequisites: (GEOL 101 or GEOL 103), and GEOL 101LAB, and GEOL 200.

GEOL 360. Structural Geology (5). Introduction to the basic principles of rock deformation with an emphasis on the geometry, styles, and mechanics of faulting and folding and the stereographic projection and analysis of geologic structures. Prerequisites: GEOL 200 and GEOL 305 and GEOL 320 and MATH 154. Three lectures and four hours laboratory per week. Field trips required.

GEOL 370. Sedimentology and Stratigraphy (5). Origin of sedimentary rocks, physical processes and stratigraphic principles. Identification of sedimentary rocks. Recognition of depositional environments represented in the geologic record. Field trip required. Prerequisite: GEOL 200, and GEOL 305, and MATH 153. Co-requisite: MATH 153.

GEOL 377. Regional Natural History (2). Classroom study of the natural history of a selected region as preparation for a one- or two-week field trip. Emphasis will be on developing background skills to undertake a field exploration over the quarter (winter, spring, summer) break. Subtitles will identify the selected geographical region (e.g. Baja California Natural History). GEOL 377 and BIOL 377 are cross-listed courses. Prerequisite: Permission of instructor. May be repeated for credit under a different subtitle (region).

GEOL 377LAB. Regional Natural History (3). One- or two-week field trip to explore biological and physical patterns and processes in selected regions of North America. Emphasis will be on recording field observations, keeping a field journal, field study techniques, and performing investigations chosen and developed by student participants. Subtitles will identify the region studied. BIOL 377LAB and GEOL377LAB are cross-listed courses. Special fees required. May be repeated for credit under a different subtitle.

GEOL 380. Natural Hazards (5). Environmental concerns of earth processes and natural hazards including earthquakes, volcanic activity, flooding, landslides, etc. Three hours lecture plus one three-hour lab per week. Prerequisites: (either GEOL 101 or GEOL 102, or GEOL 103) and GEOL101LAB, or instructor permission.

GEOL 382. Earth Resources and Pollution (4). Human impact on the Earth through use of its resources, including pollution and remediation strategies. Two 2-hour lecture/lab sessions per week. Prerequisites: GEOL 101 or GEOL 102 or GEOL 108 and GEOL101LAB or permission of instructor.

GEOL 384. Ocean, Atmosphere and Climate Interactions (4). The characteristics and circulation of Earth's ocean and atmosphere are examined in the context of investigating the Earth's energy balance and climate. Both natural and anthropogenic causes of climate variability are explored. Prerequisites: (GEOL 101 or GEOL 103) and GEOL 101LAB, and GEOL 305.

GEOL 386. Geomorphology (5). Descriptive and interpretive examination of the Earth's landforms, and the processes and factors that shape these features over space and time. Four lectures and three hours laboratory or field trips each week. GEOG 386, GEOG 486, and GEOL 386 are cross-listed courses; students may not receive credit for both. Prerequisites: (GEOL 101 or GEOL 102 or GEOL 103 and GEOL 101LAB) or GEOG 107.

GEOL 388. Field Trips (1-3). Intensive study of geological phenomena on field trips up to two weeks in length. Three days field work for each credit. Extra fees required. Prerequisite: permission of instructor. Course may be repeated for areas of significantly different geologic content. Grade will either be S or U.

GEOL 392. Lab Experience Teaching Physical Geology (1). Prerequisites: (either GEOL 101 OR GEOL 102, OR GEOL 103) and GEOL101LAB. May be repeated up to 2 credits. Grade will either be S or U.

GEOL 395. Junior Research (1-6). Prerequisite: by permission only. May be repeated for up to 12 credits.

GEOL 396. Individual Study (1-6).

GEOL 398. Special Topics (1-6).

GEOL 404. Intermediate GIS (5). Applied concepts, principles, and operation of fundamental GIS applications, including raster-vector data models, topology, digitizing, and various analytical techniques such as overlay, buffers, and Boolean queries. Lecture and practical applications. ANTH 404, GEOL 404 and GEOG 404 are cross-listed courses; students may not receive credit for more than one. Prerequisites: either GEOG 303, GEOL 303, or ANTH 303.

GEOL 415. Earthquake Geology and Neotectonics (5). Geomorphology, stratigraphy, and structural geology applied to the study of active faults and folds in a variety of tectonic settings. Relation of seismicity and geodetic measurements to geologic structure and active tectonic processes, including case studies of selected earthquakes. Three hours lecture and four hours laboratory per week. GEOL 415 and GEOL 515 are layered courses; students may not receive credit for both. Prerequisites: (either GEOL 101 OR GEOL 103) and GEOL101LAB and GEOL 386 and MATH 154.

GEOL 417. Advanced GIS (4). Advanced GIS principles, techniques, analysis, and application. Lecture and practical hands-on experience. Applied experience using GIS software. GEOL 417, ANTH 417 and GEOG 417 are cross-listed courses; students may not receive credit for more than one . Prerequisites: GEOG 404, GEOL 404, or ANTH 404.

GEOL 423. The Cryosphere (5). Components of the cryosphere (ice sheets, mountain glaciers, ice shelves, global snow cover, sea ice extent, and permafrost/frozen ground) will be examined, including anticipated changes in the cryosphere due to changing climate. GEOL 423 and GEOL 523 are equivalent courses; students may not receive credit for both. Prerequisites: (either GEOL 101 or GEOL 102 or GEOL 103) and GEOL 101LAB, GEOL 200, GEOL 210, CHEM 181 and CHEM 182.

GEOL 425. Environmental Geochemistry (5). Global geochemical cycles, influences of rocks and soils on water chemistry, behavior of isotopes and trace elements. Includes class project studying local environmental geochemistry topic. Three lectures plus one three-hour lab per week. GEOL 425 and GEOL 525 are layered courses; students may not receive credit for both. Prerequisites: CHEM 181, and CHEM 181LAB, and CHEM 182, and CHEM 182LAB and MATH 153.

GEOL 430. Remote Sensing (5). Principles of acquisition, analysis, and use of remotely sensed data (LANDSAT, SPOT, Ikonos, etc.). Applied experience using image processing software. Three hours lecture and three hours laboratory per week. GEOL 430, GEOG 430, and GEOL 530 are cross-listed courses; students may not receive credit for more than one. Prerequisites: GEOG 410 or GEOL 210.

GEOL 432. Field Geodetic Techniques (3). Training in field geodetic techniques, including scientific application of two or more precision surveying instruments: geodetic GPS, differential GPS, and electronic distance meter. Three hours a week and field project, or one-week field course. GEOL 432 and GEOL 532 are layered courses; students may not receive credit for both. Prerequisites: (either GEOL 101 OR GEOL 102, OR GEOL 103) and GEOL101LAB, and GEOL 200 and GEOL 210.

GEOL 434. Petroleum Geology (5). Petroleum geology delivers a comprehensive introduction to the application of geology in the oil and gas industry, including the origin and occurrence of petroleum, application of geology in exploration and production, and the evolution of the industry in the context of global demand. GEOL 434 and GEOL 534 are layered courses; students may not receive credit for both. Prerequisite: GEOL 210 or permission of instructor.

GEOL 441. Climate Variability and Climate Change (5). Examine past, present, and future changes in climate, and the factors that contribute to climate change over various timescales. GEOL 441 and GEOL 541 are equivalent courses; students may not receive credit for both. Prerequisite: GEOL 200.

GEOL 445. Hydrogeology (5). Study of the occurrence and movement of ground water using geology, hydrology, and geochemistry, with an emphasis on practical problems in water management. Three hours lecture and three hours laboratory per week. GEOL 445 and GEOL 545 are layered courses; students may not receive credit for both. Prerequisites: (either GEOL 101 OR GEOL 102, OR GEOL 103) and GEOL101LAB, and MATH 154.

GEOL 453. Seismology (5). Elasticity theory, the wave equation, ray theory, diffraction, waveform modeling, travel time inversion. Data analysis. Three hours lecture per week plus four hours of scientific computing lab. Offered alternate years. GEOL 453 and GEOL 553 are equivalent courses; students may not receive credit for both. Prerequisite: MATH 173.

GEOL 456. Geodynamics (5). Study of plate tectonics and mountain building processes that shape Earth. Lab includes introduction to Matlab software for analysis and visualization. Required field trip. GEOL 456 and GEOL 556 are layered courses; students may not receive credit for both. Prerequisite: (either GEOL 101 OR GEOL 102, OR GEOL 103) and GEOL101LAB. Corequisite: MATH 172.

GEOL 474. Quaternary Geology (4). Study of geological processes affecting Earth's most recent history. Course emphasizes marine and continental quarternary environmental change, glacial epochs, paleoclimatic methods, and dating techniques. GEOL 474 and GEOL 574 are layered courses; students may not receive credit for both. Prerequisites: either GEOG 386 or GEOL 386 or GEOL 370.

GEOL 475. Petrography and Petrogenesis (5). Petrogenetic, hand specimen, and thin section study of igneous, metamorphic, or sedimentary rocks. Three hours lecture and four hours laboratory or field work per week plus required field trips. GEOL 475 and GEOL 575 are layered courses; students may not receive credit for both. Offered in alternate years.

GEOL 476. Advanced Sedimentology (4). Sediments, sedimentary rocks, and advanced lab and field techniques for students interested in conducting research or working in sedimentology-related fields. Required field trips. GEOL 476 and GEOL 576 are layered courses; students may not receive credit for both. Prerequisite: GEOL 370.

GEOL 477. Tsunami Geology and Geophysics (2). Course will

cover the current science of paleotsunami research, an overview of modern survey observations, the basic physics of tsunami generation and propagation, and introduce students to tsunami modeling methodologies. GEOL 477 and GEOL 577 are cross-listed; students may not receive credit for both. Prerequisite: GEOL 370.

GEOL 478. Volcanology (5). Study of volcanoes and associated deposits, styles of eruption, physical and chemical controls on eruption mechanisms, and volcanic hazards and hazard mitigation. Three hours lecture and four hours laboratory per week plus required field trips. GEOL 478 and GEOL 578 are layered courses; students may not receive credit for both. Offered in alternate years.

GEOL 483. Isotope Geochemistry (5). Covers principles of isotope geochemistry and applications to studies of geological processes such as hydrologic cycling, volcanic petrogenesis, and climate change. Three hours lecture per week plus required laboratory work and field trips. GEOL 483 and GEOL 583 are layered course; students may not receive credit for both. Offered in alternate years. Prerequisites: CHEM 182, CHEM 182LAB, and MATH 154.

GEOL 484. Geochronology (5). Principles, analytical methods, and interpretation of several of the most widely applied geochronological methods. Computer-based data analysis of problems in igneous and metamorphic petrology, structural geology, sedimentary geology, geomorphology, paleoseismology, and planetary science. GEOL 484 and GEOL 584 are layered courses; students may not receive credit for both. Prerequisites: MATH 172 and GEOL 346 or permission of the instructor.

GEOL 487. End-of-major Review Seminar (1). Students must be familiar with the language of geology and possess certain basic geologic skills. Coordinates student participation in program assessment activities and provides a structured avenue for student input into program goals. Prerequisite: senior status and intention to graduate during the current year. Grade will either be S or U.

GEOL 489. Geologic Field Methods (6-12). Emphasis is placed on observation and recording of lithologic and structural features, measurement of stratigraphic and structural sections, applications of various survey methods, and plotting geologic data on topographic and aerial photographs in the field. The class will be offered during summer or winter break, or as arranged by the instructor. Credits will be carried in concurrent or immediately subsequent academic year quarter. Extra fees required. Prerequisites: (GEOL 101 or GEOL 103) and GEOL101LAB, and GEOL 200, and GEOL 210, and GEOL 320, and GEOL 346, and GEOL 360, and GEOL 370.

GEOL 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prerequisite: prior approval required. May be repeated for credit. Grade will either be S or U.

GEOL 491. Workshop (1-6).

GEOL 492A. Experience Teaching Upper-level Geology (2). Assisting with instruction in upper-level geology major lab or field courses. May be repeated once for the same course, and up to a total of four times. Grade will either be S or U.

GEOL 492B. Laboratory Experience Teaching Earth Science (2). Course designed for future Earth science teachers in secondary schools. Assist teaching one laboratory section of GEOL 101LAB and discuss laboratory-teaching methods. Grade will either be S or U.

GEOL 493. Field Methods in Environmental Geology (4). Introduction to field methods in environmental geology. In this two-week field course, students will apply these methods to a local or regional environmental geology research question. Prerequisites: GEOL 386 or permission of instructor.

GEOL 494. Applied GIS Project (2-6). GIS projects in anthropology, biology, geography, geology, and resource management. ANTH 494, GEOL 494 and GEOG 494 are cross-listed courses; students may not receive credit for more than one.

GEOL 495. Senior Research (1-6). By permission only. May be repeated up to 12 credits.

GEOL 496. Individual Study (1-6).

GEOL 498. Special Topics (1-6).

GEOL 499. Seminar (1-5).

German Courses

GERM 151. First-year German (5). Conversational approach

with intensive oral-aural drill. Firm foundation in the basic structural principles of the language. Courses must be taken in sequence.

GERM 152. First-year German (5). Conversational approach with intensive oral-aural drill. Firm foundation in the basic structural principles of the language. Prerequisite: GERM 151. Courses must be taken in sequence.

GERM 153. First-year German (5). Conversational approach with intensive oral-aural drill. Firm foundation in the basic structural principles of the language. Prerequisite: GERM 152. Courses must be taken in sequence.

GERM 251. Second-year German (5). Graduated readings in modern German prose with discussion conducted in German. Thorough review of German grammar. Courses must be taken in sequence.

GERM 252. Second-year German (5). Graduated readings in modern German prose with discussion conducted in German. Thorough review of German grammar. Prerequisite: GERM 251. Courses must be taken in sequence.

GERM 253. Second-year German (5). Graduated readings in modern German prose with discussion conducted in German. Thorough review of German grammar. Prerequisite: GERM 252. Courses must be taken in sequence.

GERM 298. Special Topics (1-6).

GERM 301. Introduction to German Literature (3). Selected pieces of German literature characteristic of the Middle Ages to the present. Prerequisite: GERM 253.

GERM 341. Intermediate Composition and Grammar (3). Prerequisite: GERM 253. Should be taken in sequence with GERM 441.

GERM 343. Intermediate Conversation (2). Prerequisite: GERM 253.

GERM 344. Intermediate Conversation (2). Prerequisite: GERM 343.

GERM 350. Advanced Conversation (4). The course will broaden students' communicative strategies and develop their speaking and listening skills through exposure to a variety of media. Films, visual art, and music will provide the basis for general class participation and small group discussion. Prerequisite: GERM 253.

GERM 352. Advanced Reading and Expression (4). Texts culled from a variety of sources and time periods will form the basis of this course, allowing students a broad exposure to German written expression in order to broaden and develop their reading skills and strategies. Prerequisite: GERM 253.

GERM 354. Advanced Grammar and Composition (4). The course focuses on the development of writing skills through the analysis and practice of grammar, vocabulary, and rhetorical devices. Prerequisite: GERM 253.

GERM 385. German Phonetics (3). Designed to show how German is pronounced, and how to attain accuracy, which approximates native-like pronunciation as much as possible. Provides an opportunity to improve pronunciation. Prerequisite: GERM 341.

GERM 398. Special Topics (1-6).

GERM 464. German Cinema (4). An examination of the history, aesthetic achievements, major directors and themes, and cultural explorations of German cinema.

GERM 491. Workshop (1-6).

GERM 496. Individual Study (1-6).

GERM 498. Special Topics (1-6).

Global Wine Studies Courses

GWS 202. A Social History of Beer, Wine, and Distilled Spirits (4). This course looks at alcohol production/consumption from early societies to its present-day industry. Students debate health issues of alcohol, environmental issues, and quality of life issues associated with the wine, beer, and spirits.

GWS 302. Fundamentals of Viticulture and Enology (4). Fundamentals of viticulture and enology, techniques and practices, wine styles, and grape varietals. Health issues associated with wine, basics of wine, and food pairing.

GWS 303. Major Wine Regions of the World (4). Major wine regions of the world. Identification of major grape varietals and wine styles, label regulations, and legal issues. Viniculture and winemaking regulations, climate, soils, and other factors affecting each region.

GWS 304. Wine Marketing and Branding (4). Regulations and legalities, marketing, branding, public relations, consumer behavior, and business planning in the wine industry.

GWS 402. Issues in Viticulture and Enology (4). This course covers advanced techniques in viticulture and enology practices, product quality control and quality assurance,

and worker protection. Prerequisite: GWS 302 or permission of instructor.

GWS 403. The Global Wine Industry (4). Traditional and emerging wine regions: globalization, classification and legal systems, trade structures, international agreements, consumption habits, patterns, and trends. Prerequisite: GWS 303. By permission.

GWS 404. The International Wine Trade (5). Accounting and finance, global supply chain, distribution, retail, intellectual property rights, legal issues, wine auctions and investments, journalism and ratings. Prerequisites: GWS 304 and ACCT 301.

GWS 405. Beverage and Food Pairing for the Sommelier (4). Overview of major beverages and service standards related to the world of fine wines in a dining environment. Fundamentals of food pairing with major wine varietals, wine styles, and other industry beverages of the world. Must be 21 years of age or older prior to the start of class. Prerequisite: GWS 303.

GWS 406. Professional Wine Analysis (3). Evaluation and assessment of global wines. Component format for organoleptic properties including appearance, aroma and palate. Must be 21 years of age or older prior to the start of class. Graded

GWS 407. Beverage Management and Service for the Sommelier (4). Basics of the wine and beverage cellar, menu pricing and creation of a wine and beverage list, sales techniques with a practical beverage industry approach, and service standards pertaining to the beverage industry and sommeliers. Must be 21 years of age or older prior to the start of class. Prerequisite: GWS 303.

GWS 408. Advanced Sensory Analysis (4). Assessment of viticulture and winemaking techniques in wine, identification of provenance, fraud, age and potential for investment. Must be 21 years of age or older prior to the start of class. Prerequisites: GWS 402 and GWS 406.

GWS 409. Applied Professional Tasting Analysis (4). This course will combine lecture and tasting for wines, beers, spirits, and liqueurs for students who are interested in a career path as sommelier to work in the dining industry. Students will learn proper tasting techniques for each beverage along with appropriate aging and service for a dining establishment. Must be 21 years of age or older prior to the start of class. Prerequisite: GWS 303.

GWS 410. Wine Faults (3). Chemical, physical, and biological faults and flaws found in wine from the vineyard, winery, distribution, retail, and consumer. Product recalls and legalities of faulty wines. Prerequisites: GWS 402 and GWS 406. By permission.

GWS 412. Advanced Wine Regions (3). Study of lesser known vineyard areas around the world including unusual grape varietals, regulations, quality designations, and wines made for specific markets. Prerequisite: GWS 303.

GWS 452. Regional Wine Tourism (4). Wine tourism is an American growth industry. Unlike in Europe, support for wine tourism in the USA is regional. This course offers an academic and hands-on approach to regional wine tourism that will assist RT and GWS graduates. GWS 452 and RT 452 are cross-listed courses, students may not receive credit for both. Prerequisites: nine credits of upper division GWS or RT courses or permission of instructor.

GWS 454. Wine Tourism Applications (4). Applying what they have learned in GWS/RT 452, students conduct research on sectors of the wine tourism industry in Washington State such as wine trails, wine clubs, regional wine associations and wine festivals. The student conducts hands-on research that may be useful to these sectors. Prerequisite: GWS 452 or RT 452. GWS 454 and RT 454 are cross-listed courses, students may not receive credit for both.

GWS 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry or government agencies in the wine industry. A learning agreement is created to identify and plan the directed and supervised study. Must be 21 years of age or older prior to the start of class. Prerequisite: admission to the global wine studies major. May be repeated for credit. Grade will either be S or U.

GWS 491. Workshop (1-6).

GWS 492. Field Experience (3). The student will spend 1 to 3 weeks in a major wine area OUTSIDE the Pacific Northwest USA researching the appellation(s), the wineries, their viticulture, wine production, wine styles and marketing approaches. This course requires a literature review, methodical tastings, interviews with the area's winemakers and marketing

staff. Prerequisite: permission of the instructor.

GWS 498. Special Topics (1-6).

GWS 499. Seminar (1-6).

Health Education Courses

HED 101. Health Essentials (4). Fundamental patterns and understanding of human interaction with natural and man made environments intended to help students make informed judgments. SB-Found Human Adaptations.

HED 205. Drugs and Sport (2). Survey of the potential hazards of recreational, ergogenic, and restorative drugs commonly used by athletes.

HED 209. Consumer Health (3). Analysis of health aids, cosmetics, non-prescription drugs, health fads, and fallacies. Critical evaluation of advertising and promotional schemes; quackery.

HED 210. Drugs and Health (3). Uses and abuses of drugs. Special emphasis will be on psycho-physiological effects upon human health and responsible drug use.

HED 230. Foundations of Public Health (3). This is an introductory course for students interested in public health. The course introduces students to the core foundational concepts for continuing study in the area of public health. This course surveys the history, philosophies, and underlying the practice of public health. This course involves community and campus interaction through service learning.

HED 240. Writing in Public Health (3). Fundamental skills and practice for effective written communication in public health and related disciplines; attention to clarity and accuracy; various styles and strategies; appropriate use and citation of peer-reviewed literature; audience concern; hierarchy of evidence; APA style is a focus. Prerequisite: CWU basic skills requirement ENG 101 and ENG 102.

HED 250. Introduction to Health Policy and Systems (3). This introductory course provides an overview of the U.S. health system, and explores the conceptual process of health policy development, the social and political environment in which policy decisions are made and their implications on the health and well-being of populations.

HED 296. Individual Study (1-6).

HED 298. Special Topics (1-6).

HED 299. Seminar (1-5).

HED 310. Community Health (3). An overview of contemporary community health programs; problems in community health at the local, national, and international levels. Prerequisite: HED 230 or permission of instructor.

HED 311. Cross Cultural Practice in Public Health (3). An overview of culturally-driven behaviors, attitudes, and policies that come together to enable effective public health practice in cross-cultural situations. This course will review best-practices in interpersonal behaviors, effective communication skills, and knowledge development for culturally-competent public health professionals.

HED 317. Global Health (3). Explores the health status of people within the global community. Explores specific health issues endemic to certain parts of the world and related programs.

HED 318. The Politics of Food and Health (2). Exploration of the politics of food from farm to table, and the implications for human and environmental health. HED 318 and NUTR 318 are cross-listed courses, students may not receive credit for both.

HED 320. Environmental Health (3). Explores basic environmental health topics that public health educators will use in community settings, including models and theories that encourage community involvement.

HED 324. Infectious and Non-infectious Disease (4). This course introduces students to the various principles related to the identification, treatment, and prevention of prevalent infectious and non-infectious diseases. Additionally, the physical, social, psychological, and economic effects of these illnesses/diseases in society are explored.

HED 340. Technological Applications in Health Education (3). Assist students in utilizing computerized sources of information, methods of instruction, understand technology applied to training, and a better use of computers for health information resources.

HED 351. Community Building Strategies for Public Health (3). Overview of effective strategies and practices of community building for health, including community organizing and coalition building. Prerequisite: HED 230. Formerly HED 450.

HED 370. Contemporary Issues in Public Health (3). Contemporary health education topics and issues are explored through classroom and community contacts, visual,

web-based, and interactive media. May be repeated for up to 6 credits.

HED 375. Theories of Health Behavior (3). Provides an introduction to methods and theories of behavior change related to community and public health. Examines change process of individual and communities including motivating factors essential to maintaining positive behavior change.

HED 380. Epidemiology (3). Epidemiology is the scientific study of the determinants, rates, and distribution of disease amongst populations.

HED 387. Principles of Fitness and Stress Management (3). The theory and practice of health enhancement through fitness and stress management.

HED 398. Special Topics (1-6).

HED 412. Health Aspects of Aging (3). Examination of total health as it relates to the aged and the aging process. Prerequisite: HED 101.

HED 422. Methods for Health Promotion (4). Prerequisites: HED 101 and HED 230, and current WSP/FBI fingerprint clearance .

HED 431. Principles of Sexuality Education (3). Principles and content for sex education in school and community settings. Prerequisite: by permission .

HED 440. Public Health Communication (3). Basic theory and practice of public health communications to inform and influence individual and community decisions that enhance health. Prerequisite: HED 230.

HED 442. Field Work and Experience in Health Education (1-15). Observation and participation in health programs, and/or HED 101. May be repeated to a maximum of 15 credits.

HED 445. Professionalism in Public Health (1). Professional ethics, job readiness, and job search in public health. To be taken last two quarters before internship placement. Prerequisites: HED 230, and HED 240, and HED 375 and acceptance into the public health major.

HED 446. Health Education Curriculum for Elementary Teachers (3). Examination of available curricula and teaching materials in health education for elementary school teachers. Students must develop an elementary health education curriculum. Prerequisite: current WSP/FBI fingerprint clearance, and admission to the Teacher Certification Program.

HED 448. Sexual Health (3). This course surveys sexual health from a public health perspective, focusing on both individual and societal factors contributing to sexual health.

HED 460. Public Health Ethics (3). Overview of key ethical frameworks and their application to ethical issues in public health practice. Prerequisites: HED 230 and HED 240 and acceptance into public health major and senior standing.

HED 470. Population Health Assessment and Research (4). Theory and practice of assessing the health status, potential, and determinants of communities and populations. Prerequisites: HED 230, and HED 240, and MATH 130 and acceptance into public health major.

HED 471. Program Planning (4). Health program planning; needs assessment, and goal setting. Prerequisites: HED 330 and acceptance into public health major.

HED 472. Program Implementation and Evaluation (4). Implementation and evaluation of programs and other strategies designed to improve population health outcomes. Prerequisites: HED 471 and acceptance into public health major.

HED 475. Community Health Administration (3). Understanding and application of knowledge to various administrative tasks in community health. Grants, management, and personnel issues will be covered. Prerequisite: HED 472.

HED 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prerequisite: prior approval required. May be repeated for credit. Grade will either be S or U.

HED 491. Workshop (1-6).

HED 492. Practicum (4). Practical experience and application of responsibilities and competencies necessary for practicing health education. Prerequisites: HED 345 or 472.

HED 496. Individual Study (1-6).

HED 498. Special Topics (1-6).

HED 499. Seminar (1-5).

History Courses

HIST 101. World Civilization to 1500 (5). Origins and development of the major world civilizations to the 15th century. A comparative study of their political, social, and economic institutions, and their religious and intellectual backgrounds.

Meets the General Education writing requirement. SB-Perspective on World Culture (W).

HIST 102. World Civilization: 1500-1815 (5). A comparative survey of political, social, economic, and cultural developments. For general education (breadth) credit, it is preferred that a student be enrolled in or have completed ENG 101. Meets the General Education writing requirement. SB-Perspective on World Culture (W).

HIST 103. World Civilization Since 1815 (5). A comparative survey of political, social, economic, and cultural developments. For general education (breadth) credit, it is preferred that a student be enrolled in or have completed ENG 101. Meets the General Education writing requirement. SB-Perspective on World Culture (W).

HIST 143. United States History to 1865 (5). The Colonial, Revolutionary, and National periods. Meets the General Education writing requirement. SB-Perspectives on Cultures and experiences of U.S. (W).

HIST 144. United States History Since 1865 (5). Reconstruction, Industrial America, and 20th-century urban America. Recommended ENG 101. SB-Perspectives on Cultures and experiences of U.S. (W).

HIST 298. Special Topics (1-6).

HIST 301. Pacific Northwest History (5). Exploration and settlement; subsequent political, economic, and social history with particular emphasis on Washington.

HIST 302. Historical Methods (5). Exercises in historical research, critical analysis, and interpretation. Prerequisites: sophomore or junior standing and admission to either the history large, small or social studies teaching major. Students must earn a minimum grade of C as a major requirement.

HIST 309. American History through Film (5). Explores American history through the prism of film, how film represents the past, how filmmakers, historians, and the general public understand cinematic history, and how film can be viewed as both primary and secondary sources.

HIST 313. History of Rome 500 B.C. to 500 A. D. (5). Beginning, city-state, republican period; world empire; decline.

HIST 314. Military History of the United States (5). A comprehensive and systematic survey and analysis of the American military experience from Colonial times through the Vietnam War. HIST 314 and MSL 314 are cross-listed courses; students may not receive credit for both.

HIST 315. Muslim Middle East (5). The origins and spread of Islamic civilization and its interaction with Graeco-Roman, Persian, and Indian civilizations. Crusades and the rise and fall of the Ottoman Empire.

HIST 321. Latin America Through Film, Art, and Music (5). Analyzes the role of film, art, and music in understanding the social, cultural, and political history of Latin America in the colonial and modern eras.

HIST 322. World Prehistory (4). Old- and New-world prehistory from late Pliocene to the early historic period, including the ecology and development of hunting-gathering, agriculture, and state-level societies. HIST 322 and ANTH 322 are cross-listed courses; students may not receive credit for both.

HIST 323. Food and Drink in Global History (5). Examination of cultural, political, and economic roles food and drink have played in global history, 1400 to present. Themes: cultural exchange and globalization; national, ethnic and gender identities; empire and slavery; war; industrialization; politics of food.

HIST 325. Renaissance and Reformation (5). Survey of European political, social, cultural, and economic revolutions from the 14th to16th centuries; including medieval dissolution, humanism, overseas exploration, Protestantism, and popular culture.

HIST 328. Modern Latin America (5). Analyzes the history of Latin America in the past two centuries, from the Wars of Independence to the present day.

HIST 329. The Tropics and the Modern World (5). Analyzes the history of the modern world through the history of tropical commodities.

HIST 330. Africa to 1800 (5). This course is designed to explore Africa's earliest civilizations; internal processes of change; external influences; state formation; complex societies; connections to the world economy.

HIST 331. Colonial Africa (5). Africa on the eve of colonial conquest; causes of imperialism; colonial rule and African reactions and initiatives; independence and colonial legacy.

HIST 332. History of the Black Diaspora (5). This course focuses on the black diaspora. It

looks at the movement and impact of black people from Africa to other parts of the world. It examines their contribution to world civilizations and identities.

HIST 334. History of Gender and Sexuality in Africa from Pre-colonial Times to the Present (5). This course examines the histories and changing aspects of gender and sexuality in different African contexts from the pre-colonial to the post-colonial eras. Topics will include marriage, politics, prestige, wealth, social cohesion, Christianity, AIDs, etc.

HIST 339. Colonial British America (5). Social, cultural, political, and economic life in the British colonies of North America to 1763.

HIST 341. The Constitution and the New Republic, 1783-1800 (5). Explores the origins of American government, society and culture by examining the Articles of Confederation, the crisis of the 1780s, the Constitutional convention, ratification, the Federalists and Anti-Federalists, the creation of the first two-party system, Republican Motherhood, slavery, and the formation of American identity.

HIST 344. American Manhood in Historical Perspective (5). This course examines the cultural construction of masculinity in America from the colonial period to the present. Important topics include the interplay between gender and politics, sexuality, race, courtship, religion, honor, and violence.

HIST 346. Women in American History (5). A survey of the role of women, their treatment, and response in American society from colonial times to the present.

HIST 352. The History of the American Family (3). American family patterns from early settlement to the present; demography, gender roles, courtship, marriage, child raising, aging, ethnicity, and alternative lifestyles.

HIST 370. Medieval European History (5). Survey of Western European history from late antiquity to the 16th century; political, economic, social, and religious thought and institutions.

HIST 380. Modern East Asia (5). A survey of the modern histories of China, Japan, and Korea from 1600 to the present. Imperialism, nationalism, and the rise of communism are covered.

HIST 381. History of Modern Southeast Asia: Colonial Era to the Present (5). This is a survey course in the political and cultural history of modern Southeast Asia. It will examine European colonialism, nationalism, decolonization, and post WWII configuration. Put on reserve 9/16/2014. Last taught in 2010. Will go inactive 8/24/17.

HIST 383. East Asian Civilization (5). A general survey of the development of civilization in China, Japan, and Korea to about 1600.

HIST 385. Aztec, Inca, Maya: Empire and City in the New World (5). Introduces students to three key urban civilizations: the Mexica (Aztecs), Mayans, and Inca. the course focuses on political and social history as well as the "conquest" of those groups by the Spanish empire.

HIST 386. The Latin American Colonies (5). Analyzes the history of Latin America and the Caribbean from pre-Columbian times to the Wars of Independence.

HIST 395. Research in Local History (1- 6). Comparative local history with emphasis on research techniques and the utilization of sources. May be repeated for credit.

HIST 398. Special Topics (1-6).

HIST 401. Readings in U.S. History (5). Readings seminar of United States history. Put on reserve 9/16/2014. Will go inactive 8/24/17. May be repeated for up to 15 credits.

HIST 402. Reading in European History (5). Readings seminar on European history. May be repeated for up to 15 credits.

HIST 403. Readings in African, Asian, Middle Eastern, Latin American History (5). Readings seminar on African, Asian, Middle Eastern, or Latin American history. May be repeated for up to 15 credits.

HIST 421. Methods and Materials in the Social Studies, Secondary (5). Prerequisite: admission to the Teacher Certification Program. EDCS 311 is a recommended prerequisite.

HIST 422. Roman and Medieval Britain (5). The British Isles from Roman times to the beginnings of the Tudor dynasty. Course will cover the rise of the English monarchy, the creation of parliament, and the colonization of the British Isles. HIST 422 and HIST 522 are layered courses; students may not receive credit for both.

HIST 423. The Irish Revolution (5). History and historiography of the Irish revolution. Topics include the constitutional and revolutionary antecedents, the course of the revolution, and the foundation of the Irish Free State. HIST 423 and HIST 523

are layered courses; students may not receive credit for both.

HIST 424. Modern Ireland: 1798-present (5). The history of Ireland from the revolt of 1798 through the present. Focus will be on the varieties of Irish nationalism, the process of state-building, and the ongoing troubles in the north. HIST 424 and HIST 524 are layered courses; students may not receive credit for both.

HIST 426. France 1789-1945 (5). French history through the lens of revolution. Discussions of the variety of French revolutions (1789, 1792, 1830, 1848, 1870) and concluding with the National Revolution of Vichy France. HIST 426 and HIST 526 are layered courses; students may not receive credit for both.

HIST 427. Modern Britain and the Empire since 1763 (5). History of Britain and the Empire since the Seven Years' War. Topics include growth of empire, industrialization, political reform, world wars, decolonization, and post-war social changes. HIST 427 and HIST 527 are layered courses; students may not receive credit for both.

HIST 428. Early Modern Britain 1485-1763 (5). History of the Britain and the Empire during the Tudor-Stuart and early Hanoverian periods. Topics covered include the origins of the British Empire, the development of the British state, the Civil War and the Glorious Revolution. HIST 428 and HIST 528 are layered courses; students may not receive credit for both.

HIST 434. American Indian History to 1795 (5). Discussion and lecture course on Native North American history from 1492 to the founding of the American Republic, and an introduction to the discipline and practice of ethnohistory, which combines traditional historical analysis with ethnographic concepts and research methodologies. HIST 434 and HIST 534 are layered courses, students may not receive credit for both.

HIST 438. American Indian History since 1795 (5). Examines American Indian history since the Treaty of Greenville, wherein the U.S. recognized tribal sovereignty. Themes include resistance, assimilation, cultural revitalization, federal Indian policy, sovereignty, and reservation economics. HIST 438 and HIST 538 are layered courses; students may not receive credit for both.

HIST 440. The American Revolution (5). Causes and consequences of the American Revolution, 1688-1789. HIST 440 and HIST 540 are layered courses; students may receive credit for both.

HIST 442. Jefferson, Jackson, and American Growth, 1800-1848 (5). Election of Jefferson to ratification of the Treaty of Guadalupe Hidalgo. Examines growth of political parties; development of a "working" and a "middle" class; changing gender relations; Manifest Destiny; Indian Removal; expansion of slavery; and revolutions in transportation, communication, and markets. HIST 442 and 542 are layered courses; students may not receive credit for both.

HIST 443. The West in American History (5). Exploration, territorial acquisition, patterns of settlement, economic development, and the influence of the frontier on American institutions. HIST 443 and HIST 543 are layered courses; students may not receive credit for both.

HIST 444. Sectionalism, Civil War, and Reconstruction (5). Slavery, the Old South, sectionalism, the breakdown of the Union, and secession. A military, political, and social history of North and South during the Civil War, and the aftermath of the war. HIST 444 and HIST 544 are layered courses; students may not receive credit for both.

HIST 445. Introduction to Public History (5). This course examines the venues through which the general public learns American history, with visits and analysis of exhibits and their interpretation.

HIST 450. Exploring U.S. Cultural History (5). Thematic approach to 19th century cultural transformations in U.S. Selected topics; mesmerism, utopias, true womanhood, women's rights, slave spirituals, confidence men, and gold rushes. HIST 450 and HIST 550 are layered courses; students may not receive credit for both.

HIST 451. 20th Century U.S.: 1896-1919 (5). Imperialism, progressivism, and World War I. HIST 451 and HIST 551 are layered courses; students may not receive credit for both.

HIST 452. 20th Century U.S.: 1919-1945 (5). Prosperity and depression; the New Deal and its implications; World War II, origins and conclusion. HIST 452 and HIST 552 are layered courses; students may not receive credit for both.

HIST 453. 20th Century U.S.: 1945 to the Present (5). Cold War, sedentary 50s, rebellious 60s, the Watergate era. HIST 453 and HIST 553 are layered

courses; students may not receive credit for both.

HIST 454. American Environmental History (5). Environmental values and practices of the diverse populations of America. HIST 454 and HIST 554 are layered courses; students may not receive credit for both.

HIST 460. Religion in Latin America (5). Analyzes the relationship between individuals, religious movements, and the state from the pre-Columbian era to the present. HIST 460 and HIST 560 are layered courses; students may not receive credit for both.

HIST 462. History of American Foreign Relations: 1900-1941 (5). From the Spanish-American War to Pearl Harbor. HIST 462 and HIST 562 are layered courses; students may not receive credit for both.

HIST 463. History of American Foreign Relations Since 1941 (5). From Pearl Harbor to the present. HIST 463 and HIST 563 are layered course; students may not receive credit for both.

HIST 464. Latin American Revolutions (5). Analyzes revolutions and peasant revolts in Latin America and the Caribbean from 1750 to the present. HIST 464 and HIST 564 are layered courses, students may not receive credit for both.

HIST 465. History of the People's Republic of China (5). Evaluates the historical record of the Chinese Communists in power since the establishment of the People's Republic of China in 1949. HIST 465 and HIST 565 are layered courses; students may not receive credit for both.

HIST 472. German History since 1815 (5). A political, socio-economic, and intellectual study of Germany with special attention to the causes, progress, and aftermath of the National Socialist State. HIST 472 and HIST 572 are layered courses; students may not receive credit for both.

HIST 473. Russia to 1881 (5). The political, social, economic, and cultural development of Russia from ancient times to the assassination of Alexander II. HIST 473 and HIST 573 are layered courses; students may not receive credit for both.

HIST 474. Russia Since 1881 (5). The political, economic, social and cultural history of Russia and the Soviet Union since 1881. HIST 474 and HIST 574 are layered courses; students may not receive credit for both.

HIST 476. History of Modern East Europe (5). Poland, Czech, Slovak Republics, Austria, Hungary, Romania, Yugoslavia, Bulgaria, Greece, Albania, with special attention to multi-ethnicity, economic underdevelopment and modernization, political dependence, and nationalism. HIST 476 and HIST 576 are layered courses; students may not receive credit for both.

HIST 478. Russian Far East (5). Russian Far East history from 16th century Cossack exploration to 21st century democracy. Topics include the imperial "urge to the sea," the Trans-Siberian Railway, the Soviet gulag system, and Pacific Rim relations. HIST 478 and HIST 578 are cross-listed courses; student may not receive credit for both.

HIST 481. Senior Thesis (4). Analysis of the nature of history, of the way historians reason, and of the search for meaning in history. Prerequisites: HIST 302 and senior standing. Students must earn a minimum grade of C as a major requirement.

HIST 483. Modern China (5). The history of China in the 19th and 20th centuries, including the nature of China's response to the West and the Chinese Revolution of the 20th century. Emphasis on internal social and economic change. HIST 483 and HIST 583 are layered courses; students may not receive credit for both.

HIST 488. Mexico in the Modern Era (5). Analyzes the modern history of Mexico, from independence to the present day. HIST 488 and HIST 588 are layered courses; students may not receive credit for both.

HIST 490. Cooperative Education (1-8). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student-learning plan, cooperating employer supervision, and faculty coordination. HIST 490 and HIST 590 are layered courses; students may not receive credit for both. Department consent. May be repeated for credit. Grade will either be S or U.

HIST 496. Individual Study (1-6).

HIST 497. Honors Individual Study (1-6). Open to students accepted into the departmental honors program. This course may be repeated once, but no more than an over-all total of 6 credits per quarter is permitted.

HIST 498. Special Topics (1-6).

Human Resource Management Courses

HRM 381. Management of Human Resources (5). Selection of personnel, methods of training and retraining workers, wage policy, utilization of

human resources, job training, administration of labor contracts, and public relations.

HRM 442. Training and Development (5). Application of training and development concepts and techniques used in assessing training requirements, planning and budgeting training programs, developing and facilitating training, and evaluating results. Prerequisites: HRM 381 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25 OR (HRM 381 and declaration of a Human Resource Management minor).

HRM 445. Organizational Staffing (5). Applied and conceptual analysis of strategic personnel planning, recruiting, selecting, negotiating, socializing, career developing, retaining, and transitioning. Prerequisites: HRM 381 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25; OR (HRM 381 and declaration of a Human Resource Management minor).

HRM 479. Employee Relations (5). Statutory and case law governing labor relations. Contracts and negotiations. Impasse procedures. Arbitration cases and grievance procedures. Contemporary issues and cases. Prerequisites: HRM 381 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25; OR (HRM 381 and declaration of a Human Resource Management minor).

HRM 486. Problems in Human Resource Management (5). Analysis and research on selected topics involving contemporary issues in personnel management. This is the capstone course for the HRM specialization. Prerequisites: HRM 381 AND 2 other HRM courses AND admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25.

HRM 488. Compensation Policy and Administration (5). Employee compensation policy and administration is studied on a broad perspective encompassing direct financial payments, employer benefits, and non-financial rewards. Prerequisites: HRM 381 AND admission to a college of business major AND completion of the college of business foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum grade of C- in each course and a minimum collegiate GPA of 2.25.

Humanities Courses

HUM 101. Exploring Cultures in the Ancient World (5). An interdisciplinary exploration from literature, history, philosophy, and the arts of selected major ancient civilizations in Asia, Africa, Europe, and the Americas from their beginnings through the 15th century. Prerequisites: ENG 101 with a grade of C- or higher. AH-Literature and Humanities (W).

HUM 102. Exploring Cultures From 16th through 19th Centuries (5). An interdisciplinary exploration of selected literature, history, philosophy, and the arts in Asia, Africa, Europe, and the Americas from the 16th through the 19th centuries. Prerequisites: ENG 101 with a grade of C- or higher. AH-Literature and Humanities (W).

HUM 103. Exploring Cultures in Modern and Contemporary Societies (5). An interdisciplinary exploration of literature, history, philosophy, and the arts of selected world civilizations of the 20th century. Prerequisites: ENG 101 with a grade of C- or higher. AH-Literature and Humanities (W).

HUM 398. Special Topics (1-6).

HUM 498. Special Topics (1-6).

Interdisciplinary Studies Courses

IDS 289. Introduction to the Major (1). Introduction to the interdisciplinary studies major, interdisciplinary studies degree proposal design and preparation. By permission. Grade will either be S or U.

IDS 311. Don't Lie to Me: Contemporary Profiling (5). This course explores and examines the use of profiles is contemporary policing with a focus on violent crimes. The discussions and readings examine what criminal profiling is, what it accomplishes, and how it is utilized. Criminological theory and applicable research articles are used to examine the legitimacy of profiles and measures deception. Prerequisite: PSY 101 or SOC 107 .

IDS 323. Dangerous Women: Mad, Bad or Misunderstood (5). Violent crimes are generally associated with men; however, more and more women are becoming dangerous criminals. This class examines different theories behind violent women. Material will include cases of real-life female criminals, as well as fictional representations in movies and television. Prerequisites: PSY 101 or SOC 107.

IDS 343. Origins and Results of Food Technology: The Gluttonous Human (5). As food production technologies have become increasingly complex, humans are now facing the adverse consequences as well as the benefits. This course explores the evolution of feeding strategies from Paleolithic until the present, including recent innovations such as, corporate farming, genetic modification of organisms and diseases of novel environments.

IDS 353. National Parks and Reserves (5). This course focuses on the development of the National Parks, the Forest Services, and other land and marine reserves in the United States, as well as policies effecting them. The course also focuses on international parks and preserves, and varied models of natural and cultural resource management.

IDS 363. The Simpsons: Social Institutions and National Community (5). The television show, "The Simpsons", students will gain an understanding of the major themes and concepts that structure life for the members of the pluralistic American community.

IDS 373. The Purpose of the United States (5). Is the United States just another country, acting in its own national interest? Or does the United States have some long term global purpose? This course analyzes patterns in the American experience to answer these questions.

IDS 389. Academic and Career Exploration (3). This course leads IDS-social sciences students in the development of a career/graduate school plan. Students will investigate the work world and/or graduate schools in terms of their academic and personal goals. Students will modify their IDS 289 program. Prerequisite: IDS 289, junior status.

IDS 398. Special Topics (1-6).

IDS 489. Senior Portfolio Project (1). End-of-program assessment; preparation of comprehensive degree report and/or descriptive portfolio of project. Students must earn at least a C grade to pass this course. Students will enroll in IDS 489 no earlier that 2 quarters following successful completion of IDS 289. Prerequisites: IDS 289, student will have completed a minimum of 165 credits, and admission to the Interdisciplinary Studies: Social Sciences major. Instructor permission.

IDS 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. By permission. May be repeated for credit. Grade will either be S or U.

IDS 498. Special Topics (1-6).

Industrial Engineering Technology Courses

IEM 290. Cooperative Education (1-10). A pre-professional apprenticeship. An individualized field experience with energy companies and relevant governmental and non-governmental organizations to develop basic and advanced skills in energy management. The course involves a student learning plan, cooperating employer supervision, and faculty coordination. Prerequisite: by permission of director of the institute for integrated energy studies.

IEM 301. Energy Management (5). Principles and methods of energy management in residential, commercial and industrial settings, history of energy production; basics of energy supply and uses; energy conservation and efficiently in various settings; environmental, political and economic implications.

IEM 490. Cooperative Education (1-12). A pre-professional apprenticeship. An individualized field experience with energy companies and relevant governmental and non-governmental organizations to develop basic and advanced skills in energy management. The course involves a student learning plan, cooperating employer supervision, and faculty coordination. Prerequisite: by permission of director of the institute for integrated energy studies.

International Study Courses

INTL 110. Agriculture (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different titles. May be repeated for credit under different subtitle.

INTL 115. Business or Management (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different titles. May be repeated for credit under different subtitle.

INTL 120. Education (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different titles. May be repeated for credit under different subtitle.

INTL 125. Engineering (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different titles. May be repeated for credit under different subtitle.

INTL 130. Fine or Applied Arts (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different titles. May be repeated for credit under different subtitle.

INTL 135. Foreign Languages (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different titles. May be repeated for credit under different subtitle.

INTL 140. Health Sciences (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different subtitle. May be repeated for credit under different subtitle.

INTL 145. Humanities (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different titles. May be repeated for credit under different subtitle.

INTL 150. Law (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different titles. May be repeated for credit under different subtitle.

INTL 155. Math or Computer Sciences (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different titles. May be repeated for credit under different subtitle.

INTL 160. Physical or Life Sciences (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different titles. May be repeated for credit under different subtitle.

INTL 165. Social Sciences (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different titles. May be repeated for credit under different subtitle.

INTL 198. Special Topics (1-6).

INTL 210. Agriculture (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different titles. May be repeated for credit under different subtitle.

INTL 215. Business or Management (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different titles. May be repeated for credit under different subtitle.

INTL 220. Education (1-12). Offered only in university-approved, study-abroad/exchange programs. May be repeated for credit under different subtitle.

INTL 225. Engineering (1-12). Offered only in university-approved, study-abroad/exchange programs. May be repeated for credit under different subtitle.

INTL 230. Fine or Applied Arts (1-12). Offered only in university-approved, study-abroad/exchange programs. May be repeated for credit under different subtitle.

INTL 235. Foreign Languages (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different subtitle. May be repeated for credit under different subtitle.

INTL 240. Health Sciences (1-12). Offered only in university-

approved, study-abroad/exchange programs. May be repeated for credit under different subtitle.

INTL 245. Humanities (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different subtitle. May be repeated for credit under different subtitle.

INTL 250. Law (1-12). Offered only in university-approved, study-abroad/exchange programs. May be repeated for credit under different subtitle.

INTL 255. Math or Computer Sciences (1-12). Offered only in university-approved, study-abroad/exchange programs. May be repeated for credit under different subtitle.

INTL 260. Physical or Life Sciences (1-12). Offered only in university-approved, study-abroad/exchange programs. May be repeated for credit under different subtitle.

INTL 265. Social Sciences (1-12). Offered only in university-approved, study-abroad/exchange programs. May be repeated for credit under different subtitle.

INTL 290. Cooperative Education (1-5). Internship credit offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different subtitle. May be repeated for credit under different subtitle. Grade will either be S or U.

INTL 298. Special Topics (1-6).

INTL 310. Agriculture (1-12). Offered only in university-approved, study-abroad/exchange programs. May be repeated for credit under different subtitle.

INTL 315. Business or Management (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different subtitle. May be repeated for credit under different subtitle.

INTL 320. Education (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different subtitle. May be repeated for credit under different subtitle.

INTL 330. Fine or Applied Arts (1-12). Offered only in university-approved, study-abroad/exchange programs. May be repeated for credit under different subtitle.

INTL 335. Foreign Languages (1-12). Offered only in university-approved, study-abroad/exchange programs. May be repeated for credit under different subtitle.

INTL 340. Health Sciences (1-12). Offered only in university-approved, study-abroad/exchange programs. May be repeated for credit under different subtitle.

INTL 345. Humanities (1-12). Offered only in university-approved, study-abroad/exchange programs. May be repeated for credit under different subtitle.

INTL 350. Law (1-12). Offered only in university-approved, study-abroad/exchange programs. May be repeated for credit under different subtitle.

INTL 355. Math or Computer Sciences (1-12). Offered only in university-approved, study-abroad/exchange programs. May be repeated for credit under different subtitle.

INTL 360. Physical or Life Sciences (1-12). Offered only in university-approved, study-abroad/exchange programs. May be repeated for credit under different subtitle.

INTL 365. Social Sciences (1-12). Offered only in university-approved, study-abroad/exchange programs. May be repeated for credit under different subtitle.

INTL 398. Special Topics (1-6).

INTL 410. Agriculture (1-12). Offered only in university-approved, study-abroad/exchange programs. May be repeated for credit under different subtitle.

INTL 415. Business or Management (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different subtitle. May be repeated for credit under different subtitle.

INTL 420. Education (1-12). Offered only in university-approved, study-abroad/exchange programs. May be repeated for credit under different subtitle.

INTL 421. Student Teaching Abroad (16). Course is available for overseas student teaching placements through an approved CWU program. Course may substitute for CWU student teaching requirement with prior permission of director of field experiences only. Department consent. Grade will either be S or U.

INTL 425. Engineering (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different subtitle. May be repeated for credit under different subtitle.

INTL 430. Fine or Applied Arts (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under

different subtitle. May be repeated for credit under different subtitle.

INTL 435. Foreign Languages (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different subtitle. May be repeated for credit under different subtitle.

INTL 440. Health Sciences (1-12). Offered only in university-approved, study-abroad/exchange programs. May be repeated for credit under different subtitle.

INTL 445. Humanities (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different subtitle. May be repeated for credit under different subtitle.

INTL 450. Law (1-12). Offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different subtitle. May be repeated for credit under different subtitle.

INTL 455. Math or Computer Sciences (1-12). Offered only in university-approved, study-abroad/exchange programs. May be repeated for credit under different subtitle.

INTL 460. Physical or Life Sciences (1-12). Offered only in university-approved, study-abroad/exchange programs. May be repeated for credit under different subtitle.

INTL 465. Social Sciences (1-12). Offered only in university-approved, study-abroad/exchange programs. May be repeated for credit under different subtitle.

INTL 490. Cooperative Education (1-12). Internship credit offered only in university-approved, study-abroad/exchange programs. Courses may be offered under different titles. May be repeated for credit under different subtitle. Grade will either be S or U.

INTL 498. Special Topics (1-6).

Individual Studies Courses

IS 200. Introduction to Individual Studies (1). This course provides an introduction to the individual studies major. Students will learn the parameters for completing a individual studies degree and will develop their learning goals and course of study under the guidance of a faculty advisor. By permission. Grade will be S or U.

IS 298. Special Topics (1-6).

IS 487. End-of-Program Assessment (1). This course will assist students in preparing their goal attainment portfolio. The final portfolio will be evaluated. Prerequisite: IS 200 and admission to the individual studies major. Grade will either be S or U.

IS 496. Individual Study (1-6).

IS 498. Special Topics (1-6).

Information Technology Courses

IT 101. Computer Applications (3). Basic skills in Windows, word processing, spreadsheets, databases, and presentations. BAS6 Basic Skills F - Computing.

IT 204. Word Processing Applications (3). Developing microcomputer word-processing skills for producing business documents. Not intended for ITAM majors. Prerequisites: IT 101 or CS 101.

IT 228. Introduction to Information Technology (2). Exploring information technology principles, practices, and applications in contemporary society. Not intended for ITAM majors.

IT 238. Introduction to Cyberterrorism (4). Exploration of the use of IT be terrorist groups and individuals to organize and execute attacks against computer systems and telecommunications infrastructure. The use of exchanging information or making threats electronically will also be examined.

IT 248. Web Fundamentals (4). Development of web pages and internet skills for business, education, and training environments.

IT 258. Spreadsheet Applications (3). Developing spreadsheets for business and workplace environments. Not intended for ITAM majors.
Prerequisites: IT 101 or CS 101.

IT 260. Integrated Information Technology Application Projects (5). Developing word processing, spreadsheets, database, and presentation skills to create integrated projects for business and workplace environments. IT 260 and IT 360 are layered courses; students may not receive credit for both. Prerequisites: IT 101 or CS 101.

IT 268. Database Applications (3). Develop databases for business and workplace environments. Not intended for ITAM majors. Prerequisites: IT 101 or CS 101.

IT 288. Business Presentation Applications (2). Develop multimedia graphic presentations for business and workplace environments. Prerequisites: IT 101 or CS 101. Not intended for ITAM majors. Put on reserve 9/16/2014. Last taught in 2010. Will go inactive 8/24/17.

IT 298. Special Topics (1-6).

IT 301. Information Technology Security, Privacy, and Ethics (3). Examination of information technology security and privacy issues in the context of law and ethics. Prerequisite: junior standing or above.

IT 322. Web Site Construction (4). Design and implementation of the information technology infrastructure needed to operate a business Web site. Prerequisite: IT 248.

IT 336. Digital Forensics (4). Students will learn skills in digital forensics including how to analyze a device, retrieve "deleted" information, and methods of digital concealment. Prerequisites: IT 238 and IT 351.

IT 338. Cybercrime (4). Investigate vulnerability of computer networks, systems, and computer applications. Learn methods of mitigation and/or prevention of cybercrime. Attributes of cybercrime such as virus attacks, identity theft, electronic funds transfers, and publishing will be examined. Prerequisite: IT 238 and IT 351.

IT 351. Computer Networks (4). Computer network communications including LAN and WAN Topologies, Protocols and Services, such as TCP/IP, and Ethernet, within the context of the OSI Reference Model. Prerequisite: junior standing or above.

IT 359. Advanced Spreadsheet Applications (3). Advanced spreadsheets for business applications such as design of multiple sheet workbooks and templates, advanced functions and formulas, enhanced formats, lists, and pivot tables. Prerequisites: IT 258 or IT 260.

IT 360. Integrated Information Technology Application Projects (5). Developing word processing, spreadsheets, database, and presentation skills to create integrated projects for business and workplace environments. IT 260 and IT 360 are layered courses; students may not receive credit for both. Prerequisites: IT 101 or CS 101.

IT 362. Wireless Communications (4). Broad introduction to wireless communications. Provides students with an exposure to a variety of technologies, standards, and concepts. Prerequisite: IT 351.

IT 376. Project Management and Information Technology (3). IT project management with a focus on facilitating project management areas; risk management, procurement management, HR management , and communication management. Microsoft Project will be used. Prerequisite: students must be junior standing or above.

IT 381. Web Apps for M-Commerce (4). This course will introduce concepts in developing business web apps for use in m-commerce. Web apps review and development using web app authoring/application software for various operating systems. Prerequisite: IT 322.

IT 398. Special Topics (1-6).

IT 426. Application of Web Languages (4). Web languages for the non-computer science student. Prerequisite: IT 322.

IT 428. Web Applications (4). Web application design using Web software such as Dreamweaver, Fireworks, and Flash. Prerequisite: IT 322.

IT 436. Cyberattack/Defense (4). Examines the techniques and technologies for penetration of networks, detection of attacks, and the prevention of attacks. This course addresses the techniques, technologies, and methodologies used by cyberintruders. Prerequisites: IT 238 and IT 351.

IT 438. IT Risk Management (4). Explores Networking Security from the perspective of risk management to develop strategies to mitigate and manage risks. Focuses on assessment strategies for effective mitigation measures and risk management practices in terms of cybersecurity. Prerequisites: IT 238 and IT 351.

IT 456. Advanced Computer Network Management (4). Students will analyze network requirements, design network infrastructures, and install, configure and maintain routing and switching equipment. Prerequisite: IT 351.

IT 459. Workstation Administration (4). Implementation, administration, and troubleshooting workstations as a desktop operating system in any network environment. Prerequisite: IT 351.

IT 461. Systems Analysis (4). Feasibility studies of systems, cost analysis, budgets, and tools of systems analysis. Prerequisite: senior standing.

IT 462. Systems Design (4). Analyze office information systems through selected analysis tools and procedures. Students will apply this knowledge by designing improved systems. Prerequisite: IT 461.

IT 463. Computer Network Management (4). Develop and improve network administration and management skills within a network server environment. Prerequisite: IT 351.

IT 464. Directory Services (4). Students will plan, implement, and maintain directory service features including forests, sites, domains, and organizational units to meet network accessibility, performance, and security goals. Prerequisite: IT 463.

IT 465. Messaging Service (4). Provides students with the knowledge and skills needed to install and support a reliable, secure e-mail messaging infrastructure in a medium-to large-sized (250 to 5,000 users) corporate environment. Prerequisite: IT 463.

IT 466. Open Source Server Management (4). Open Source Server Management covers the concepts required for Linux/UNIX server system administration and common networking services configuration, operation, and management. Prerequisite: IT 459.

IT 467. Network Security (4). Analysis and design of computer network security in the business environment. Prerequisite: IT 463.

IT 468. Projects in Database (4). Techniques in database design and management. Prerequisite: IT 260 or IT 268.

IT 469. Enterprise Database Systems: SQL (3). Students will learn to write SQL statements, basic database administration, and report writing skills. Prerequisite: IT 468.

IT 470. Database and the Web (4). Creating dynamic web pages that interact with a database. Prerequisites: IT 322 and IT 468.

IT 481. Quality Verification and Validation (4). System quality improvement through reviews, testing, and quality management. Prerequisite: IT 461.

IT 486. Critical Issues in Information Technology (4). This seminar format and case study course is intended to expose pre-graduation IT seniors to a variety of topics pertaining to the IT industry. Prerequisites: IT 301 and senior standing.

IT 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student-learning plan, cooperating employer supervision, and faculty coordination. Prerequisite: RMT 379. May be repeated for credit. Grade will either be S or U.

IT 491. Workshop (1-6).

IT 493A. Undergraduate Research Practicum (1-3). Conduct research under direct supervision of a professor with specific learning agreement required. Department requirements must be met. ADMG/IT/RMT 493A are cross-listed courses; students may not receive credit for both. May be repeated for a total of 3 credits. Grade will either be S or U.

IT 496. Individual Study (1-6).

IT 498. Special Topics (1-6).

IT 499. Seminar (1-5).

Japanese Courses

JAPN 151. First-year Japanese (5). Conversational approach with intensive oral-aural drill. Foundation in basic structural principles of the language. Courses must be taken in sequence.

JAPN 152. First-year Japanese (5). Conversational approach with intensive oral-aural drill. Foundation in basic structural principles of the language. Prerequisite: JAPN 151. Courses must be taken in sequence.

JAPN 153. First-year Japanese (5). Conversational approach with intensive oral-aural drill. Foundation in basic structural principles of the language. Prerequisite: JAPN 152. Courses must be taken in sequence.

JAPN 251. Second-year Japanese (5). Graduated readings in modern Japanese writings with discussion conducted in Japanese. Courses must be taken in sequence.

JAPN 252. Second-year Japanese (5). Graduated readings in modern Japanese writings with discussion conducted in Japanese. Prerequisite: JAPN 251. Courses must be taken in sequence.

JAPN 253. Second-year Japanese (5). Graduated readings in modern Japanese writings with discussion conducted in Japanese. Prerequisite: JAPN 252. Courses must be taken in sequence.

JAPN 298. Special Topics (1-6).

JAPN 344. Intermediate Conversation (2). Prerequisite: JAPN 343.

JAPN 361. Composition, Grammar and Conversation I (5). This is the first in a three part series of intermediate level Japanese composition, grammar and conversation. Course must be taken in sequence. Prerequisite: JAPN 253. Declared Japanese majors and minors only.

JAPN 362. Composition, Grammar and Conversation II (5). This is the second in a three-part series of intermediate level Japanese composition, grammar and conversation. Courses must be taken in sequence. Prerequisite: JAPN 361. Declared Japanese majors and minors only.

JAPN 363. Composition, Grammar and Conversation III (5). This is the third in a three-part series of intermediate level Japanese composition, grammar and conversation. Courses must be taken in sequence. Prerequisite: JAPN 362. Declared Japanese majors and minors only.

JAPN 398. Special Topics (1-6).

JAPN 442. Translation and Interpretation (4). Translation into English of Japanese textual material drawn from a wide range of sources. Prerequisite: JAPN 363.

JAPN 462. Japanese Cinema (4). An examination of the history, aesthetic achievements, major directors and themes, and cultural explorations of Japanese cinema. Includes close look at Japan's leading auteur directors.

JAPN 496. Individual Study (1-6).

JAPN 498. Special Topics (1-6).

Law and Justice Courses

LAJ 102. Introduction to Law and Justice (5). This course will focus on the role of law in society and will examine both the criminal and civil law system, as well as, the function of law in social change and social control. SB - Perspectives on Cultures and experiences of U.S.

LAJ 202. Policing in a Contemporary Society (5). A historical analysis of the police function and how it has evolved into the contemporary professional police force we work with today. an overview is also made of the philosophical and ethical issues surrounding the role of the police in a democratic society.

LAJ 300. Administration of Criminal Justice (4). The sources of police power and authority in a democratic society, the internal organization and administration of federal, state and local agencies, their interaction with each other, and with the communities they serve.

LAJ 302. Criminal Procedure (4). A review of guidelines for police arrest, search, interrogation, and identification procedures based upon rules of criminal procedure derived from the U.S. Constitution. LAJ 300 is recommended. Prerequisite: admission to the major or minor.

LAJ 303. Legal Research (4). Techniques of legal research; the case system, statutes, court decisions, Sherardizing. LAJ 300 is recommended. Prerequisite: admission to the major or minor.

LAJ 311. Family Law (4). Marriage, divorce, state regulation, custody, and care and supervision of children. LAJ 300 is recommended.

LAJ 313. Introduction to Criminal Law (4). Scope and nature of law; classification of offenses; act and intent; capacity to commit crime and defenses. Elements of major criminal statutes. LAJ 300 is recommended.

LAJ 316. Introduction to Paralegal Studies (4). This course provides an introduction to paralegal studies. It provides analysis of the role of the paralegal and the tasks involved in being a paralegal including interviewing clients and witnesses, legal research, writing, legal writing, and attending trials. LAJ 300 is recommended. Prerequisite: admission to the major or minor.

LAJ 317. Introduction to Civil Practice (4). This course is designed to provide students with a comprehensive overview of civil litigation from investigation through discovery, trial, and appeal. LAJ 300 is recommended. Prerequisite: admission to the major or minor.

LAJ 318. Introduction to Forensics (4). This course explores the subject matter and methods forensic investigators use when searching and recovering evidence from crime scenes.We examine approaches to forensics across multiple disciples including anthropology, biological sciences, chemistry, law and justice, geological sciences, physics, psychology, and sociology. The goal is to provide a broad overview for students interested in exploring forensic careers. ANTH 318 and LAJ 318 are crosslisted courses; students may not receive credit for both.

LAJ 324. Correctional Law (4). This course examines transitions in prisoner civil rights since the U.S. Supreme Court ruled that inmates hold all rights as other citizens with the exception of those necessarily taken by fact of incarceration. Constitutional issues will be analyzed, including standards for shelter and medical care, discipline, religion, and access to the courts. LAJ 300 is recommended.

LAJ 326. Correctional Counseling (4). This course provides an analysis of the role of correctional counselor in rehabilitative efforts with offenders. Course focuses include criminal offender treatment methods and correctional or rehabilitative policy. LAJ 300 is

recommended. Prerequisite: admission to the major or minor.

LAJ 327. Community Corrections (4). Maintaining, supervising, and counseling offenders in the community-based setting. LAJ 300 is recommended. Prerequisite: admission to the major or minor.

LAJ 331. Investigation (4). Function and propriety of investigations; methods of gathering evidence. LAJ 300 is recommended. Prerequisite: admission to the major or minor.

LAJ 332. Police Community Relations (4). This course examines the relationship between the police and community and how to make this relationship a positive one. Analysis will be made of the history of police and friction with various groups in society. Attempts at positive police communication and community participation will also be examined. LAJ 300 is recommended. Prerequisite: admission to the major or minor.

LAJ 333. Police Personnel Administration (4). History and philosophy of federal, state, and local police personnel programs; overview of personnel functions. LAJ 300 is recommended. Prerequisite: admission to the major or minor.

LAJ 334. Issues in Policing (4). This course provides a comprehensive examination of the current critical issues and policy dilemmas within the American criminal justice system. LAJ 300 is recommended. Prerequisite: admission to the major or minor.

LAJ 342. Juvenile Justice Process (4). Includes historical, ideological development of juvenile justice process; analyses policies, mechanisms; examines integrated network of agencies; examines juvenile law, rights, treatment; examines current research. LAJ 300 is recommended. Prerequisite: admission to the major or minor.

LAJ 350. Criminal Justice and the Media (4). An exploration of media messages concerning crime and criminal justice, how these portrayals compare with the operation of the criminal justice system, and how media images influence both individual attitudes and public policy. LAJ 300 is recommended. By permission.

LAJ 351. Preparing for a Law Enforcement Career (4). This course provides crucial information to help students understand, prepare, compete, and promote themselves during the competitive testing and hiring process for law enforcement positions. LAJ 300 is recommended. Prerequisite: admission to the major or minor. By permission.

LAJ 353. Great American Trials (4). Famous American trials in history will be explored including the role of attorneys, trial advocacy, and whether justice has been achieved. LAJ 300 is recommended. By permission.

LAJ 398. Special Topics (1-6).

LAJ 400. Research Methods in Criminal Justice (4). This course examines current research in criminal justice and research methods and statistics. Students will critique current methods. LAJ 300 is recommended. Prerequisites: either a DTA or ENG 101 and ENG 102, and MATH 101 or MATH 101 or MATH 153 or MATH 154 or MATH 170 or MATH 172 and either MATH 102 or MATH 130 or PHIL 201 or CS 105.

LAJ 401. Ethics, Diversity, and Conflict in Criminal Justice (4). Introduce students to a multi-cultural approach to practical legal ethics within the criminal justice system. The course covers law enforcement, corrections, and Alternative Dispute Resolution. LAJ 300 is a recommended. Prerequisites: either a DTA 101 or ENG 101 and ENG 102, either MATH 101, MATH 153, MATH 154, MATH 164, MATH 170, or MATH 172, and either MATH 102, MATH 130, PHIL 201 or CS 105. By permission.

LAJ 402. African Americans and the Constitution (4). The law is the way a society governs itself and protects the freedom of all citizens. African Americans and the Constitution will examine legal issues engendered with dispute and division. LAJ 300 is recommended. Prerequisites: either a DTA 101 or ENG 101 and ENG 102, either MATH 101, MATH 153, MATH 154, MATH 164, MATH 170, or MATH 172, and either MATH 102, MATH 130, PHIL 201 or CS 105.

LAJ 403. Sexual Minorities, the Law, and Justice (4). This course examines sexuality, homosexuality, bisexuality, and transgender/transsexual issues related to the legal system. It provides a political and sociological overview of history, morality, law, and law enforcement practices related to sexual orientation. LAJ 300 is recommended. Prerequisites: either a DTA 101 or ENG 101 and ENG 102, either MATH 101, MATH 153, MATH

154, MATH 164, MATH 170, or MATH 172, and either MATH 102, MATH 130, PHIL 201 or CS 105.

LAJ 410. Legal Writing (4). The pre-law or paralegal student will learn fundamental legal writing tools in conjunction with basic rules on correspondence, retainer agreements, and other commonly used documents. LAJ 300 is recommended. Prerequisites: either a DTA 101 or ENG 101 and ENG 102, either MATH 101, MATH 153, MATH 154, MATH 164, MATH 170, or MATH 172, and either MATH 102, MATH 130, PHIL 201 or CS 105, and admission to the major or minor. By permission.

LAJ 420. Community and Social Justice (4). This course will examine the concepts of community justice and restorative justice in the larger context of social justice. Students will explore how community and restorative justice work with the traditional justice system. LAJ 300 is recommended. Prerequisites: either a DTA 101 or ENG 101 and ENG 102, either MATH 101, MATH 153, MATH 154, MATH 164, MATH 170, or MATH 172, and either MATH 102, MATH 130, PHIL 201 or CS 105, and admission to the major or minor.

LAJ 426. Advanced Correctional Counseling (4). This course will provide students with specialized training in theory and techniques required in the rapidly evolving practice of correctional counseling. LAJ 300 is recommended. Prerequisites: either a DTA 101 or ENG 101 and ENG 102, either MATH 101, MATH 153, MATH 154, MATH 164, MATH 170, or MATH 172, and either MATH 102, MATH 130, PHIL 201 or CS 105, and admission to the major or minor.

LAJ 440. Basic Mediation (4). Course provides an introduction to the philosophy, practice, and skills required for basic mediation, which are explored through readings, lectures, demonstrations, and skill-building role plays. LAJ 300 is recommended. Prerequisites: either a DTA 101 or ENG 101 and ENG 102, either MATH 101, MATH 153, MATH 154, MATH 164, MATH 170, or MATH 172, and either MATH 102, MATH 130, PHIL 201 or CS 105, and admission to the major or minor. By permission.

LAJ 450. Report Writing (4). Law enforcement and corrections students will learn basic writing in the context of specialized reports utilized in their fields. LAJ 300 is recommended. Prerequisites: either a DTA 101 or ENG 101 and ENG 102, either MATH 101, MATH 153, MATH 154, MATH 164, MATH 170, or MATH 172, and either MATH 102, MATH 130, PHIL 201 or CS 105, and admission to the major or minor. By permission.

LAJ 451. Crime in America (4). American crime problems in historical perspectives. Social and policy factors affecting crime. Crime impact and trends, offender, and victim profiles. LAJ 300 is recommended. Prerequisites: either a DTA 101 or ENG 101 and ENG 102, either MATH 101, MATH 153, MATH 154, MATH 164, MATH 170, or MATH 172, and either MATH 102, MATH 130, PHIL 201 or CS 105, and admission to the major or minor.

LAJ 453. Domestic Violence Issues (4). This course provides an overview of domestic violence in our society and examines critical issues, including perspectives from the legislature, courts, police, prosecutors, and victims. Significant emphasis on these perspectives in Washington State. LAJ 300 is recommended. Prerequisites: either a DTA 101 or ENG 101 and ENG 102, either MATH 101, MATH 153, MATH 154, MATH 164, MATH 170, or MATH 172, and either MATH 102, MATH 130, PHIL 201 or CS 105. May be repeated for credit.

LAJ 455. Comparative Criminal Justice Systems (4). In this course, students will revisit the U.S. system of criminal justice and learn an appreciation for the criminal justice systems of other countries. By the end of the course students will be able to compare and contrast the different systems and their application, benefits, and weaknesses. LAJ 300 is recommended. Prerequisites: either a DTA 101 or ENG 101 and ENG 102, either MATH 101, MATH 153, MATH 154, MATH 164, MATH 170, or MATH 172, and either MATH 102, MATH 130, PHIL 201 or CS 105.

LAJ 459. Current Issues (4). Current legal, correctional, and enforcement issues will be explored. LAJ 300 is recommended. Prerequisites: either a DTA 101 or ENG 101 and ENG 102, either MATH 101, MATH 153, MATH 154, MATH 164, MATH 170, or MATH 172, and either MATH 102, MATH 130, PHIL 201 or CS 105, and admission to the major or minor. By permission.

LAJ 460. Terrorism (4). Survey of domestic terrorism and United States interests in international terrorism, including concepts and theories of terrorism, history of terrorism, terrorist

organizations, specific terrorist incidents, investigative techniques, and developing legal issues. LAJ 300 is recommended.
Prerequisites: either a DTA 101 or ENG 101 and ENG 102, either MATH 101, MATH 153, MATH 154, MATH 164, MATH 170, or MATH 172, and either MATH 102, MATH 130, PHIL 201 or CS 105, and admission to the major or minor. May be repeated for credit.

LAJ 470. Victimology (4). In this course, students will focus on victims' rights, legal issues pertaining to victims, psychological trauma of crime victims and how to appropriately respond in the field to crime victims. LAJ 300 is recommended.
Prerequisites: either a DTA 101 or ENG 101 and ENG 102, either MATH 101, MATH 153, MATH 154, MATH 164, MATH 170, or MATH 172, and either MATH 102, MATH 130, PHIL 201 or CS 105.

LAJ 489. Senior Seminar in Law and Justice (4). An end-of-major course conducting a critical examination of the research in the field of law and justice. An emphasis will be placed on public policy issues in law and justice. Prerequisite: student must be a law and justice major and in their senior year of study.

LAJ 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. LAJ 300 is recommended. By permission. May be repeated for credit. Grade will either be S or U.

LAJ 491. Workshop (1-6).

LAJ 492. Teaching Experience in Law and Justice (1-4). Completion of course in which teaching or assisting is to be done and approval of the instructor and department chair. By permission. May be repeated up to 8 credits. Grade will either be S or U.

LAJ 495. Directed Research (1-5). Individual research project. LAJ 300 is recommended. By permission. May be repeated up to 10 credits.

LAJ 496. Individual Study (1-6).

LAJ 497. Forensics Capstone (1). A capstone course designed to assess student mastery of fundamental knowledge of forensics through submission of a portfolio of work collected throughout the program, and explore future opportunities. ANTH 497 and LAJ 497 are crosslisted; students may not receive credit for both. Prerequisite: senior standing.

LAJ 498. Special Topics (1-6).

LAJ 499. Seminar (1-5).

Latin Courses

LAT 151. Latin (5). Translation, declension, and conjugation approach using oral-aural drill. Firm foundation in the basic structural principles.

Leadership Courses

LEAD 101. Foundations of Leadership (2). Simulation-heavy course purposed for developing a conceptual understanding of leadership across contexts. Knowledge acquisition of core leadership concepts (e.g., perspective-taking, decision-making, etc.) is reinforced through high-fidelity activities.

LEAD 201. Leading Others: Essential Skills (5). Students examine leadership theory and principles in light of group leadership situations. With emphasis on developing essential leadership skills and competencies, students apply learning in simulated classroom activities and through an affiliated service-learning program. Prerequisite: LEAD 101.

Library Science Courses

LIS 110. Research Fundamentals (1). Designed for students new to research at the college level. Course explores knowledge of information sources, more effective searching technique familiarity of services for researchers.

LIS 201. Foundations of Library and Information Science (3). Introductory course covering the history of libraries and information usage in contemporary society. The course will explore the role of libraries in the organization, preservation and dissemination of information and career opportunities in the discipline. Prerequisite: LIS 110.

LIS 298. Special Topic (1-6).

LIS 310. Information Literacy and User Services (3). This course will cover information-seeking theories, methods, and user behaviors. Principles and philosophies of library reference service, information literacy, reading, listening and viewing guidance, and information resources will be explored. Co- or prerequisites: LIS 110 and LIS 201.

LIS 314. Technology in Library and Information Science (3). This course provides a review of the hardware and software used in libraries. Provides an

introduction to technology tools, processes, and web applications that support the delivery of library services. Co- or prerequisites: LIS 110 and LIS 201.

LIS 345. Library Research Methods and Information Literacy (4). Development of information literacy skills and theory through a discussion of internal and external information sources; knowledge of the organization of print and non-print resources; and creation of bibliographies, reports, and other academic materials. Open to all students.

LIS 398. Special Topic (1-6). Course content identified in schedule of classes. May be repeated for credit under different titles. Permission of instructor. May be repeated for credit.

LIS 410. Collection Development (3). Course covering the basic components of collection development and management. Topics to be explored will include selection, planning, budgeting and maintenance of library collections. Co- or prerequisites: LIS 110 and LIS 201.

LIS 411. Introduction to Archives (3). Introductory course in archival studies. The history, development, and nature of work in the profession, the basics of collections management and development, intellectual control, preservation, conservation, and technological applications will be presented. Co- or prerequisites: LIS 110 and LIS 201 or permission of instructor.

LIS 412. Library Management and Leadership (3). Course covering policies and procedure necessary for the effective operation of a library and information centers. The course will explore the policies and procedures required for budgeting, planning, promoting and assessing library and information programs. Co- or prerequisites: LIS 110 and LIS 201.

LIS 414. Organization of Knowledge (3). This course provides an introduction to the organization of print and electronic resources. Topics to be covered include cataloging and classification of resources, use of controlled vocabularies, and intellectual access to those resources. Co- or prerequisites: LIS 110 and LIS 201.

LIS 415. Role of the School Library Media Specialist (5). This course will provide an in-depth look at the role of the school library media specialist in the P-12 environment. The course will explore reader advisory services, professional educator standards, standards based information literacy instruction and the application of previous courses outcomes specific to P-12 education settings. Prerequisites: LIS 110 and LIS 201 and LIS 310 and LIS 314 and LIS 410 and LIS 412 and LIS 414.

LIS 490. Library and Information Science Internship (1-12). This course will provide students with hands-on instruction and experience in a library, archive, museum or other information center. In coordination with the library faculty internship advisor, the student plans and completes an internship. Prerequisites: LIS 110 and LIS 201 and LIS 310 and LIS 314. Grade will be S or U.

LIS 492. School Library Media Clinical Experience (4). This course provides students with an opportunity to apply library and information science course work in a supervised clinical experience in a P-12 library media center. Students will complete 40 hours of site based practicum and a final program portfolio. Prerequisites: LIS 110 and LIS 201 and LIS 310 and LIS 314 and LIS 410 and LIS 412 and LIS 414 and LIS 415 and current WSP/FBI fingerprint clearance. Grade will either be S or U.

LIS 498. Special Topic (1-6). Course content identified in schedule of classes. May be repeated for credit under different titles. May be repeated for credit.

Latino and Latin American Studies Courses

LLAS 102. An Introduction to Latino and Latin American Studies (5). A multi-disciplinary introduction of Latino and Latin American studies, presented in three main components: People and the Land, The Environment and the Human Condition, and Socio-Political Spectrum. SB-Perspective on World Culture (W).

LLAS 398. Special Topics (1-6).

LLAS 496. Individual Study (1-6).

Mathematics Courses

MATH 100A. Pre-Algebra (5). This course is designed to prepare students for college mathematics. Symbolic, graphical, and numeric representations will be studied to understand and apply the concepts underlying algebra. Prerequisite: either 390 or below on SAT, 15 or below on ACT, or 38 or below on Pre-Algebra compass test. Credits will not be allowed toward meeting bachelor's degree requirements. Grade will be XC.

MATH 100B. Introductory Algebra (5). This course is designed to prepare students for college mathematics. Symbolic, graphical, and numeric representations will be studied to understand and apply the concepts of algebra. Prerequisite: either 400-490 on SAT, or 16-18 on ACT, or 39-49 on Pre-Algebra compass test. Credits will not be allowed toward meeting bachelor's degree requirements. Grade will be XC.

MATH 100C. Intermediate Algebra (5). This course is designed to prepare students for college-level precalculus mathematics. Symbolic, graphical, and numeric representations will be studied to understand and apply the concepts needed to be successful in precalculus. Credits will not be allowed toward meeting bachelor's degree requirements. Prerequisite: either at least 500 on SAT, or 19 on ACT, or a Compass score of either 50-Pre-Algebra, 26-Algebra, 31-College Algebra, or 31-Trigonometry, or completed MATH 100B or higher level math course and must receive advising from the academic advising center.

MATH 101. Mathematics in the Modern World (5). Selected topics from the historical development and applications of mathematics together with their relationship to the development of our present society. Prerequisites: either at least 500 on the SAT, 19 on the ACT, a Compass test score of either 50-Pre-Algebra, 26-Algebra, 31-College Algebra, or 31-Trigonometry, or completed MATH 100B or a higher level math class. Basic Skills 4 - Math.

MATH 102. Mathematical Decision Making (5). Selected topics from probability, statistics, and mathematical decision making with real-world application. Prerequisites: either at least 500 on the SAT, 19 on the ACT, a Compass test score of either 50-Pre-Algebra, 26-Algebra, 31-College Algebra, or 31-Trigonometry, or completed MATH 100B or a higher level math class. Basic Skills 5 - Reasoning.

MATH 130. Finite Mathematics (5). The language of sets, counting procedures, introductory probability, decision making, and introductory descriptive statistics. Meets General Education "reasoning" requirement and prepares student for introductory statistics courses in various departments. Prerequisites: either at least 500 on the SAT, 19 on the ACT, a Compass test score of either 50-Pre-Algebra, 26-Algebra, 31-College Algebra, or 31-Trigonometry, or completed MATH 100B or a higher level math class. Basic Skills 5 - Reasoning.

MATH 153. Pre-Calculus Mathematics I (5). A foundation course which stresses those algebraic and elementary function concepts together with the manipulative skills essential to the study of calculus. Prerequisites: either MATH 100C with a grade of C or higher; or a score of 18 or higher on the Intermediate Math Placement Test, or a score of 66 or higher on the Compass Algebra test. Basic Skills 4 - Math.

MATH 154. Pre-Calculus Mathematics II (5). A continuation of MATH 153 with emphasis on trigonometric functions, vectors, systems of equations, the complex numbers, and an introduction to analytic geometry. Prerequisites: MATH 153 with a grade of C or higher, a score of 17 or higher on the Advanced Math Placement Test, or a score of 46 or higher on the Compass College Algebra Test. Basic Skills 4 - Math.

MATH 155. Pre-Calculus Review (5). An accelerated review of topics necessary for success in calculus with a focus on linear, quadratic, rational, exponential, trigonometric functions, and their inverses. Intended only for students continuing to calculus. Prerequisite: COMPASS score of 46+ on college algebra or 31+ on trigonometry or advanced math placement.

MATH 164. Foundations of Arithmetic (5). Structure of the real number system. Properties of and operations on integers, rationals, decimal representation, percentages, proportion, graphing, and elementary problem solving. Recommended for the prospective elementary school teacher. Prerequisites: 45 earned credits, and either at least a 500 on the SAT, a 19 on the ACT, or a score of 50 on the Compass test. Basic Skills 4 - Math.

MATH 170. Intuitive Calculus (5). An intuitive approach to the differential and integral calculus specifically designed for students in the behavioral, managerial, and social sciences. Prerequisites: MATH 153 with a grade of C or higher or a score of 19 or higher on the Advanced Placement Test. Not open to students with credit for MATH 172 or higher. Basic Skills 4 - Math.

MATH 172. Calculus I (5). Theory, techniques, and

applications of differentiation and integration of the elementary functions. Prerequisites: MATH 154 with a grade of C or higher, a score of 19 on the Advanced Math Placement Test, or a score of 46 or higher on the Compass Trigonometry test. Basic Skills 4 - Math.

MATH 173. Calculus II (5). Theory, techniques, and applications of differentiation and integration of the elementary functions. Prerequisite: MATH 172 with a grade of C or higher.

MATH 207. Mathematics Honors Seminar - Lower Level (1). Introduction to new areas of mathematics. Exposure to open problems in mathematics, and to the practice of modern research mathematics. May be repeated up to 12 credits.

MATH 216. Number and Operations 2 (4). This course focuses on the conceptual and procedural understanding of number and operations including patterns, proportional reasoning, percentages, integer operations and models, number theory, and irrational numbers. Concepts are taught from a problem solving perspective. Prerequisites: either MATH 100C with a grade of C or higher or score of 66 or higher on the Compass Algebra test.

MATH 226. Geometry and Measurement (4). This course focuses on the conceptual and procedural understanding of geometry and measurement including shapes, rigid motions, similarity, congruence, spatial reasoning, proof and measurement. Concepts are taught from a problem solving perspective using appropriate technology. Prerequisite: MATH 216.

MATH 232. Discrete Modeling for Middle-level Teachers (4). Discrete models including recurrence relations finite differences, logic, applications of graph theory, applications of linear programming, and simple combinatorics. Prerequisites: MATH 164 and MATH 250.

MATH 250. Intuitive Geometry for Elementary Teachers (4). An intuitive approach to the geometry topics relative to the elementary school curriculum. Prerequisite: MATH 164 with a grade of C or higher.

MATH 251. Probability and Statistics for Elementary Teachers (4). This course for elementary and middle grades preservice teachers is an introduction to probability and statistics. Concepts will be explored individually and cooperatively using manipulatives, simulations, and other appropriate methods. Prerequisite: MATH 164.

MATH 260. Sets and Logic (5). Essentials of mathematical proofs, including use of quantifiers and principles of valid inference. Set theory as a mathematical system. Prerequisites: MATH 173 with a grade of C or higher or MATH 172 and CS 301 with grades of C or higher.

MATH 264. Functions for Middle-level Teachers (5). Analyze and create algebraic models of functions on both continue and discrete systems. Apply function techniques to solve problems. Apply knowledge of functions and of society to communicate concepts of mathematical functions to a diverse group of middle school students. Prerequisites: MATH 100C with a grade of C or higher or a score of 18 or higher on the Intermediate Math Placement Test.

MATH 265. Linear Algebra I (4). Vector spaces, linear systems, matrices, and determinants. Prerequisite: MATH 173 with a grade of C or higher.

MATH 272. Multivariable Calculus I (5). Differential and integral calculus of multivariable functions and related topics. Prerequisite: MATH 173 with a grade of C or higher.

MATH 273. Multivariable Calculus II (5). Differential and integral calculus of multivariable functions and related topics. Prerequisite: MATH 272 with a grade of C or higher.

MATH 298. Special Topics (1-6).

MATH 299. Seminar (1-5).

MATH 299E. Orientation Seminar: Secondary Mathematics (2). Introductory seminar for new mathematics education students focusing on problem solving, technical presentation of solutions, and electronic portfolio preparation. Prerequisites: admission to the teaching secondary math major, and application to the Teacher Certification Program. Corequisite: EFC 210.

MATH 299S. Seminar - Math Major Orientation (4). Introductory seminar for new math majors, focusing on requirements and preparation for the math major. Students will learn appropriate software which will be used in future math major courses. Prerequisite: acceptance in mathematics major.

MATH 306. Middle-level Mathematics Standards Review (2). This course focuses on conceptual, procedural, and pedagogical understanding of the mathematics required for

the middle-level mathematics endorsement. This is an on-line course. Prerequisites: MATH 102 and MATH 153.

MATH 311. Statistical Concepts and Methods (5). Hands-on activities for exploring data. Surveys, planned experiments, and observational studies. Modeling, sampling distributions, and statistical inference. MINITAB statistical computing language introduced and used extensively. Prerequisites: MATH 130 or MATH 173 with a grade of C or higher.

MATH 314. Probability and Statistics (5). This course is a calculus-based introduction to probability statistics. Topics include the basic rules of probability, random variables, continuous and discrete probability distributions, moments, sampling distributions for common statistics, confidence intervals, and hypothesis testing. Prerequisite: MATH 173 with a grade of C or higher.

MATH 320. History of Mathematics (3). A study of the development of mathematics and the personalities involved. Prerequisite: MATH 260 with a grade of C or higher.

MATH 321. Math WEST-E Prep (2). Prerequisite: Students must be admitted into the mathematics education major or minor. Fully online course designed to prepare teacher candidates for the WEST-E in mathematics. Topics include mathematical processes, number and operation, algebra and function, measurement and geometry, statistics and probability, discrete mathematics and calculus. Prerequisite: MATH 265 with a C or higher. Grade will either be S or U.

MATH 322. Assessment of Student Learning for Mathematics Teachers (5). Candidates will create assessment plans organized around big ideas and essential questions from the Washington State Standards of Student Assessment. Finally, candidates will learn how to develop and implement assessment tasks to identify their student's mathematical performance and plan further instruction. Prerequisite: EFC 210, EFC 310, and MATH 299E and current WSP/FBI fingerprint clearance.

MATH 323. Teaching Middle-level Mathematics (4). Teacher candidates will use research-based best practices to plan, teach, and assess lessons aligned with the CCSS-Math in middle school classrooms (40 hours observation and instruction). Prerequisites: admission to the middle-level math major Teacher Certification Program, and current WSP/FBI fingerprint clearance.

MATH 324. Methods and Materials in Mathematics-Secondary (5). Prerequisites: EFC 320, MATH 322, current WSP/FBI fingerprint clearance, and conditional or full admission to the Teacher Certification Program. Corequisite: EFC 210.

MATH 325. Instructional Practices for Teaching Mathematics (4). Mathematics teacher candidates will practice planning, teaching, and assessing mathematics activities with emphasis on standard-based curriculum, problems solving, teaching for understanding, equity, and technology. Candidates will discuss and implement technology to improve their impact on student learning. Prerequisite: EFC 320, and MATH 324.

MATH 330. Discrete Mathematics (5). Topics from logic, combinatorics, counting techniques, graph theory, and theory of finite-state machines. Prerequisite: MATH 260 with a grade of C or higher.

MATH 331. Continuous Models (3). Students will use multiple integrals, line integrals, and differential equations to model physical situations. Prerequisite: MATH 272 with a grade of C or higher.

MATH 332. Discrete Models (4). Discrete models including graph theory, difference equations, and the models of social choice, inherent logic combinatorics, and algebra. Prerequisite: admission to the mathematics education major or minor.

MATH 335. Combinatorics and Graph Theory (4). An introduction to discrete mathematics and graph theory, with some applications. Emphasis will be placed on proof writing. Prerequisite: MATH 260 with a grade of C or higher.

MATH 337. Cryptological Mathematics (5). A mathematical look at code making and code breaking. Famous historical ciphers to be studied will include substitution, Hill, and Vigenere ciphers. Students will also investigate public key cryptography and signature authentication methods. Prerequisites: MATH 260 and MATH 265 and MATH 272.

MATH 351. Point Set Topology (4). Introduction to basic

concepts of point-set topology: topologies, continuity, compactness, connectedness, and separation axioms. Emphasis will be placed on proof writing. Prerequisite: MATH 260 with a grade of C or higher.

MATH 355. College Geometry I (4). An inductive and deductive approach to intuitive geometry, modern Euclidean geometry, history of geometry, and axiomatic systems in geometry. Prerequisite: admission to the mathematics education major or minor.

MATH 360. Algebraic Structures I (3). First course in the structure of algebraic systems includes the study of real number systems and other algebraic systems in the development of group theory. Prerequisite: admission to the mathematics education major or minor.

MATH 361. Algebraic Structures II (3). The second course in the structure of algebraic systems, including rings, modules, and fields, and their associated morphisms.

MATH 365. Linear Algebra II (4). Topics from linear algebra, such as vector spaces, linear transformations, bilinear and quadratic forms, eigenvalues and eigenvectors, and inner products. Emphasis is placed on proof writing. Prerequisites: MATH 265, and at least one of MATH 335 or MATH 351, both with a grade of C or higher.

MATH 371. Advanced Calculus (4). The basic concepts of the real numbers and calculus are presented from an axiomatic standpoint. This course also offers basic proof writing skills that are necessary for more advanced mathematics. Prerequisites: MATH 272, and at least one of MATH 335 or MATH 351, both with a grade of C or higher.

MATH 372. Complex Analysis (5). Arithmetic of complex numbers and functions of a complex variable, linear fractional transformations, Cauchy-Riemann equations, contour integration, Cauchy's theorem, residue theorem, power series and applications. Prerequisites: MATH 260 and MATH 273 with grades of C or higher.

MATH 376. Differential Equations I (3). Elementary methods of solutions of ordinary differential equations. Some numerical methods for solving ordinary differential equations with applications. Prerequisites: MATH 265 and MATH 272 with grades of C or higher.

MATH 377. Differential Equations II (3). Elementary methods of solutions of ordinary differential equations. Some numerical methods for solving ordinary differential equations with applications. Prerequisite: MATH 376 with a grade of C or higher.

MATH 405. Probability and Statistics for Teachers (4). This course focuses on conceptual and procedural understanding of probability and statistics including probability, graphing, measures of center and spread, distributions, and confidence intervals. Concepts are taught from a problem solving perspective using appropriate technology. Prerequisites: MATH 102 and MATH 153 and admission to the middle-level math major.

MATH 406. Modern Algebra for Teachers (4). This course focuses on conceptual and procedural development of algebra including logic, algebraic reasoning, equations, inequalities, patterns, sequences, functions, modeling, and polynomial algebra. Concepts are taught from a problem solving perspective using appropriate technology. Prerequisites: MATH 153 and MATH 216.

MATH 407. Mathematics Honors Seminar - Upper-level (1). Introduction to new areas of mathematics. Exposure to open problems in mathematics, and to the practice of modern research mathematics. Prerequisite: junior standing or higher. May be repeated up to 12 credits.

MATH 410A. Advanced Statistical Methods I (3). A thorough treatment of regression and correlation. Chi-square and other enumeration statistics. Non-parametric statistical principles of experimental design. Examples will be from a variety of fields. Prerequisite: MATH 311 with a grade of C or higher.

MATH 410B. Advanced Statistical Methods II (3). A thorough treatment of regression and correlation. Chi-square and other enumeration statistics. Non-parametric statistical principles of experimental design. Examples will be from a variety of fields. Prerequisite: MATH 410A with a grade of C or higher.

MATH 411A. Probability Theory (4). Principal topics include: combinatorial theory, conditional probability, random variables, expectation and moments, generating functions, various discrete and continuous distributions, law of large numbers, central limit theorem. Prerequisite: MATH 273 with a grade of C or higher.

MATH 411B. Mathematical Statistics I (3). Derived distributions, point and interval estimation, hypothesis testing. Correlation and regression theory. Distribution free methods. Bayesian inference. Prerequisite: MATH 411A with a grade of C or higher.

MATH 411C. Mathematical Statistics II (3). Derived distributions, point and interval estimation, hypothesis testing. Correlation and regression theory. Distribution free methods. Bayesian inference. Prerequisite: MATH 411B with a grade of C or higher.

MATH 414. Time Series Analysis (3). Model building, parameter estimation, diagnostic checking of time series data; ARIMA models and forecasting. Analysis of seasonal models. Co- or prerequisite: MATH 410B.

MATH 416A. Actuarial Science Problems II (1-2). Students discuss and present problems in probability and mathematical statistics important for actuaries. Prerequisite: MATH 411B with a grade of C or higher. May be repeated up to 3 credits.

MATH 416B. Actuarial Science Problems III (2). Review of topics in financial mathematics important for actuaries, including time value of money, annuities, loans, bonds, and derivatives markets. Co- or prerequisite: MATH 418C.

MATH 417A. Loss Models I (3). Modeling process, calibration, and evaluation. Analyzing data, determining a suitable model including parameter values, and providing measures. Prerequisite: MATH 411A with a grade of C or higher.

MATH 417B. Loss Models II (3). Modeling process, calibration, and evaluation. Analyzing data, determining a suitable model including parameter values, and providing measures of confidence for decisions based upon the model. Prerequisite: MATH 417A with a grade of C or higher.

MATH 417C. Loss Models III (3). Modeling process, calibration, and evaluation. Analyzing data, determining a suitable model including parameter values, and providing measures of confidence for decisions based upon the model. Prerequisite: MATH 417B with a grade of C or higher.

MATH 418A. Financial Mathematics I (3). Fundamental concepts and calculations for cash flows as a basis for future use in reserving, valuation, pricing, asset/liability management, investment ,and capital budgeting. Prerequisite: MATH 173 with a grade of C or higher.

MATH 418B. Financial Mathematics II (3). Fundamental concepts and calculations for cash flows as a basis for future use in: reserving, valuation, pricing, asset/liability management, investment, and capital budgeting. Prerequisite: MATH 418A with a grade of C or higher.

MATH 418C. Financial Mathematics III (3). Introduction to financial instruments, including derivatives, and the concept of no-arbitrage as it relates to financial mathematics. Introduction to financial economics and key terms: derivatives, forwards, short and long positions, call and put options, spreads, collars, hedging, arbitrage, and swaps. Prerequisite: MATH 418B with a grade of C or higher.

MATH 419A. Actuarial Mathematics I (3). Mathematics of analyzing and pricing insurance, annuities, and pension products. Life contingencies, risk theory, and techniques in reserving and valuation. Prerequisite: MATH 411A with a grade of C or higher.

MATH 419B. Actuarial Mathematics II (3). Mathematics of analyzing and pricing insurance, annuities, and pension products. Life contingencies, risk theory, and techniques in reserving and valuation. Prerequisite: MATH 419A with a grade of C or higher.

MATH 419C. Actuarial Mathematics III (3). Mathematics of analyzing and pricing insurance, annuities, and pension products. Life contingencies, risk theory, and techniques in reserving and valuation. Prerequisite: MATH 419B with a grade of C or higher.

MATH 430. Introduction to Theory of Numbers (3). Euclidean algorithm, fundamental theorem of arithmetic, Diophantine equations, primitive roots and indices, and other number theory topics. Prerequisite: MATH 260 with a grade of C or higher.

MATH 440. Mathematical Theory of Financial Economics (5). Concepts, principles, and techniques needed for the professional actuarial SOA/CAS Exam MFE are covered in this course. Topics to explore include interest rate models, bond price models, rational valuation of derivative securities, and delta-hedging as

risk management techniques. Prerequisites: MATH 411B and MATH 418C.

MATH 451. Topology I (3). An introduction to point-set and algebraic topology. Topics may include metric spaces, topological spaces, homotopy theory, and the fundamental group. Prerequisites: MATH 260 and MATH 265 with grades of C or higher.

MATH 452. Topology II (3). An introduction to point-set and algebraic topology. Topics may include metric spaces, topological spaces, homotopy theory, and the fundamental group. Prerequisite: MATH 451 with a grade of C or higher.

MATH 453. Topology III (3). An introduction to point-set and algebraic topology. Topics may include metric spaces, topological spaces, homotopy theory, and the fundamental group.

MATH 455. College Geometry II (3). Introduction to non-Euclidean geometry including history, deductive reasoning, and topics in hyperbolic and elliptical geometry. Prerequisites: MATH 355 and MATH 260 with grades of C or higher.

MATH 461. Abstract Algebra I (4). Algebraic structures such as groupoids, groups, rings, and fields. Prerequisite: MATH 365.

MATH 462. Abstract Algebra II (4). Algebraic structures such as groupoids, groups, rings, and fields. Prerequisite: MATH 461 with a grade of a C or higher.

MATH 471. Advanced Analysis I (4). Further development of properties of calculus. Prerequisite: MATH 371, with grade of C or higher.

MATH 472. Advanced Analysis II (4). Further development of properties of calculus, including topics in uniform convergence, differentiation, and integration. Prerequisite: MATH 471 with a grade of C or higher.

MATH 473. Advanced Analysis III (3). Further development of properties of calculus. Prerequisite: MATH 472 with a grade of C or higher.

MATH 475. Applied Analysis I (3). Selected topics from advanced analysis especially useful to the engineer, chemist, physicist, and applied mathematician. Prerequisite: MATH 376 with a grade of C or higher.

MATH 476. Applied Analysis II (3). Selected topics from advanced analysis especially useful to the engineer, chemist, physicist, and applied mathematician. Prerequisite: MATH 475 with a grade of C or higher.

MATH 477. Applied Analysis III (3). Selected topics from advanced analysis especially useful to the engineer, chemist, physicist, and applied mathematician. Prerequisite: MATH 476 with a grade of C or higher.

MATH 486. Mathematical Modeling for Middle-level Teaching (4). Teacher candidates will create and analyze mathematical models in relation to the CCSS-Math content domains using appropriate technology. They will design real-world math tasks that highlight the use of models for making sense of mathematics. Prerequisites: MATH 406 and admission to the middle-level math major and application to the Teacher Certification Program.

MATH 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prerequisite: prior approval required. May be repeated for credit. Grade will either be S or U.

MATH 491. Workshop (1-6). The title of the workshop and the credit to be earned shall be determined at the time the workshop is approved. Designed to give an opportunity for individual and group study of problems in mathematics. May be repeated for credit.

MATH 495. Undergraduate Research (1). May be repeated up to 5 credits.

MATH 496. Individual Study (1-6).

MATH 498. Special Topics (1-6).

MATH 499. Seminar (1-5).

MATH 499E. Senior Seminar: Secondary Mathematics (4). Individualized projects using oral presentations and written electronic portfolio to show mastery in all program outcomes for teaching secondary mathematics. Prerequisite: MATH 325.

MATH 499S. Senior Seminar (2). Individualized projects using oral presentations and written portfolio to show mastery in all program outcomes for mathematics.

McNair Scholars Courses

MCNA 301. Introduction to the McNair Scholars Program (1). A seminar designed to introduce students to the McNair Program and guide them through the steps of identifying a faculty mentor and choosing a research topic. Prerequisite: admission into the

McNair Scholar Program. May be repeated up to 2 credits.

MCNA 302. Finding a Graduate School (1). A seminar designed to assist McNair Scholar students identify prospective graduate schools in their field of study. Prerequisite: MCNA 301 and admission into the McNair Scholars Program. May be repeated up to 2 credits.

MCNA 303. Completing the Graduate School Application (1). A seminar designed to assist McNair Scholar students to complete their graduate school application materials. Prerequisite: MCNA 302 and admission into the McNair Scholars Program. May be repeated up to 2 credits. Grade will either be S or U.

MCNA 395. Undergraduate Research Methods (2). An introduction to the steps of writing a research proposal. Prerequisite: admission to the McNair Scholars Program.

MCNA 401. Conquering the Graduate Record Exam (3). This course is designed to prepare junior and seniors who plan to pursue masters or doctoral programs that require GRE scores. Topics include test-taking strategies for the verbal, quantitative and writing assessments. Prerequisite: junior or senior status. Grade will be S or U. May be repeated up to 6 credits.

Mechanical Engineering Technology Courses

MET 255. Machining (4). Basic operations and technical information concerning common metal working machines and metal machining processes. Two hours lecture and four hours laboratory per week.

MET 257. Casting Processes (4). Theory and practice in green sand, shell core, permanent mold, no bake, and evaporation casting processes. Two hours lecture and four hours laboratory per week.

MET 310. Hydraulics/Pneumatics (4). A study of the application, controls, and uses of air and liquid for the transmission of power. Prerequisite: IET 210 or permission. Two hours lecture and four hours laboratory per week.

MET 314. Applied Thermodynamics (4). Properties of pure substances, first and second laws of thermodynamics, enthalpy and entropy, perfect gases, Carnot cycle, steam cycles, refrigeration cycles, mixtures of perfect gases, chemical reactions, and combustion. Four hours lecture per week. Prerequisites: MATH 173 and PHYS 182 or PHYS 112. Co-requisite: MET 314LAB.

MET 314LAB. Applied Thermodynamics Laboratory (1). Practical application of thermodynamics systems teaching First and Second Law of Thermodynamics principles. Lab work includes usage of state-of-the-art instrumentation and data systems. Corequisite: MET 314. Prerequisites: MATH 173 and either PHYS 182 or 112.

MET 315. Fluid Dynamics (5). Fluid statics, continuity, Bernoulli, and the general energy equation, laminar and turbulent flow, friction losses in pipes and ducts, pump performance and selection, compressible flow, and fluid measurements. Four hours lecture and two hours laboratory per week. Prerequisites: IET 311 and MET 314.

MET 316. Applied Heat Transfer (5). Steady and unsteady state heat conduction, free convection, forced convection in tubes, forced convection over exterior surfaces, radiation heat transfer, change in phase heat transfer, heat exchangers, and heat pipes. Four hours lecture and two hours laboratory per week. Prerequisite: MET 315.

MET 320. Fundamentals of Laser Technology (4). Overview of laser technology with emphasis on laser characteristics, safety, and applications. Prerequisite: PHYS 113. Four hours lecture per week.

MET 327. Technical Dynamics (4). Topics: rectilinear and curvilinear motion, rotational kinematics, work, energy and power, linear impulse and momentum, angular impulse and momentum, rigid body motion, relative motion, and vibrations. Prerequisite: ETSC 311 with a grade of 2.3, C+, or higher. Co-requisite: MET 327LAB.

MET 327LAB. Technical Dynamics Laboratory (1). Practical application of dynamical systems including usage of state-of-the-art instrumentation and data recording systems. Prerequisite: IET 311. Co-requisite: MET 327.

MET 345. Production Technology (4). Mass production principles, organization for production, product engineering, production system design, jig, and fixture development, special problems in production.

MET 351. Metallurgy/Materials and Processes (4). Ferrous and nonferrous metals and alloys; polymeric, ceramic, and cellular materials; use of phase diagrams, cooling curves, stress-strain diagrams, and

metallography. Prerequisites: CHEM 111 or CHEM 181.

MET 355. Advanced Machining and CNC Programming (4). Machining of metallic and non-metallic materials on automated equipment; mass production technology; programming and operation of CNC equipment. Prerequisite: MET 255.

MET 357. Welding/Fabrication (4). Theory and practice in arc welding, oxyacetylene welding and cutting, MIG, TIG, and plastic welding. Two hours lecture and four hours laboratory per week.

MET 382. Plastics and Composites (4). Composition, characteristics, and classifications of plastics and composite materials incorporating industrial applications, processing, and fabrication. Prerequisites: CHEM 111 and CHEM 111LAB, or CHEM 181 and CHEM 181LAB.

MET 388. Tool Design (4). Principles of tool design for material removal, work holding, press working, joining and inspection processes with emphasis on inventive ability and problem solving. Prerequisites: IET 160 or IET 265, and MET 255.

MET 411. Energy Systems I (5). Power generation, energy reserves, fuels, reciprocating machines, internal combustion engines, rotating compressors, axial flow turbines, and gas turbine power. Prerequisite: MET 316. Four hours lecture and two hours laboratory per week.

MET 412. Alternative Energy Systems (5). Comprehensive overview of alternative energy technology including societal issues, energy reserves, fossil, nuclear, solar, wind, geothermal, hydrogen and biomass energy sources, and advanced energy conversion systems.

MET 418. Mechanical Design I (4). Mechanical design principles including material and device responses to complex loading and optimization of energy system and mechanical drives. Prerequisite: ETSC 312 with a grade of 2.3, C+, or higher.

MET 418LAB. Mechanical Design I Laboratory (1). Practical application of mechanical design principles. Lab work includes design and or evaluation of modern mechanical devices, concepts and systems. Prerequisite: ETSC 312 with a grade of 2.3, C+, or higher.

MET 419. Mechanical Design II (5). Fasteners, welds, machine frames, pressure vessels, hydraulic cylinders, electrical motors, and actuators. Prerequisite: MET 418. Four hours lecture and two hours laboratory per week.

MET 420. Finite Element Analysis (4). Computerized modeling of structural, vibrational, and thermal design problems. Prerequisites: IET 160 and MET 426. Two hours lecture and four hours laboratory.

MET 423. Computer-aided Design and Manufacturing (4). Integrates Computer-aided Design (CAD) and Computer-aided Manufacturing (CAM). Prerequisites: IET 160, MET 255, and MET 418. Three hours lecture and two hours laboratory per week.

MET 426. Applications in Strength of Materials (4). Topics support stress analysis and design. Laboratory activities include material strength, hardness, impact testing, strain gage technology, photoelasticity, ultrasonics, and eddy current. Prerequisites: IET 312 and MET 351.

MET 483. Ceramics and Composites (4). Composition, characterization, and classification of ceramics and related composite materials incorporating industrial applications, processing, and fabrication. Prerequisites: CHEM 111 and CHEM 111LAB, or CHEM 181 and CHEM 181LAB.

MET 488. Professional Certification Exam Preparation (2). A comprehensive review of professional mechanical engineering principles and technical skills in preparation for the national certification examination. Prerequisite: MET 418. Grade will either be S or U.

MET 495A. Senior Project I (3). The senior project is a capstone course that integrates all the major elements of the MET curriculum in a project related activity. The topic is chosen by the student in concurrence with the instructor and must include elements of planning, design, and analysis (Phase I), construction (Phase II), and test and evaluation (Phase III). Collaboration with representatives of industry, government agencies, or community institutions is encouraged. As an alternative, it will be possible to select a design study for the senior project for all three quarters, providing it is sufficiently comprehensive and approved by the MET advisor. Prerequisite: MET 315. Course must be taken in sequence. May be repeated for credit.

MET 495B. Senior Project II (3). The senior project is a capstone

course that integrates all the major elements of the MET curriculum in a project related activity. The topic is chosen by the student in concurrence with the instructor and must include elements of planning, design, and analysis (Phase I), construction (Phase II), and test and evaluation (Phase III). Collaboration with representatives of industry, government agencies, or community institutions is encouraged. As an alternative, it will be possible to select a design study for the senior project for all three quarters, providing it is sufficiently comprehensive and approved by the MET advisor. Prerequisite: MET 495A. Course must be taken in sequence. May be repeated for credit.

MET 495C. Senior Project III (3). The senior project is a capstone course that integrates all the major elements of the MET curriculum in a project related activity. The topic is chosen by the student in concurrence with the instructor and must include elements of planning, design, and analysis (Phase I), construction (Phase II), and test and evaluation (Phase III). Collaboration with representatives of industry, government agencies, or community institutions is encouraged. As an alternative, it will be possible to select a design study for the senior project for all three quarters, providing it is sufficiently comprehensive and approved by the MET advisor. Prerequisite: MET 495B. Course must be taken in sequence. May be repeated for credit.

Management Courses

MGT 200. Essential Skills for Business Professionals (5). This course develops the skills and insights necessary to effectively acquire, synthesize and disseminate knowledge as a business decision maker - skills essential for success in business school and standard abilities in high performance professionals.

MGT 380. Organizational Management (5). Principles of management class for non-business majors. Introduces students to the history and development of management ideas and contemporary practice. Overview of all the major elements of the managerial function. MGT 380 and MGT 382 are equivalent courses; students may not receive credit for both. Prerequisites: this course is only available to non-business majors. College of business majors or pre-majors should be enrolling in MGT 382 instead of MGT 380, and MKT 362 instead of MKT 360.

MGT 382. Principles of Management (5). History of management thought and practice, challenges of contemporary management, organizational theory, human behavioral aspects of management, introduce strategic management process. Open to Business majors only. MGT 382 and MGT 380 are equivalent courses; students may not receive credit for both. Prerequisite: ECON 201 and admission to a CB major; or, admission to a College of Business Graduate Program.

MGT 386. Principles of Organizational Behavior (5). Applied and conceptual analysis of behavior within organizations. Involves leadership, motivation, communications, group processes, decision-making, climate, and culture. Prerequisites: MGT 380 or MGT 382.

MGT 394. Legal Considerations in Sport Business (5). An exploration of the relationship between sports and the law. Issues to be explored include liability, legal rights of employees and athletes, as well as managing the legal risk in the sports profession. Prerequisites: BUS 241 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25; OR (declaration of a Sports Business minor or certificate).

MGT 395. Leadership in Business Organizations (5). Examination of historical and current practices in leading business organizations. Prerequisites: BUS 241 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25; OR (declaration of a Sports Business minor or certificate).

MGT 477. Global Leadership and Culture (5). Leadership and developmental relationships across cultures, cultural

influences on leadership attributes, behaviors, and performance; leader development, self-assessment of leader competencies. Prerequisites: (MGT 382 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25) OR (MGT 380 and admission to the Integrated Energy Management Program).

MGT 478. Leadership Capstone (5). Culminating learning experience that explores knowledge of effective leadership acquired through all previous leadership curriculum. Involves application and evaluation of: students' leader competencies, knowledge of leadership theory, values, and ethics. Prerequisites: MGT 382 and MGT 395 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25.

MGT 482. Advanced Organizational Behavior (5). MGT 482 builds on the foundations and theories of MGT 386 by providing students with an advanced understanding of the field of organizational behavior. Students will be challenged to develop and improve their leadership knowledge and skills, and they will also learn to apply, integrate, and problem-solve using emerging management research. Prerequisites: MGT 386 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25.

MGT 483. Decision Making and Organizational Change (5). This course analyzes the synergetic relationship between leadership, decision making and organizational change. It combines theory and applied practice to inform students of current studies on how effective decisions are made, how bad decisions can be avoided and how to implement change resulting from good decisions. The dual aspects of the decision-making process: intuitive and analytical will be covered, and the respective values of both will be highlighted. Prerequisites: MGT 382 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25.

MGT 484. International Management (5). A comparative study of management in selected countries as well as an analysis of key managerial problems encountered in the multinational corporation. Prerequisites: MGT 382 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25.

MGT 487. Entrepreneurism and Small Business Management (5). Investigation of entrepreneurism and small business management issues. Students learn to perform feasibility studies and develop business plans. Small business challenges in marketing, finance, etc., will also be addressed. Prerequisites: MGT 382 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25.

MGT 489. Strategic Management (5). Basic policy decisions involved in managing the total enterprise. Prerequisites: completion of the college of business core classes (ECON 202 and FIN 370 and SCM 310 and MIS 386 and MKT 362 and MGT 382 and (MGT 200 or BUS 301) and (ADMG 385 or COM 345 or ENG 310) with a minimum grade of a C- in each course and

a minimum collegiate GPA of 2.25 AND senior standing AND completed application for graduation; (OR admission to a College of Business Graduate Program).

Management Information System Courses

MIS 386. Management Information Systems (5). Use of computer-based information systems in all functional areas of business. Computer and information technology, resources, management, and end-user decision making, and system development. Prerequisites: BUS 221 and admission to a college of business major; or admission to a College of Business Graduate program.

Marketing Courses

MKT 360. Principles of Marketing (5). Principles of marketing class for non-business majors. Explores the function and processes of marketing, introducing students to the fundamental marketing concepts. MKT360 and MKT362 are equivalent courses; students may not receive credit for both. Prerequisites: this course is only available to non-business majors. College of business majors or pre-majors should be enrolling in MGT 382 instead of MGT 380 and MKT 362 instead of MKT 360.

MKT 362. Essential Marketing Concepts (5). Introduction to the principles of marketing, creating, communicating, and delivering superior customer value, choosing target markets, managing customer relations. MKT360 and MKT362 are equivalent courses; students may not receive credit for both. Prerequisites: ECON 201 and BUS 221 and admission to a College of Business major; OR, admission to a College of Business Graduate Program.

MKT 364. Marketing Promotion Management (5). Communication problems of marketing goods and services to consumers and industrial buyers; advertising management, personal selling, and sales promotion; analysis for the promotion mix; and public interest in marketing communication. Prerequisites: MKT 362 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25.

MKT 365. International Marketing (5). Marketing functions involved in doing business internationally, environmental conditions affecting international trade, and problems of securing employment internationally. Prerequisites: (MKT 362 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25) OR (MKT 360 and admission to the Integrated Energy Management Program).

MKT 370. Sports Marketing and Sponsorship (5). This course takes a strong industry focus to the study of sports marketing. Work examines the range of promotional strategies and tactics used by different leagues/sport businesses to attract and retain sports fans. Additional topics include the nature of effective sports sponsorship campaigns. Prerequisites: (MKT 362 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25) OR (MKT 360 and declaration of a Sport Business minor or certificate).

MKT 371. Sponsorship and Promotion in Sport Business (5). Examination of sport sponsorship, sales, implementation, and evaluation; communication between sport sellers and consumers through advertising, sales promotion, public relations, and other forms of communication. Prerequisites: (MKT 362 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25) OR (MKT 360 and declaration of a Sport Business minor or certificate).

MKT 372. Revenue Generation and Finance in Sport Business (5). Examination of historical and current practice in revenue generation and financing of sport organizations, including public and private sources of revenue. Prerequisites: (MKT 362 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25) OR (MKT 360 and declaration of a Sport Business minor or certificate).

MKT 376. Foundations of Digital Marketing (5). Explores the impact of digital media on consumer behavior and marketing strategies. Provides an overview of digital metrics and analytics, online business models, future trends, and ethical implications of digital marketing. Prerequisites: MKT 362 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25.

MKT 398. Special Topics (1-6).

MKT 468. Consumer Behavior (5). An introduction to analysis of the consumer as a basis for marketing decisions. The analysis concerns who buys what, how the consumer uses the product, the significance of the product to the consumer, and the buying process. Prerequisites: MKT 362 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25.

MKT 469. Market Research (5). Application of research to economic and business problems; tools of research design; planning investigations; gathering, organizing, and interpreting data; and presentation of findings. (Not open to students with credit in ECON 426.) Prerequisites: MKT 362 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25.

MKT 470. Marketing Problems and Policy (5). The capstone course for the marketing specialty. Use case analysis and other techniques to develop marketing decision skills and policy determination abilities. Prerequisites: MKT 362 and MKT 468 and MKT 469 with a grade of C or higher and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25. By permission.

MKT 476. Advanced Digital Marketing (5). Application of digital marketing theories and concepts to real-world cases and projects. Prerequisites: MKT 362 and MKT 376 and admission to a College of Business major AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25.

Military Science and Leadership Courses

MSL 101. Foundations of Officership (1). Introduces students to issues and competencies that are central to a commissioned officer's responsibilities. Establishes framework for understanding officership, leadership, Army values, and life skills, such as physical fitness and time management. Open to all students.

MSL 102. Basic Leadership (2). Establishes foundation of basic fundamentals such as problem solving, communications, briefings, effective writing, goal setting, techniques for improving listening and speaking skills, and an introduction to counseling. Open to all students.

MSL 103. Advanced Leadership (2). Studies in problem solving, communications, effective writing, goal setting, techniques

of listening, advanced speaking skills and professional counseling. Open to all students.

MSL 201. Individual Leadership Studies (2). Students identify successful leadership characteristics through personal experience and observation of others during hands-on team building exercises. Explores persuasion techniques and the continuum of guidance to determine leadership styles. Open to all students.

MSL 202. Leadership and Teamwork (2). Examines how to build successful teams, various methods for influencing action, effective communication in setting and achieving goals, the importance of timing the decision, creativity in the problem solving process, and obtaining team buy-in through immediate feedback. Open to all students.

MSL 211. Land Navigation (2). Principles of land navigation and orienteering with practical field applications.

MSL 212. Leadership Laboratory (1). Practical experience in leadership and basic military skills. May be repeated for credit.

MSL 292. Leader's Training Course, Internship (8). Basic military skills and leadership techniques taught at Ft. Knox, Kentucky, during the summer. Qualifies the student for enrollment in the ROTC advanced course. Training emphasizes leadership development and can be taken in place of the basic course. Students receive pay, food, lodging, and travel expenses to and from Ft. Knox. By permission.

MSL 293. Ranger Challenge Training (2). Prepares students to compete as a team member on the CWU Ranger Challenge team. Corequisite: PEF 118.

MSL 296. Individual Studies in Military Science (1-15).

MSL 298. Special Topics (1-6).

MSL 301. Leadership and Problem Solving (3). Students conduct self-assessment of leadership style, develop personal fitness regimen, and learn to plan and conduct individual/small unit tactical training while testing reasoning and problem solving techniques. Students receive direct feedback on leadership abilities. Required for commissioning. Prerequisite: MSL 102.

MSL 301LAB. Military Science and Tactics III Laboratory (1). Corequisite: MSL 301. Requires concurrent enrollment in MSL 301. Practical experience and application in first aid, weapons, communications, and advanced land navigation.

MSL 302. Leadership and Ethics (3). Students learn small-group leadership methods with emphasis on problem solving and dealing with situational change required for commissioning. Prerequisite: MSL 301.

MSL 302LAB. Military Science and Tactics III Laboratory (1). Practical experience and application in small-unit leadership techniques, and small-unit tactics. Corequisite: MSL 302.

MSL 303. Leadership and Small Group Tactics (3). Students learn and demonstrate small-unit tactics and land navigation methods while using advanced problem-solving techniques. Emphasis on decision making and communication skills. Required for commissioning. Prerequisite: MSL 302.

MSL 303LAB. Military Science and Tactics III Laboratory (1). Practical experience integration of small-unit tactics, land navigation, techniques of fire support, and military skills. Corequisite: MSL 303.

MSL 314. Military History of the United States (5). A comprehensive and systematic survey and analysis of the American military experience from colonial times through the Vietnam War. MSL 314 and HIST 314 are cross-listed courses; students may not receive credit for both.

MSL 392. Leader Development and Assessment Course Preparation (2). Practical exercise in small-unit leadership and tactics. Prepares the student for leader development and assessment course. Prerequisite: MSL 302.

MSL 398. Special Topics (1-6).

MSL 401. Leadership and Management (4). Develops student proficiency in planning and executing complex operations, functioning as a member of a staff, and mentoring subordinates. Students explore training management, methods of effective staff collaboration, and developmental counseling techniques. Required for commissioning. Prerequisite: MSL 303.

MSL 402. Officership (4). Study includes case analysis of military culture and practical exercises on establishing a command climate. Students must complete a quarter-long Senior Leadership Project that requires them to plan, organize, collaborate, analyze, and demonstrate their leadership skills. Required for commissioning. Prerequisite: MSL 401.

MSL 403. Officership II (2). Emphasis on analyzing case and situational studies which cover contemporary leadership problems. Required for commissioning. Prerequisite: MSL 402.

MSL 492. Leader Development and Assessment Course Internship (8-15). Practical exercise in small-unit leadership and tactics. Five-week camp at Ft. Lewis, Washington. Required for commissioning. Prerequisites: MSL 301, MSL 302, and MSL 303. May be repeated for credit.

Music Courses

MUS 101. History of Jazz (5). America's only indigenous art form; late 1800s to present. Emphasis on artists and cultural/societal forces shaping music's evolution. Extensive listening, reading; required attendance of performances. AH-Aesthetic Experience

MUS 102. Introduction to Music (5). Fundamental musical concepts (melody, harmony, rhythm, form, etc.) through illustrations of the instrumental and vocal music of major composers from the earliest period through the present day. AH-Aesthetic Experience

MUS 103. History of Rock and Roll (5). America's second indigenous musical art form, after jazz, 1950's to present. Emphasis on artists and cultural/societal forces shaping music's evolution. Extensive listening, reading; required online discussion. Minimum technology requirements for online course. AH-Aesthetic Experience

MUS 104. Introduction to Musical Studies (3). Attitudes and concepts relevant to the music profession. Listening repertoire and reference materials. Designed for entering music majors. BAS1 Basic Skills A - GenEd Colloq

MUS 120. Composition 1 (3). Introduction to composition addressing such topics as phrase structure, melodic development, modulations, textures, and transitions. Small compositional projects emphasizing certain stylistic traits for piano and other genres. Prerequisites: MUS 145 and MUS 145A with a C or higher. May be repeated up to 3 credits.

MUS 143. Introduction to Music Theory (3). Introduction of fundamental music theory: scales, keys, meter, and rhythm, triads, ear-training, and keyboard fundamentals. Course is designed for non-majors seeking basic musical skills, and for music majors with limited theoretical backgrounds. Does not count toward a music degree.

MUS 144. Theory 1 (3). Basic theoretical concepts dealing with fundamental elements of common-practice period melody, harmony, and rhythm. This course is the first in the six-course harmony sequence. Courses must be taken in sequence. Prerequisite: online fundamental exam with 75% or higher, or successful completion of the online fundamental course. Co-requisite: MUS 152A.

MUS 144A. Aural Skills 1 (1). Basic fundamental concepts of common-practice period melody, harmony, and rhythm through ear training, sight-singing, dictation, rhythm, and basic keyboard applications. This course is the first in the three quarter, first year aural skills sequence. Courses must be taken in sequence. Prerequisite: online fundamental exam with 75% or higher, or successful completion of the online fundamental course. Co-requisite: MUS 152A.

MUS 145. Theory 2 (3). Basic theoretical concepts dealing with fundamental elements of common-practice period melody, harmony, rhythm, and voice leading as demonstrated through analytical and compositional perspectives. This course is the second in the six-course harmony sequence. Courses must be taken in sequence. Prerequisites: MUS 144 and MUS 144A with grades of C or higher. Co-requisite: MUS 145A and MUS 152A or MUS 153A.

MUS 145A. Aural Skills 2 (1). Basic fundamental concepts of common-practice period melody, harmony, and rhythm through ear training, sight-singing, dictation, rhythm, and basic keyboard applications. This course is the second in the three quarter, first year aural skills sequence. Courses must be taken in sequence. Prerequisites: MUS 144 and MUS 144A with grades of C or higher. Co-requisite: MUS 145A and MUS 152A or MUS 153A.

MUS 146. Theory 3 (3). Basic theoretical concepts dealing with fundamental elements of common-practice period melody, harmony, rhythm, and voice leading as demonstrated through analytical and compositional perspectives. This course is the third in the six-course harmony sequence. Courses must be taken in sequence. Prerequisite: MUS 145 and MUS 145A with grades of C or higher. Co-requisite: MUS 146A and MUS 154A or MUS 153A or MUS 154A.

MUS 146A. Aural Skills 3 (1). Basic fundamental concepts of common-practice period melody, harmony, and rhythm through ear training, sight-singing, dictation, rhythm, and basic keyboard applications. This course is the third in the three quarter, first year aural skills sequence. Courses must be taken in sequence. Prerequisite: MUS 145 and MUS 145A with grades of C or higher. Co-requisite: MUS 146A and MUS 154A or MUS 153A or MUS 154A.

MUS 152A. Class Piano I (1). Group instruction providing beginning skills to prepare for the piano proficiency requirement and to reinforce music theory concepts. Co-requisites: MUS 144 and MUS 144A. Grade will either be S or U.

MUS 153A. Class Piano II (1). Group instruction providing beginning/intermediate skills to prepare for the piano proficiency requirement and to reinforce music theory concepts. Prerequisite: MUS 152A. Grade will either be S or U.

MUS 154. Class Instruction (1). Each course prerequisite to the next numeral (A.) Piano I, II, III; (B.) Voice I, II; (H.) Guitar I, II. Course fees do apply. May be repeated for credit.

MUS 154A. Class Piano III (1). Group instruction providing intermediate skills to prepare for the piano proficiency requirement and to reinforce music theory concepts. Prerequisite: MUS 153A. May be repeated up to 3 credits. Grade will either be S or U.

MUS 154B. Class Voice for the Non-major (1). This course is designed for the non-major beginning voice student. Through group instruction the fundamentals of proper vocal production will be introduced and practiced; concepts of breathing, resonance and articulation. Students will prepare group songs and individual solos by the end of the quarter. Prerequisite: each course prerequisite to the next numeral (A.) Piano I, II, III; (B.) Voice I, II; (H.) Guitar I, II. May be repeated for credit.

MUS 164. Major Applied Area (Individual Instruction) (1-2). Instruction available in performance areas A-H and K. Department Consent Required. May be repeated for credit.

MUS 171. Secondary Applied Area (Individual Instruction) (1). Private study on instruments secondary to a student's major performance area. Intended particularly for beginning students who wish to develop additional skills on an instrument or in voice to enrich their total music background. Instruction available in performance areas A-I and K. One credit any quarter, may be repeated. May be repeated for credit.

MUS 171A. Secondary Applied Area Piano (1). Private study on instruments secondary to a student's major performance area. Intended particularly for beginning students who wish to develop additional skills on an instrument or in voice to enrich their total music background. One credit any quarter, may be repeated. By permission. May be repeated for credit.

MUS 198. Special Topics (1-6).

MUS 210. Vocal Jazz Choir (1). Must attend all scheduled rehearsals and performances. An ensemble specializing in performance of repertoire from jazz choir tradition established in the Northwest and beyond. Limited to SATB singers and rhythm-section instruments. Prerequisite: student must be freshmen or sophomore standing. May be repeated for credit.

MUS 211. Women's Choir (1). Prerequisite: student must be freshmen or sophomore standing. Two hours of rehearsal per week plus all scheduled rehearsals and performances. May be repeated for credit.

MUS 213. Flute Choir (1). Prerequisite: students must be freshmen or sophomore standing. Previous experience in flute performance and permission of instructor. Two hours of rehearsal per week plus all scheduled rehearsals and performances. May be repeated for credit.

MUS 214. Brass Choir (1). Prerequisite: student must be freshmen or sophomore standing. Two hours of rehearsal per week plus all scheduled rehearsals and performances. May be repeated for credit.

MUS 215. Chamber Orchestra (1). Prerequisites: student must be freshmen or sophomore standing. Two hours of rehearsal per week plus all scheduled rehearsals and performances. By permission. May be repeated for credit.

MUS 217. Chamber Music Ensemble (1). One hour coaching plus two hours of rehearsal per week plus all scheduled rehearsals and performances. Instruction available in performance areas A,C-I and L. By permission.

MUS 218. Jazz Combo (1). Performance in jazz combos in various configurations. Prerequisite: student must be freshmen or sophomore

standing. May be repeated for credit.

MUS 220. Composition 2 (2). Intermediate study in composition. Prerequisite: 3 credits of MUS 120. May be repeated up to 6 credits.

MUS 228. Men's Choir (1). Prerequisites: student must be freshmen or sophomore standing. Two hours of rehearsal per week plus all scheduled rehearsals and performances. May be repeated for credit.

MUS 229. Percussion Ensemble (1). Prerequisite: student must be freshmen or sophomore standing. Two hours of rehearsal per week plus all scheduled rehearsals and performances. May be repeated for credit.

MUS 232. Big Band (1). Prerequisites: student must be freshmen or sophomore standing. Must attend all scheduled rehearsals and performances. MUS 432 for juniors and seniors. By permission. May be repeated for credit.

MUS 235. Laboratory Choir (1). Two hours of rehearsal per week plus all scheduled rehearsals and performances. Open to all students to participate as singers. By permission. May be repeated for credit.

MUS 240. Diction in Singers I (Intro to IPA, Italian, Latin, English) (2). A fundamental course to teach the singer and choral director the International Phonetic Alphabet symbols, the correct execution of Italian, Latin, and English sounds, and the basic pronunciation rules of the three languages.

MUS 241. Diction for Singers 2 (Advanced IPA and German) (2). A course designed to teach the singer and choral director the International Phonetic Alphabet symbols as specifically applied to the German languages, the correct execution of German sounds, and the basic pronunciation rules of German. Prerequisite: MUS 240.

MUS 242. Diction for Singers 3 (Advanced IPA and French) (2). A course designed to teach the singer and choral director the International Phonetic Alphabet symbols as specifically applied to the French language, the correct execution of French sounds and the basic pronunciation rules of French. Prerequisite: MUS 240.

MUS 244. Theory 4 (3). Intermediate theoretical concepts dealing with fundamental elements of common-practice period melody, harmony, rhythm, and voice leading as demonstrated through analytical and compositional perspectives. This course integrates written topics and ear training, singing, dictation, rhythm, and practical keyboard applications. This is the fourth in the six-course harmony sequence. Courses must be taken in sequence. Prerequisites: MUS 146 and MUS 146A with grades of C or higher.

MUS 245. Theory 5 (3). Advanced theoretical concepts dealing with fundamental elements of common-practice period melody, harmony, rhythm, and voice leading as demonstrated through analytical and compositional perspectives. This course integrates written topics and ear training, singing, dictation, rhythm, and practical keyboard applications. This is the fifth in the six-course harmony sequence. Courses must be taken in sequence. Prerequisite: MUS 244 with a C or higher.

MUS 246. Theory 6 (3). Advanced theoretical concepts dealing with fundamental elements of common-practice period melody, harmony, rhythm, and voice leading as demonstrated through analytical and compositional perspectives. This course integrates written topics and ear training, singing, dictation, rhythm, and practical keyboard applications. This is the sixth in the six-course harmony sequence. Courses must be taken in sequence. Prerequisite: MUS 245 with a C or higher.

MUS 252D. Class Instrumental Methods: Double Reeds (1). Techniques and methods in applied instruction in music education. May be repeated for credit.

MUS 253C. Class Instrumental Methods Strings I (1). Lower strings (cello and bass). Techniques and methods in applied instruction for music education. May be repeated for credit.

MUS 253D. Class Instrumental Methods Woodwinds I (1). Lower woodwinds (single reeds). Techniques and methods in applied instruction for music education. May be repeated for credit.

MUS 253E. Class Instrumental Methods Brass I (1). Lower brass (trombone and tuba). Techniques and methods in applied instruction for music education. May be repeated for credit.

MUS 253G. Class Instrumental Methods Percussion I (1). Techniques and methods in applied instruction for music education. May be repeated for credit.

MUS 254B. Class Vocal Methods (1). A course designed to teach the music education student the fundamentals of group vocal instruction: basic vocal anatomy and physiology, common approaches to vocal technique instruction, how to prepare songs in English and foreign languages, and beginning vocal performance strategies.

MUS 254C. Class Instrumental Methods Strings II (1). Upper strings (violin and viola). Techniques and methods in applied instruction for music education. May be repeated for credit.

MUS 254D. Class Instrumental Methods Woodwinds II (1). Upper woodwinds (flute). Techniques and methods in applied instruction for music education. May be repeated for credit.

MUS 254E. Class Instrumental Methods Brass II (1). Upper brass (horn and trumpet). Techniques and methods in applied instruction for music education. May be repeated for credit.

MUS 255. Jazz Harmony and Keyboard (1). For instrumental, choral, and studio teachers providing practical/working knowledge of keyboard harmony, chord voicing, bass line construction, and improvisation in jazz and pop genres. Prerequisites: MUS 146 and MUS 154A.

MUS 261. Opera Workshop (1). A class leading to the performance of scenes and single acts from opera. Prerequisite: student must be freshmen or sophomore standing. By permission. May be repeated for credit.

MUS 262. Opera Production (1-3). A class leading to performance of a complete opera. Prerequisite: student must be freshman or sophomore standing. May be repeated up to 9 credits.

MUS 264. Major Applied Area (Individual Instruction) (1-2). Instruction available in performance areas A-H and K. Prerequisite: MUS 164 (A-H, and K) in appropriated applied area. Department Consent Required May be repeated for credit.

MUS 266. Wind Ensemble (1-2). Prerequisite: students must be freshmen or sophomore standing. Open to students with demonstrated proficiency on band instruments by audition or permission of the instructor. Five hours of rehearsal per week plus all scheduled rehearsals and performances. One credit if offered one term only during summer session. May be repeated for credit.

MUS 267. Choir (1-2). Prerequisite: student must be freshmen or sophomore standing. Open to all students by audition. Five hours rehearsal per week plus all scheduled rehearsals and performances. One credit if offered one term only during summer session. May be repeated for credit.

MUS 268. Chamber Choir (2). Prerequisite: student must be freshmen or sophomore standing. Open to all students by audition. Three hours rehearsal per week plus all scheduled rehearsals and performances. May be repeated for credit.

MUS 271. Secondary Applied Area (Individual Instruction) (1). Private study on instruments secondary to a student's major performance area. Intended particularly for intermediate students who wish to develop additional skills on an instrument or in voice to enrich their total music background. Instruction available. One credit any quarter, may be repeated.

MUS 277. Orchestra (1-2). Prerequisite: students must be freshmen or sophomore standing. Open to all students proficient on orchestral instruments by permission of director. Five hours of rehearsal per week plus all scheduled rehearsals and performances. One credit if offered one term only during summer session. May be repeated for credit.

MUS 287. Marching and Concert Band (2). Prerequisite: students must be freshmen or sophomore standing. Fall quarter only. Five hours of rehearsal per week plus all scheduled rehearsals and performances. This band functions as a marching band and is organized into a concert band at completion of the football season. May be repeated for credit.

MUS 288. Symphonic Band (2). Prerequisite: students must be freshmen or sophomore standing. Winter and spring quarters only. Five hours of rehearsal per week plus scheduled rehearsals and performances. During winter and spring quarters the symphonic band will present several formal concert programs. May be repeated for credit.

MUS 292. Accompanying Practicum (1- 3). Prerequisite: students must be freshmen or sophomore standing. By assignment of instructor. Minimum three hours of rehearsal weekly per credit plus performances. May be repeated for credit.

MUS 296. Individual Study (1-6).

MUS 298. Special Topics (1-6).

MUS 299. Seminar (1-5).

MUS 300. Recital Performance (1). Recital performance required for completion of degrees requiring 364-level applied study. Prerequisite: at least 1 credit of MUS 364 (any letter). Co-requisite: MUS 364. Grade will either be S or U.

MUS 320. Composition 3 (2). Advanced study in composition. Prerequisite: six units of MUS 220. May be repeated up to 6 credits.

MUS 323. Choral Music Education (3). Philosophy, methods, and materials. Individual research and presentation of teaching unit in class. Prerequisite: MUS 341.

MUS 325. Instrumental Music Education (3). Philosophy and psychology of music education through methods and materials; observation of teachers in the rehearsal, individual research. Prerequisite: admission to the Teacher Certification Program.

MUS 326. Music in the Classroom (3). For the general classroom teacher. (Not for music majors or minors.). Techniques used in helping children to develop musically through singing, rhythmic activities, creative activities, listening, and playing instruments. Prerequisite: admission to the Teacher Certification Program.

MUS 329. General Music Methods (3). Materials, methods, and instructional techniques for general music, grades K-12. Prerequisites: MUS 146 and MUS 146A with grades of C or higher, and current WSP/FBI fingerprint clearance .

MUS 340. Form and Analysis (3). Analysis of the structure of tonal music from both a historical and theoretical perspective. Prerequisite: MUS 246 with a grade of C or higher.

MUS 341. Conducting I (3). Fundamental principles of baton techniques, practical experience in conducting. Prerequisite: MUS 146.

MUS 342. Conducting II (3). A continuation of MUS 341 and conducting literature of junior-senior high school performing groups. Prerequisite: MUS 341.

MUS 343. Counterpoint I (3). Independent melodic line, harmonic background, motive structure, and two-point counterpoint as practiced by the composers of the 18th and 19th centuries. Written exercises and analysis. Prerequisite: MUS 244.

MUS 344. Theory Review (3). A complete review of traditional harmony from rudiments of music through chromatic harmony. Prerequisite: MUS 246.

MUS 347. Electronic Music Composition (3). Study of contemporary technologies and techniques as used to compose music. MUS 347 and MUS 547 are layered courses; students may not receive credit for both. Prerequisite: MUS 246.

MUS 353. Jazz Improvisation I (1). Beginning basic jazz improvisation techniques for upper-division wind, percussion, guitar, acoustic bass, and keyboard instruments. Prerequisites: MUS 246 and MUS 255. May be repeated for credit.

MUS 354. Jazz Improvisation II (1). Intermediate basic jazz improvisation techniques for upper-division wind, percussion, guitar, acoustic bass, and keyboard instruments. Prerequisites: MUS 246, MUS 255, and MUS 353. May be repeated for credit.

MUS 355. Jazz Improvisation III (1). Advanced basic jazz improvisational techniques for upper-division wind instruments, percussion, guitar, acoustic bass, and keyboard instruments. Prerequisite: MUS 354. May be repeated for up to 2 credits.

MUS 356. Jazz Styles (3). A survey of jazz history with regard to evolution of jazz styles. Course activities include analysis, transcription, guided listening, imitative composition, research and essay writing. Prerequisite: MUS 246.

MUS 357. Jazz Composition and Arranging (3). Development of skills in songwriting, melody and chord progression, construction, and arranging in the jazz idiom through student projects and score analysis. Prerequisites: MUS 246 and MUS 255.

MUS 359. Survey of Music in Cross-cultural Perspectives (2). An introduction to ethnomusicology: the cultural context of music with emphasis on Africa, Asia, Native North and South America, Oceania. ANTH 359 and MUS 359 are equivalent courses; students may not receive credit for both.

MUS 364. Major-applied Area (Individual Instruction) (1-2). Instruction available in performance areas A-H and K. Prerequisite: MUS 264 (A-H, and K) in appropriated applied area. May be repeated for credit.

MUS 366. Applied Jazz (Individual Instruction) (1). Private study on instruments secondary to a student's major performance area. Intended particularly for advanced students who wish to develop additional skills on an instrument or in voice to enrich their total music background.

Instruction available in performance areas A-E, G and H. Prerequisites: at least two quarters at the MUS 264 level and admission to the BA music jazz specialization. One credit any quarter, may be repeated.

MUS 370. Applied Area (Individual Instruction: Secondary or Major Supplementary) (1). Private study in area secondary to major performance area, or supplemental instruction in major performance area. Intended for advanced students who wish to develop additional performance skills to enrich their total music background. By permission. May be repeated for credit.

MUS 372. Music History 1 (3). Study of music history. The first in a three-quarter sequence. Prerequisites: MUS 146 with a C or higher, and MUS 154A.

MUS 373. Music History 2 (3). A study of music history. The second of a three-quarter sequence. Prerequisites: MUS 244 and MUS 372.

MUS 374. Music History 3 (3). A study of music history. The third of a three-quarter sequence. Prerequisites: MUS 245 and MUS 373.

MUS 379. Philosophy of Music (3). Great music as a source of insights into human beings and the world.

MUS 380. Music History Review (3). A review of the material presented in the required undergraduate music history sequence. Specifically intended for graduate students. The final exam will be equivalent to the graduate music history diagnostic examination. May not be used to satisfy upper-division undergraduate or graduate degree requirements. Required for graduate students not passing Music History diagnostic test. Grade will either be S or U.

MUS 382. Survey of Chamber Music (3). Prerequisite: MUS 372.

MUS 383. Survey of Symphonic Music (3). Prerequisite: MUS 372.

MUS 384. Survey of Choral Music (3). Prerequisite: MUS 372.

MUS 385. Survey of Opera (3). Prerequisite: MUS 372.

MUS 386. Survey of 20th-century Music (3). Prerequisite: MUS 372.

MUS 398. Special Topics (1-6).

MUS 400. Recital Performance (1). Recital performance required for the completion of degrees requiring MUS 464-level applied study. Prerequisite: 3 credits of any MUS 464. Co-requisite: any MUS 464. Grade will either be S or U.

MUS 410. Vocal Jazz Choir (1). An ensemble specializing in performance of repertoire from jazz choir tradition established in the Northwest and beyond. Prerequisite: junior standing or above. Must attend all scheduled rehearsals and performances. For juniors and seniors. Limited to SATB singers and rhythm section instruments. May be repeated for credit.

MUS 411. Women's Choir (1). Prerequisite: junior standing or above. May be repeated for credit.

MUS 413. Flute Choir (1). Previous experience in flute performance and permission of instructor. Two hours of rehearsal per week plus all scheduled rehearsals and performances. Prerequisite: junior standing or above. May be repeated for credit.

MUS 414. Brass Choir (1). Prerequisite: junior standing or above. See MUS 214 for description. May be repeated for credit.

MUS 415. Chamber Orchestra (1). Prerequisite: junior standing or above. See MUS 215 for description. May be repeated for credit.

MUS 417. Chamber Music Ensemble (1). Prerequisite: permission of instructor. One hour coaching plus two hours rehearsal per week plus all scheduled rehearsals and performances. Instruction available in performance areas A, C-F, H and L.

MUS 418. Jazz Combo (1). Prerequisite: junior standing or above. Performance in jazz combos in various configurations. May be repeated for credit.

MUS 420. Composition 4 (3). Prerequisite: 6 credits of MUS 320. May be repeated up to 9 credits.

MUS 422. Orchestration (3). Instrumentation. Prerequisites: MUS 246 with a grade of C or higher and MUS 372. May be repeated for credit.

MUS 423. Advanced Orchestration (3). Study of various scores and treatises. Individual projects. Prerequisite: MUS 422A.

MUS 424. Jazz Pedagogy (3). Jazz-specific teaching methods, strategies, literature and materials primarily for application in a public school setting, grades 6-12, vocal or instrumental. Recommended for , but not limited to, music education majors. Prerequisite: junior standing or above. This course is a part of the Teacher Preparation Program.

MUS 425. Pedagogy (Studio) (3). Teaching methods and

materials. Instruction available in performance areas A-E,G, and H. By permission.

MUS 425A. Pedagogy (Studio Piano) (3). Teaching methods and materials. By permission.

MUS 425B. Pedagogy, Vocal (3). Teaching methods and materials. By permission.

MUS 426. Literature (Studio) (3). Literature related to the specific applied area for teaching and performance purposes. Instruction available in performance areas A-E, and G. By permission.

MUS 426A. Literature (Studio Piano) (3). Literature related to the specific applied area for teaching and performance purposes. By permission.

MUS 426H. Literature (Studio Guitar) (3). Literature related to the specific applied area for teaching and performance purposes. By permission.

MUS 428. Men's Choir (1). Prerequisite: junior standing or above. May be repeated for credit.

MUS 429. Percussion Ensemble (1). Prerequisite: junior standing or above. See MUS 229 for description. May be repeated for credit.

MUS 432. Big Band (1). Prerequisite: junior standing or above. Must attend all scheduled rehearsals and performances. MUS 232 for freshmen and sophomores. May be repeated for credit.

MUS 435. Laboratory Choir (1). See MUS 235 for description. May be repeated for credit.

MUS 440. Analytical Techniques II (3). Emphasis on 20th century music, including contemporary extrapolations from Schenker's methods, pitch class, and parametric analysis techniques. Prerequisite: MUS 340.

MUS 461. Opera Workshop (1-2). A class leading to the performance of scenes or single acts from opera. Prerequisites: junior standing or above. By permission. May be repeated for credit.

MUS 462. Opera Production (1-3). A class leading to performance of a complete opera. MUS 462 and MUS 562 are layered courses; students not receive credit for both. Prerequisite: junior standing for above. May be repeated for credit.

MUS 464. Major Applied Area (Individual Instruction) (3). Instruction available in performance areas A-H and K. Prerequisite: MUS 364 A-E, G, H, and L. Additional fee's required. Lessons available in applied areas. May be repeated for credit.

MUS 466. Wind Ensemble (1-2). Prerequisites: junior standing or above. See MUS 266 for description. One credit if offered one term only during summer session. By permission. May be repeated for credit.

MUS 467. Choir (1-2). Prerequisite: junior standing or above. Open to all students by audition. Five hours rehearsal per week plus all scheduled rehearsals and performances. One credit if offered one term only during summer session. May be repeated for credit.

MUS 468. Chamber Choir (2). Prerequisite: junior standing or above. See MUS 268 for complete description. May be repeated for credit.

MUS 477. Orchestra (1-2). Prerequisite: junior standing or above. Open to all students proficient on orchestral instruments by permission of director. Five hours of rehearsal per week plus all scheduled rehearsals and performances. One credit if offered one term only during summer session. May be repeated for credit.

MUS 480. Reed Making for Double Reed Instruments (1).

MUS 485. Choral Arranging (3). Course will focus skills needed to write and arrange music junior and senior high school vocal ensembles.

MUS 486. Jazz Band Arranging (3). Orchestration/arranging techniques in the jazz band idiom, including writing for smaller jazz ensembles, specialized instrumentation, and the big band. Especially useful for music educators. Prerequisites: MUS 246 and MUS 255.

MUS 487. Marching and Concert Band (2). Prerequisite: junior standing or above. Fall quarter only. May be repeated for credit.

MUS 488. Symphonic Band (2). Prerequisite: junior standing or above. Winter and spring quarters only. See MUS 288 for description. May be repeated for credit.

MUS 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prerequisite: prior approval required. May be repeated for credit. Grade will either be S or U.

MUS 491. Workshop or Clinic (1-6).

MUS 492. Accompanying Practicum (1-3). Prerequisite: junior standing or above. By assignment of instructor. Minimum of three hours of rehearsal weekly per credit plus

performances. May be repeated for credit.

MUS 495. Senior Project (2). Students are required, as a senior project, to present a recital, composition, or piece of research. May be repeated for credit.

MUS 496. Individual Study (1-6).

MUS 497. Honors (1-12). Prerequisite: admission to department honors program.

MUS 498. Special Topics (1-6).

MUS 499. Seminar (1-5).

Nutrition Courses

NUTR 101. Introduction to Human Nutrition (5). Fundamental nutritional concepts as related to health. Four hours lecture and one hour discussion per week. NS-Application Natural Science.

NUTR 240. Introduction to Foods (2). Examination of scientific principles of food preparation, function of ingredients, effects of preparation techniques, and nutritional considerations. Two hours lecture per week. Corequisite: NUTR 240LAB.

NUTR 240LAB. Introduction to Foods Laboratory (2). Additional material fees. Four hours per week. Corequisite: NUTR 240.

NUTR 298. Special Topics (1-6).

NUTR 318. The Politics of Food and Health (2). Exploration of the politics of food from farm to table, and the implications for human and environmental health. HED 318 and NUTR 318 are cross-listed courses, students may not receive credit for both.

NUTR 340. Management of Food Resources (2). Food management principles involved in the planning, purchasing, preparing, and serving of meals in relation to nutritional needs, social needs, food preferences, and resources. Prerequisites: NUTR 101 and NUTR 240.

NUTR 340LAB. Management of Food Resources Laboratory (1). Demonstration of food management principles. Prerequisite: NUTR 340. Twenty dollars materials fee.

NUTR 342. Quantity Food Production and Service (4). Principles and techniques of food production and food safety for restaurants, health care facilities, and other institutions. Corequisite: NUTR 342LAB. Prerequisite: NUTR 240.

NUTR 342LAB. Quantity Food Production and Service Laboratory (1). Corequisite: NUTR 342.

NUTR 343. Foods and Nutrition Professionalism (1). Professional ethics, career readiness, and career research in foods and nutrition. Prerequisite: junior standing or above.

NUTR 344. Medical Nutrition Therapy I (3). Introduction to medical nutrition therapy including nutrition care process, diabetes, heart disease, and cancer. Prerequisites: NUTR 101, BIOL 201, and CHEM 111, CHEM 181, or BIOL 355.

NUTR 345. Nutrition and the Lifecycle (5). Effects of nutrition on development, growth, and health, from conception through the older adult. Prerequisites: NUTR 101 or NUTR 433.

NUTR 346. Theory and Treatment of Eating Disorders (3). Introduction of the dangers of dieting and the socio-cultural influences toward eating disorders and identification of the history, theory, and treatment of eating disorders. Prerequisite: NUTR 101.

NUTR 347. Nutrition Education and Counseling (4). Introduction to educating individuals and groups about nutrition, from theory to application. Includes techniques, procedures, and skills related to successful nutrition counseling. Prerequisite: NUTR 101.

NUTR 350. Weight Management (3). Study of the pathophysiology of obesity and the underlying principles of healthy weight assessment, achievement, and management. Prerequisite: NUTR 101 and declared major in food science and nutrition or by permission.

NUTR 398. Special Topics (1-6).

NUTR 405. Hospitality Catering (3). Basics of off-premise catering including menu planning, budgeting, logistics, and marketing. NUTR 405, RT 405, and RT 505 are equivalent courses; students may not receive credit for more than one.

NUTR 406. Peer Nutrition Education Practicum (1). Supervised experience as a nutrition educator at the Student Health Center and/or CWU Center for Sports Nutrition. Prerequisite: NUTR 101, 348, and 446. May be repeated for credit.

NUTR 433. Macronutrients (3). Nutritional aspects of carbohydrates, proteins, lipids, water, and energy. Prerequisites: CHEM 112 or CHEM 363.

NUTR 440. Experimental Foods (2). Physical and chemical bases of food preparation. Experiment testing result of variation in ingredients and manipulative practice. Prerequisites: (NUTR 240, and NUTR 240LAB, and CHEM 112) AND (PSY 362 or EDCS 312) .

NUTR 440LAB. Experimental Foods Laboratory (1).

Additional material fees. Co-requisite: NUTR 440.

NUTR 442. Nutrition Assessment Laboratory (2). Current tools for nutritional assessment with laboratory experience. Prerequisite: NUTR 443. One hour lecture and two hours laboratory per week.

NUTR 443. Metabolism and Micronutrients (5). Effect of nutritional and physiological state on the regulation of carbohydrate, lipid, and protein metabolism. Metabolic and physiological role of vitamins and minerals. Prerequisites: NUTR 433 and CHEM 113, or CHEM 432 and BIOL 201, or BIOL 356.

NUTR 444. Medical Nutrition Therapy II (3). The influence of nutrition on physiological problems; disease and medical nutritional therapy; nutrition and health management. Prerequisites: NUTR 344, NUTR 443 and CHEM 113 or CHEM 432.

NUTR 445. Experimental Food Research (1). Principles of experimental food research. Propose, conduct, analyze, and present original food research project. Prerequisites: NUTR 440 and NUTR 440LAB.

NUTR 445LAB. Experimental Food Research Laboratory (1). Product production, sensory and objective testing of experimental food research project. Co-requisite: NUTR 445.

NUTR 446. Sports Nutrition (3). Integration and application of scientifically based nutrition and exercise physiology principles that support and enhance performance and good health. NUTR 446 and EXSC 446 are cross-listed courses; students may not receive credit for both. Prerequisites: NUTR 101 and (CHEM 113 or EXSC 450).

NUTR 447. Community Nutrition (3). National and international nutritional problems and programs. Prerequisites: either NUTR 101 or NUTR 433.

NUTR 448. Food Service Systems Management (4). Application of organizational management and principles to food-service systems including organizing, staffing, controlling, planning, marketing, and leading. Prerequisites: NUTR 240 and NUTR 342.

NUTR 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervisor and faculty coordination. Prerequisite: prior approval required. May be repeated for credit. Grade will either be S or U.

NUTR 491. Workshop (1-6).

NUTR 492A. Dietetic Practicum (10-18). Dietetic internship experience. Credits may not be used to apply to the master's degree. Prerequisite: permission required. May be repeated for credit. Grade will either be S or U.

NUTR 492B. Dietetic Practicum (10-18). Dietetic internship experience. Credits may not be used to apply to the master's degree. Prerequisite: NUTR 492A.

May be repeated for credit. Grade will either be S or U.

NUTR 492C. Dietetic Practicum (10-18). Dietetic internship experience. Credits may not be used to apply to the master's degree. Prerequisite: NUTR 492B. May be repeated for credit. Grade will either be S or U.

NUTR 496. Individual Study (1-6).

NUTR 498. Special Topics (1-6).

NUTR 499. Seminar (1-5).

Occupational Education Courses

OCED 310A. Vocational-Technical Teaching Methods (3-5). An introduction to teaching pedagogy and application of occupational skills, knowledge, and practice to a vocational classroom setting.

OCED 310B. Vocational-Technical Occupational Analysis (3-5). An introduction to teaching pedagogy and application of occupational skills, knowledge ,and practice to a vocational classroom setting.

OCED 310C. Vocational-Technical Course Organization and Curriculum Design (3-5). An introduction to teaching pedagogy and application of occupational skills, knowledge, and practice to a vocational classroom setting.

OCED 311A. Vocational-Technical Coordination Techniques of Cooperative Education (3-5). Advanced teaching pedagogy, history, and philosophy of vocational education, school law and issues related to abuse, leadership, and work-based learning.

OCED 311B. Vocational-Technical History and Philosophy of Vocational Education (3-5). Advanced teaching pedagogy, history, and philosophy of vocational education, school law, and issues related to abuse,

leadership, and work-based learning.

OCED 311C. Vocational-Technical Student and Professional Leadership Development (3-5). Advanced teaching pedagogy, history and philosophy of vocational education, school law and issues related to abuse, leadership, and work-based learning.

OCED 311D. Vocational-Technical School Law and Issues Related to Abuse (3-5). Advanced teaching pedagogy, history, and philosophy of vocational education, school law and issues related to abuse, leadership, and work-based learning.

OCED 410. Career and Technical Education School to Work Programs (4). Work-based learning, student leadership, advisory committees, program promotion, and professional responsibilities in vocational education. Prerequisite: full admission to the Teacher Preparation Program.

OCED 432. Occupational Analysis (3). Analysis of jobs and trades to determine related technical information, skills, and advisory sources necessary to develop content materials for a course of study.

OCED 492. Practicum (3-15). Prerequisite: permission of department chair. By permission. Grade will either be S or U.

Physical Education Courses

PE 115. Beginning Climbing (1). This course will introduce students to indoor rock climbing techniques. Including: climbing movement and top rope climbing skills. May be repeated up to 3 credits.

PE 116. Intermediate Climbing (1). This course will build indoor rock climbing skills learned in PE 115, beginning climbing, and introduce skills that will help students begin climbing outside. Including climbing movement, lead climbing, rappelling and anchor cleaning. Prerequisite: PE 115 or instructor approval. May be repeated up to 3 credits.

PE 118. Climbing Wall to Rock (1). Introduction to outdoor rock climbing by ensuring proficiency in an indoor setting over 5 weeks and to be concluded with an outdoor climbing trip to utilize skills learned. Course focuses on anchor systems, rappelling, lead climbing and belaying, and trip planning. Climbing experience and a top rope belay certification required. Prerequisites: PE 115 or PE 116 or by permission of instructor.

PE 220. Climbing Wall Instructor (2). This course will prepare students to instruct climbing in an indoor setting. Students will learn to instruct both technical and movement climbing skills. This course will prepare students to receive a climbing wall instructor certification through the professional climbing instructors association. Prerequisite: PEID 298 Intermediate Climbing or instructor permission. May be repeated up to 6 credits.

PE 298. Special Topics (1-6).

PE 321. Football Coaching (3).

PE 323. Basketball Coaching (3).

PE 324. Track Coaching (3).

PE 325. Baseball Coaching (3).

PE 326. Theory of Coaching Soccer (3). This course provides an in-depth examination of the coaching of soccer at all school age levels. May be repeated up to 6 credits.

PE 330. Volleyball Coach (3).

PE 334. Physical Education Activities for the Elementary School (3). Selection, organization, and presentation of physical education activities in the elementary school. Prerequisite: current WSP/FBI fingerprint clearance, and conditional or full admission to the Teacher Certification Program.

PE 346. Administration of Athletes (3). The course will provide the student with an overview of the role of the athletic director as the leader, manager, organizer, and director of the interscholastic and intercollegiate programs in public and private schools. Prerequisite: PE 365.

PE 365. Foundations of Coaching (3). Introduction to principles and methods of coaching sports with children and youth.

PE 398. Special Topics (1-6).

PE 442. Field Work in Physical Education (1-6). Class to be arranged by college supervisor. May be repeated for credit. Grade will either be S or U.

PE 448. Coaching and Competitive Ethics (3). This course is to enable the student to understand and apply ethical values as a practitioner (coach) in the realm of competitive sport. Prerequisite: PE 365.

PE 453. Psychological and Sociological Foundations of Coaching (3). Investigation of factors affecting individual and group behavior in the coaching of interscholastic sports. Prerequisite: PE 365.

PE 484. Legal Liability and Risk Management (3). Aspects of personal law, premises liability, and risk management affecting policy, and behavior within the physical education and coaching profession.

PE 491. Workshop Clinic (1-6). Letter grades or S or U grades may be given at the option of the Department of Physical Education. May be repeated for credit.

PE 492. Practicum (1-4). Practical experience working with children in physical education activities. Prerequisite: four credits in physical education major. May be repeated for credit. Four credits required in major.

PE 496. Individual Study (1-6).

PE 498. Special Topics (1-6).

PE 499. Seminar (1-5).

Physical Education Aquatics Courses

PEAQ 110. Springboard Diving (1).

PEAQ 111. Beginning Swimming (1).

PEAQ 112. Intermediate Swimming (1). Prerequisite: must be able to swim 50 yards.

PEAQ 113. Advanced Swimming (1). Refinement of standard strokes and dives. Prerequisite: ability to swim 200 yards continuously, employing at least three strokes. Refinement of standard strokes and dives.

PEAQ 114. Swim Conditioning (1). Prerequisite: must be an intermediate swimmer.

PEAQ 116. Water Polo (1). Prerequisite: must be an intermediate swimmer.

PEAQ 118. Aquatic Conditioning (1). Designed for non-swimmers and swimmers who want to improve/maintain cardiovascular endurance, increase flexibility, tone muscles in the water medium. May be repeated for credit.

PEAQ 120. Advanced Springboard Diving (1). Advanced diving is designed to further the students' knowledge and skill in springboard diving. Students will perform dives of varying degrees of difficulty. Prerequisite: PEAQ 110.

PEAQ 198. Special Topics (1).

PEAQ 221. Lifeguard Training (3). American Red Cross-approved course for which certification may be granted. The course will include rescue technique, preventative lifeguarding, and conditioning. Two hours lecture and one hour laboratory per week.

PEAQ 320. Water Safety Instructor (3). Students satisfactorily passing the Red Cross requirements will receive a Red Cross Water Safety Instructors Certificate. Two hours of lecture and two hours of laboratory per week.

Physical Education Dance Courses

PED 101. Modern Dance I (2). Basic modern dance techniques and beginning composition. One hour lecture; two hours laboratory per week.

PED 102. Modern Dance II (2). Four hours of intermediate modern dance theory and technique. Experience in solo and group compositions. Prerequisite: PED 101.

PED 103. Modern Dance III (2). Four hours of advanced modern dance theory and techniques. Emphasis on performance and solo composition. Experience in organizing and presenting programs. Prerequisite: PED 102.

PED 104. Ballet I (Level 1) (2). Beginning technique in classical ballet, including barre, center work, and enchainments (center combinations).

PED 105. Ballet I (Level 2) (2). Intermediate technique in classical ballet including barre, center work, and enchainments (center combinations). Prerequisite: PED 104.

PED 106. Ballet I (Level 3) (2). Advanced technique in classical ballet including barre, center work, and enchainments (center combinations). Prerequisite: PED 105.

PED 112. Dance Rehearsal and Performance (1). Open to individuals participating in performances of Orchesis Dance Company. May be repeated for credit.

PED 116. Beginning Folk Dance (1). Traditional recreational dances of various countries.

PED 121. Tap Dance I (1).

PED 122. Tap Dance II (1). Prerequisite: PED 115.

PED 135. Ballroom Dance I (1). Emphasis on the ballroom styling of the foxtrot and waltz. May be repeated up to 3 credits.

PED 136. Ballroom Dance II (1). Emphasis on the tango and cha cha.

PED 137. Ballroom III (1). A continuation of traditional ballroom skills focusing on advanced technique including Cha Cha, Foxtrot, and Waltz. Prerequisite: PED 135. May be repeated up to 3 credits.

PED 138. Swing Dance I (1). Emphasis on ballroom dances of East Coast swing, Charleston, and Lindy hop. May be repeated for credit.

PED 139. Swing Dance II (1). Emphasis on West Coast swing, continued work on Charleston and Lindy hop. Prerequisite: PED 138. May be repeated for up to 3 credits.

PED 141. Jazz Dance I (1).

PED 142. Jazz Dance II (1). Prerequisite: PED 141.

PED 143. Jazz Dance III (1). Advanced level jazz dance technique.

PED 150. Mat Pilates (1). A beginning and intermediate-

level class, mat pilates is designed to increase core strength, coordination and flexibility.

PED 161. Cultural History of Dance (4). A survey course in the evolution of dance through the ages with emphasis on the major forces that have influenced dance in the 20th century. AH-Aesthetic Experience.

PED 198. Special Topics (1-6).

PED 204. Ballet II (Level 1) (2). Continued training in classical ballet techniques (Level II) including barre and center work. Increased emphasis on beats, multiple turns, and jumps. Prerequisite: PED 106. By permission. May be repeated for credit.

PED 205. Ballet II (Level 2) (2). Continued training in classical ballet technique (Level II) including barre and center work. Increased emphasis on beats, multiple turns, and jumps. Prerequisite: PED 204. By permission. May be repeated for credit.

PED 206. Ballet II (Level 3) (2). Continued training in classical ballet techniques (Level II) including barre and center work. Increased emphasis on beats, multiple turns, and jumps. Prerequisite: PED 205. By permission. May be repeated for credit.

PED 211. Music for Dance - Rhythms and Resources (2). A study of rhythmic concepts as related to dance movements and composition; an introduction to music resources emphasizing composer/choreographer collaborations. Prerequisite: PED 101.

PED 212. Choreography and Production (2). Choreography and production work for Orchesis Dance Company. By permission. May be repeated for credit.

PED 301. Choreography (3). The study and practice of choreographic techniques and tools utilizing creative problem solving. Prerequisite: PED 101. Students will meet for two hours laboratory work each week plus two hours lecture.

PED 302. Dance Production (3). Aspects of organizing and mounting a dance production, including scheduling, programming, publicity, costuming, lighting, and sound design.

PED 309. Teaching Methods: Recreational Dance (3). Knowledge of skills necessary in the teaching of various forms of recreational dance styles. Two hours lecture and two hours laboratory per week.

PED 314. Dance for Children (3). Strategies for teaching dance in elementary education, including creative dance, rhythmic exploration, use of props, unit plan development, and methods of assessment. Prerequisite: current WSP/FBI fingerprint clearance.

PED 315. Teaching Methods: Modern and Ballet Dance (3). Teaching methods for modern and ballet technique classes which emphasizes the development of critical and creative thinking skills, observation skills, and assessment skills. Prerequisites: PED 201A and PED 201B.

Physical Education Fitness Activity Courses

PEF 110. Conditioning Exercises (1).

PEF 111. Intermediate Conditioning Exercises (1). Prerequisite: PEF 110.

PEF 112. Ski Conditioning (1).

PEF 113. Weight Training (1).

PEF 114. Intermediate Weight Training (1). Prerequisite: PEF 113.

PEF 115. Jogging (1).

PEF 118. Military Conditioning I (1). Physical conditioning activities designed to prepare the Army ROTC student for Leader Development Assessment course and active military duty. Course is work-out oriented with emphasis on physical fitness goals. Open to all CWU students. Meets three times weekly. May be repeated up to 4 credits.

PEF 119. Military Conditioning II (1). Physical conditioning activities designed to prepare the Army ROTC student for Leader Development Assessment course and active military duty. Course is work-out oriented with emphasis on physical fitness goals. Open to all CWU students. Meets three times weekly. May be repeated up to 4 credits.

PEF 120. Military Conditioning III (1). Physical conditioning activities designed to prepare the Army ROTC student for Leader Development Assessment course and active military duty. Course is work out oriented with emphasis on physical fitness. Open to all CWU students. Meets three times weekly. May be repeated for credit.

PEF 121. Step Aerobics (1).

PEF 122. Dance Fusion (1). Course combines elements of traditional high- and low-impact dance aerobics with zumba, jazz, power yoga, and sport movements into basic combinations.

PEF 123. Aerobic Walking (1). Assessment of present level of cardio respiratory fitness and prescription of an

individualized aerobic walking exercise program for increasing and maintaining fitness.

PEF 126. Kick/Box Aerobics (1). Safe, effective aerobic work-out mimicking basic self-defense, and boxing movements.

PEF 128. Glute/Abdominal Conditioning (1). Course emphasizes abdominal conditioning, gluteal toning, and core muscle strengthening in a low impact format. Background music and various equipment is used for an effective workout.

PEF 129. Abdominal Strength Conditioning (1). Course emphasizes strengthening and conditioning the abdominals and core muscles for appearance and for performance. Use of equipment for fun and effectiveness.

PEF 130. Triathlon Training (1).

PEF 131. Frisbee (1). This course encourages positive social interaction, develops eye-hand coordination skills, is recreational, and may be an avenue to encourage students to become more active in a gentle way.

PEF 132. Women's Self Defense (1). A program of realistic self-defense tactics and techniques for women, including education about awareness, prevention, risk reduction, and risk avoidance of violence. May be repeated up to 4 credits.

PEF 140. Stretch and Strengthen with Fit Balls (1). This course combines balance, stretch, and strength training using a variety of soft fitness balls. Dynamic balancing skills will be taught using the BOSU and physioball. Strength and core drills will be taught using medicine balls and sport balls. Prerequisite: FS 234.

PEF 150. Beginning Yoga (1). Participation in stretching and then holding a variety of yoga postures. Will include demonstrations, benefits, contraindications, precautions of each posture.

PEF 151. Intermediate Yoga (1). This class will review and refine techniques learned in the beginning yoga class, as well as further discussion and practice of yoga postures and other topics related to yoga.

PEF 152. Advanced Yoga (1). In this class more advanced yoga postures will be introduced and techniques learned in previous classes will be refined.

PEF 155. Hot Yoga Therapy (1). Students practice 26 yoga postures, using heat therapy to promote muscle recovery, increased strength and flexibility, weight loss and detoxification. This unique style of yoga is beneficial to all students and athletics. No experience necessary. May be repeated up to 12 credits.

PEF 198. Special Topics (1).

Physical Education Individual and Dual Sports Courses

PEID 110. Beginning Badminton (1).

PEID 113. Beginning Bowling (1).

PEID 114. Intermediate Bowling (1). Prerequisite: PEID 113.

PEID 115. Beginning Golf (1).

PEID 116. Intermediate Golf (1). Prerequisite: PEID 115.

PEID 117. Advanced Golf (1).

PEID 120. Beginning Fencing (1).

PEID 121. Intermediate Fencing (1). Put on reserve 9/16/2014. Last taught in 2011. Will go inactive 8/24/17.

PEID 123. Beginning Tennis (1).

PEID 124. Intermediate Tennis (1). Prerequisite: PEID 123.

PEID 125. Advanced Tennis (1). Prerequisite: PEID 124.

PEID 128. Beginning Skiing and Snowboarding (1). Beginning skiing and snowboarding is designed to introduce the student to the basic knowledge of skiing and snowboarding techniques with the development of the physical skills necessary to participate safely.

PEID 129. Intermediate Skiing (1). Prerequisite: PEID 128.

PEID 130. Cross Country Skiing (1).

PEID 134. Bicycling (1).

PEID 136. Pickleball (1). Class is designed to introduce student to basic skills, fundamentals, safety procedures and knowledge to participate in pickleball as a life long activity.

PEID 137. Hiking and Orienteering (1).

PEID 138. Karate (1).

PEID 140. Fly Fishing (1).

PEID 145. Beginning Circus Arts (1). Introduction to juggling, unicycling and similar skills involving balance and coordination.

PEID 147. Conceptual Martial Arts (1). This course is designed to introduce students to the techniques and motions of self-defense.

PEID 150. Archery (1). This course teaches the fundamentals of safe archery practice and basics of the archery equipment. May be repeated up to 4 credits.

PEID 198. Special Topics (1).

PEID 298. Special Topics (1-6).

Physical Education and School Health Courses

PESH 280. Foundations of Physical Education and School Health (4). Fundamental issues, theories, paradigms, constructs, history, and experiences necessary for an understanding of teaching Health and Physical Education as a profession and

lifestyle. Prerequisite: current WSP/FBI fingerprint clearance.

PESH 300. Comprehensive School Health Education (3). This course is designed to provide the knowledge, skills, and dispositions needed to teach comprehensive school health education with a major emphasis on consumer/community health, environmental health, and personal health/safety. Prerequisite: PESH 280.

PESH 326. Human Diseases (3). Introduces students to fundamental principles relating to identification, prevention, and control of non-infectious and infectious diseases in contemporary society; emphasis on physical, social, psychological, and environmental issues surrounding these diseases. Prerequisite: PESH 280.

PESH 330. Positive Youth Development in Physical Activity (3). Provides philosophical and practical base for working in youth development programs. Focus on programs that serve youth through physical activity with special emphasis on goals of personal and social responsibility.

PESH 335. Practicum (1). Students will observe and assist in PE classes at elementary and secondary levels in a local school for 4 hours/week throughout the quarter.

PESH 336. Practicum 1 (2). Physical education teaching practicum. Prerequisite: PESH 280, and current WSP/FBI fingerprint clearance .

PESH 341. Characteristics of Effective Physical Education Teaching (3). Examination of selected pedagogical principles and their impact on the teaching of human movement. Prerequisite: PESH 280 or instructor permission for students pursuing the physical activity and recreational programming minor.

PESH 342. Developmental Movement (4). Instruction in the analysis and teaching of movement concepts, locomotor, and non-locomotor skills. Prerequisite: PESH 280.

PESH 343. Pedagogical Application of Teaching Styles and Systematic Reflection (3). The purpose of this course is to expand your already-developed effective teaching skills and knowledge to include styles of teaching and systematic analysis. Prerequisites: PESH 280 and PESH 341 and PESH 342 or instructor permission for students pursuing the physical activity recreational programming minor.

PESH 344. Applications of Technology in Teaching Fitness and Physical Activity (3). Introduces students to the plethora of technological advances being used to teach children about their health. Prerequisite: PESH 280, and current WSP/FBI fingerprint clearance. Corequisite: PESH 341 .

PESH 345. School Health Curriculum (3). This course is designed to expose learners to current school based health education curricula, materials, and strategies necessary to effectively teach comprehensive school health education in the K-12 setting. Prerequisites: HED 210.

PESH 348. Tactics and Skills of Striking and Net/Wall Games (3). This course will cover the content of tactics and striking skills in a variety of net/wall games (e.g. badminton, handball, pickleball, tennis, volleyball). Prerequisites: PESH 280, and current WSP/FBI fingerprint clearance .

PESH 350. Utilizing Tactics and Skills for Invasion Games (3). This course will cover the content of invasion games and sports (e.g., basketball, soccer, lacrosse, rugby, hockey). Prerequisites: PESH 280 and current WSP/FBI fingerprint clearance.

PESH 356. Teaching Lifelong Physical Activity Pursuits (3). Introduces students to methodology related to teaching nontraditional activities in traditional and nontraditional settings. Prerequisites: PESH 280, PESH 341, PESH 342, PESH 343 or instructor permission for students pursuing the physical activity and recreational programming minor.

PESH 358. Applications of Resistance, Core, and Cardiovascular Training (3). Students will develop, using sound research practice, skills to deliver group exercise training programs to classes at the secondary level. Emphasis is placed on resistance, core, and cardiovascular physical activities.

PESH 385. Health and Physiological Fitness Concepts for Teachers (3). This class is designed to provide health and physical education to pre-service teachers; physiological information with an emphasis on application, and its direct implications on teaching K-12 students.

PESH 437. Practicum 2 (3). Physical Education teaching practicum. Prerequisites: PESH 280, PESH 336, and current WSP/FBI fingerprint clearance .

PESH 438. Practicum 3 (3). Physical education teaching

practicum. Prerequisites: PESH 280, 336, and 437.

PESH 439. Practicum 4 (1). This course is designed to provide physical education and school health majors the knowledge and skill needed to create and teach dynamic, school health education lessons and unit plans within the K-12 setting. Prerequisites: PESH 280 and current WSP/FBI fingerprint clearance.

PESH 444. Professionalism in the Schools (2). This course provides an opportunity for the learner to assess and to fine-tune student teaching and job readiness as excellent educators. To be taken one or two quarters before student teaching. Prerequisite: this class requires admission to either the physical education or school health education major.

PESH 445. Curriculum Development and Assessment in Physical Education (3). Examination of specific pedagogical principles and their impact on the teaching of human movement. Prerequisites: PESH 341, PESH 342, and PESH 343.

PESH 447. Inclusive Strategies and Activities for Diverse Learners (3). This course will provide inclusive strategies and activities for diverse learners in physical education and school health.

PESH 456. Facilitating and Leading Adventure Activities in the Schools (2). Identify critical components of selected outdoor pursuits and circus arts activities. Prerequisites: PESH 280, PESH 341, PESH 342, PESH 343, PESH 350, and PESH 356 or instructor permission for students pursuing the physical activity and recreational programming minor.

PESH 458. Diagnosis and Analysis of Human Movement (3). Designed to teach the student applied principles of human movement diagnosis including basic motor control, motor learning sport movements, and applied biomechanical principles.

Physical Education Team Sports Courses

PETS 110. Basketball (1).

PETS 113. Soccer (1).

PETS 114. Softball (Slow Pitch) (1).

PETS 116. Volleyball (1).

PETS 120. Table Tennis (1). Table tennis will teach skills used during pair and partner play that will increase the players ability to play faster with more accuracy.

PETS 122. Touch Rugby (1). Touch rugby is a non-contact introduction course that will provide students with the basic skills essential to achieving success as a team player. May be repeated for a total of 6 credits.

PETS 198. Special Topics (1).

Physical Education Varsity Sports for Men Courses

PEVM 110. Baseball (1). Two or three hours activity per day plus all regularly scheduled meetings and game sessions. May be repeated for credit.

PEVM 111. Basketball (1). Two or three hours activity per day plus all regularly scheduled meetings and game sessions. May be repeated for credit.

PEVM 112. Cross Country (1). Two or three hours activity per day plus all regularly scheduled meetings and game sessions. May be repeated for credit.

PEVM 113. Football (1). (Two or three hours activity per day plus all regularly scheduled meetings and game sessions). May be repeated for credit.

PEVM 117. Track and Field (1). Two or three hours activity per day plus all regularly scheduled meetings and game sessions. May be repeated for credit.

PEVM 118. Rugby (1). Two or three hours activity plus all regularly scheduled meetings and game sessions. May be repeated up to 15 credits.

Physical Education Sports for Women Courses

PEVW 110. Basketball (1). Two or three hours activity per day plus all regularly scheduled meetings and game sessions. May be repeated for credit.

PEVW 111. Cross Country (1). Two or three hours activity per day plus all regularly scheduled meetings and game sessions. May be repeated for credit.

PEVW 116. Track and Field (1). Two or three hours activity per day plus all regularly scheduled meetings and game sessions. May be repeated for credit.

PEVW 117. Volleyball (1). Two or three hours activity per day plus all regularly scheduled meetings and game sessions. May be repeated for credit.

PEVW 118. Soccer (1). Two or three hours activity per day plus all regularly scheduled meetings and game sessions. May be repeated for credit.

PEVW 119. Softball (1). Two or three hours activity per day plus all regularly scheduled meetings and game sessions. May be repeated for credit.

PEVW 120. Cheerleading (1). Two or three hours activity per day plus all regularly scheduled meetings and game sessions. May be repeated for credit.

PEVW 121. Rugby (1). Two or three hours activity per day

plus all regularly scheduled meetings and game sessions. May be repeated up to 15 credits.

Philosophy Courses

PHIL 101. Philosophical Inquiry (5). Introduction to the basic themes, thinkers, and topics of philosophy. The mind-body problem, good versus evil, knowledge, truth, goodness, and beauty. AH-Philosophies and Culture World (W).

PHIL 115. The Meaning of Life (5). Original sources from diverse philosophical traditions explore various responses to the question of the meaning of life, considering the most significant human aspirations and values. AH-Philosophies and Culture World (W).

PHIL 150. Critical Thinking (5). This course will focus on informal logic: understanding and evaluating arguments in ordinary language. Students will learn to read, write, and think critically. Basic Skills 5 - Reasoning.

PHIL 201. Introduction to Logic (5). Formal principles, methods and techniques for analyzing, constructing, and evaluating arguments. Topics include validity, soundness, truth tables, Venn diagrams, syllogisms, and logical symbolism. Basic Skills 5 - Reasoning.

PHIL 202. Global Ethics (5). Examine some main traditions of ethics, such as Christian ethics, Buddhist ethics, Confucian ethics, ethical absolutism and relativism, utilitarianism, deontology, and feminist ethics. AH-Philosophies and Culture World (W).

PHIL 209. Asian Philosophy (5). Examination of selected classical and/or contemporary issues and questions in Chinese, Japanese and Indian philosophy. AH-Philosophies and Culture World (W).

PHIL 210. Current Ethical Issues (5). Contemporary ethical theories from diverse traditions applied to current ethical problems. Recent ethical approaches to euthanasia, abortion, capital punishment, affirmative action, and environmental concerns. AH-Philosophies and Culture World (W).

PHIL 298. Special Topics (1-6).

PHIL 299. Seminar (1-5).

PHIL 302. Ethical Theory (5). Offers an overview of the content and justification of historical approaches to ethical theory. Includes a critical assessment of those theories and a discussion of current approaches to ethical theory.

PHIL 304. Business Ethics (5). Ethical problems that arise in contemporary business practices and the relevance of recent ethical theory to these problems.

PHIL 305. Philosophy of Religion (5). Fundamental assumptions and issues in religious activity and thought; types of religious philosophy.

PHIL 306. Environmental Ethics (5). An examination of various positions on the human relationship with the natural environment, from ancient and contemporary, western and non-western, as well as interdisciplinary perspectives. Prerequisite: sophomore standing or above. AH-Philosophies and Culture World (W).

PHIL 307. Introduction to Formal Logic (5). An introduction to formal logic, focusing on propositional and predicate calculus. Logical operators, symbolization, truth functions, truth tables, natural deduction (including conditional and direct proofs), and quantifiers.

PHIL 308. Medical Ethics (5). Explores ethical issues arising in a medical context, such as the allocation of scarce medical resources and health care, patient confidentiality , advance directives, human experimentation, and physician-assisted suicide.

PHIL 309. Ethics through Film (5). An examination of ethical theories and themes in film, including the ethics of filmmaking. Films will be selected from a wide range of possibilities, including foreign productions. Formerly PHIL 402, students may not receive credit for both.

PHIL 324. Philosophy and Science Fiction (5). Covers issues in analytic philosophy via examination of science fiction works. Topics may include skepticism, free will, personal identity, artificial intelligence, machine ethics, transhumanism, genetic engineering and time travel.

PHIL 325. Women and Philosophy (5). An examination of what the history of philosophy has claimed about the significance of gender with particular attention to the characterization of women in those texts and the impact of this history on contemporary thought.

PHIL 345. Chinese Philosophy (5). Selected philosophical topics in Chinese literature. May be repeated up to 10 credits.

PHIL 347. Philosophy of Law (5). Examines theories regarding the origin and justification of legal systems, including; natural law theory, legal positivism, and

legal realism. Topics may include; civil disobedience, religious freedom, affirmative action, pornography, the insanity defense, and punishment.

PHIL 352. Greek and Roman Philosophy (5). Overview of major thinkers and themes in ancient Greek and Roman philosophy. Figures/schools discussed may include the Pre-Socratics, Plato, Aristotle, Stoicism, Epicureanism, Skepticism, Cicero, and/or Plotinus.

PHIL 353. Early Modern Philosophy (5). A study of some of the influential philosophies of the 17th and 18th centuries: Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume, and Kant.

PHIL 354. Kant and the 19th Century Philosophy (5). A study of European philosophers from the late 18th and 19th centuries. The course focuses on primary texts from such philosophers as Kant, Hegel, Marx, Kierkegaard, and Nietzsche.

PHIL 356. American Philosophies (5). Examines the development of American philosophies from the Colonial period to the present, including African American, Native American, Latin American philosophies, American pragmatism, transcendentalism, American feminism, and others.

PHIL 357. Philosophy of Race (5). This course will examine the philosophical significance of race: interrogating its reality and legitimacy as a category of identify, and the political and social implications of racial identify, both historically and in contemporary contexts.

PHIL 358. Existentialism (5). Kierkegaard, Nietzsche, Marcel, Heidegger, Jaspers, and Sartre.

PHIL 361. Theory of Knowledge (5). A critical study of contemporary analytic epistemology. Topics may include belief, evidence, and perception; skepticism and justification; a priori knowledge; induction; knowledge of other minds; the ethics of belief; truth and relativism.

PHIL 364. Philosophy of Mind (5). A critical study of contemporary analytic philosophy of mind. Topics may include dualism, materialism, functionalism, consciousness, intentionality and representation, the computational theory of mind, artificial intelligence, and animal minds.

PHIL 378. Philosophy of Love (5). A study of various concepts of love as they occur in philosophy, literature, and other cultural expressions. The nature of romantic love, eros, agape, friendship, and fellow feeling will be discussed. Prerequisite: sophomore standing or above. AH-Philosophies and Culture World (W).

PHIL 380. Philosophy of Science (5). A critical study of the aims, structure, and methodology of the sciences. Topics covered may include explanation, prediction, induction, theories, scientific realism, empiricism, laws, and confirmation.

PHIL 403. Philosophy of Art (5). Survey of ancient, modern, and contemporary philosophy of art, with an emphasis on primary texts and application to artwork. Examination of different ways to define art and its function: art as representation, expression, and metaphor. Formerly, PHIL 303. Students may not receive credit for both.

PHIL 459. Phenomenology (5). A historical and critical study of phenomenology as a philosophic method. Leading phenomenologists such as Husserl, Scheler, and Merleau-Ponty.

PHIL 465. Advanced Ethics (5). Advanced topics reflecting current trends and problems within philosophical ethics. May be repeated up to a maximum of 10 credits.

PHIL 485. Capstone Project (2). Culminating experience (research paper, internship or creative project) to synthesize and display understanding of knowledge gained in coursework as applied to academic, professional and personal plans for the future.

PHIL 488. Junior Seminar (5). Intensive study of selected philosophical theories, movements, or figures. Prerequisite: student must be a philosophy major with junior or senior standing or have permission from the instructor. May be repeated up to 10 credits under a different subtitle.

PHIL 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prerequisite: prior approval required. May be repeated for credit. Grade will either be S or U.

PHIL 494. Undergraduate Thesis Preparation (2). Preparation for writing undergraduate thesis. Prerequisites: advanced standing (junior standing or

above) and permission of instructor. Grade will be either S or U.

PHIL 495. Undergraduate Thesis (3). Produce an original substantive thesis-driven paper based on independent research. Prerequisite: PHIL 494 and advanced standing. By permission.

PHIL 496. Individual Study (1-6).

PHIL 497. Honors Thesis (3). Produce an original, thesis-driven honors level paper based on original research. Paper will be reviewed by a second departmental reader and presented in an open forum. Prerequisites: PHIL 494, advanced standing, and admission to the Philosophy and Religious Studies Departmental Honors Program.

PHIL 498. Special Topics (1-6).

PHIL 499. Seminar (5).

Physics Courses

PHYS 101. Introductory Astronomy I (5). An inquiry-based introduction to celestial motions, celestial objects, observational astronomy and the physics associated with each. Emphasis on stars and planets. This is an activity-based lecture/lab course. NS-Patterns&Connection Natural (L)

PHYS 102. Introductory Astronomy of the Solar System (4). An introduction to the physics of the bodies in our solar system with an emphasis on planets and the Sun. This course will include an emphasis how we observe the planets and Sun, current and past planetary missions, and the comparative evolution of bodies in our solar system. NS-Patterns&Connection Natural (L)

PHYS 103. Physics of Musical Sound (5). Basic principles of acoustics applied to the production and perception of sound by musical instruments. Other topics covered include sound in rooms, musical scales, sound synthesis, and vocal acoustics. Techniques and tools for analyzing sound will be emphasized. Class format includes lecture, group problem solving, and laboratory activities. NS-Application Natural Science (L) (W)

PHYS 106. Physics Inquiry (5). An introduction to fundamental physics topics in matter, motion, electricity, and magnetism. NS1 NS-Fund Disc Phys&Biological (L)

PHYS 108. Light and Color (4). An introduction to topics in light and color with applications to technology in the arts. NS-Application Natural Science (L)

PHYS 111. Introductory Physics (4). Topics in physics including kinematics and dynamics. Analyzing physical systems using algebra and trigonometry. Not open to students with credit in PHYS 181. Prerequisites: must be eligibility for MATH 154 based on the Math Placement Test, or MATH 153 with a grade of C or higher. Co-requisite: PHYS 111LAB. NS1 NS-Fund Disc Phys&Biological

PHYS 111LAB. Introductory Physics Laboratory (1). Investigation of topics in physics including kinematics and dynamics. Corequisite: PHYS 111. NS1 NS-Fund Disc Phys&Biological (L)

PHYS 112. Introductory Physics II (4). An integrated experimental and analytical investigation of topics in rotational dynamics, wave mechanics, and conservation principles. This integrated lecture/laboratory course includes the analysis of physical systems using algebra and trigonometry along with inquiry-based activities and experimental investigation. Prerequisite: PHYS 111 and PHYS 111LAB. Co-requisite: PHYS 112LAB.

PHYS 112LAB. Introductory Physics Laboratory II (1). An integrated experimental and analytical investigation of topics in rotational dynamics, wave mechanics, and conservation principles. This integrated lecture/laboratory course includes the analysis of physical systems using algebra and trigonometry along with inquiry-based activities and experimental investigation. Pre-requistie: PHYS 111 and PHYS 111LAB. Co-requisite: PHYS 112.

PHYS 113. Introductory Physics III (4). An integrated experimental and analytical investigation of topics in electricity, magnetism, and optics. This integrated lecture/laboratory course includes the analysis of physical systems using algebra and trigonometry along with inquiry-based activities and experimental investigation. Prerequisite: PHYS 111 and PHYS 111LAB. Co-requisite: PHYS 113LAB.

PHYS 113LAB. Introductory Physics Laboratory III (1). An integrated experimental and analytical investigation of topics in electricity, magnetism, and optics. This integrated lecture/laboratory course includes the analysis of physical systems using algebra and trigonometry along with inquiry-based activities and experimental investigation. Pre-requisites: PHYS 111 and PHYS

111LAB. Co-requisite: PHYS 113.

PHYS 121. Introductory Physics for the Life Sciences (5). An integrated lecture/laboratory course covering kinematics and dynamics with emphasis on the application of physical concepts to biological systems. Students analyze physical systems using algebra and trigonometry. Class format includes lecture, inquiry-based activities, and experimental investigation. Four class meetings of 80 minutes each. Not open to students with credit in PHYS 181. Prerequisite: MATH 153 with a grade of C or higher or eligible for MATH 154 based on math placement test.

PHYS 181. General Physics (4). Topics in physics including kinematics and dynamics. Analyzing physical systems using algebra, trigonometry, and calculus. Co-requisite: PHYS 181LAB. Co- or prerequisite: MATH 172. NS-Fund Disc Phys&Biological

PHYS 181LAB. General Physics Laboratory (1). Investigation of topics in physics including kinematics and dynamics. Co-requisite: PHYS 181. NS-Fund Disc Phys&Biological (L)

PHYS 182. General Physics II (4). An integrated experimental and analytical investigation of topics in rotational dynamics, wave mechanics, and conservation principles. This integrated lecture/laboratory course includes the analysis of physical systems using algebra, trigonometry, and calculus along with inquiry-based activities and experimental investigation. Prerequisites: PHYS 181 and PHYS 181LAB. Co-requisite: MATH 173 and PHYS 182LAB.

PHYS 182LAB. General Physics Laboratory II (1). An integrated experimental and analytical investigation of topics in rotational dynamics, wave mechanics, and conservation principles. This integrated lecture/laboratory course includes the analysis of physical systems using algebra, trigonometry, and calculus along with inquiry-based activities and experimental investigation. Prerequisites: PHYS 181 and PHYS 181LAB. Co-requisites: MATH 173 and PHYS 182.

PHYS 183. General Physics III (4). An integrated experimental and analytical investigation of topics in electricity and magnetism. This integrated lecture/laboratory course includes the analysis of physical systems using algebra, trigonometry, and calculus along with inquiry-based activities and experimental investigation. Prerequisites: PHYS 181 and PHYS 181LAB. Co-requisites: MATH 173 and PHYS 183LAB.

PHYS 183LAB. General Physics Laboratory III (1). An integrated experimental and analytical investigation of topics in electricity and magnetism. This integrated lecture/laboratory course includes the analysis of physical systems using algebra, trigonometry, and calculus along with inquiry-based activities and experimental investigation. Prerequisites: PHYS 181 and PHYS 181LAB. Co-requisites: MATH 173 and PHYS 183.

PHYS 201. Operation and Research Techniques for Small Observatories (3). Students are trained to operate a small observatory, and to use CCD cameras to collect stellar photometry data. Prerequisites: PHYS 101, and either MATH 153 with a grade of C or higher or eligible for MATH 154 based on Math Placement Test.

PHYS 292. Exploring Physics Teaching (2). Inquiry-based learning course that provides preparation for teaching physics using pedagogies that have been guided by physics education research. Prerequisites: PHYS 113 and PHYS 113LAB or PHYS 183 and PHYS 183LAB.

PHYS 296. Individual Study (1-6).

PHYS 298. Special Topics (1-6).

PHYS 301. Stellar Astrophysics I (3). Introduction to and application of physical principles, including; relativity, quantum theory, and classical physics associated with the characterization of astrophysical systems. Prerequisites: PHYS 101, PHYS 183, PHYS 183LAB, and MATH 173.

PHYS 302. Stellar Astrophysics II (2). Application of physical principles including relativity, quantum theory, classical electromagnetic fields, and classical mechanics to astrophysical processes and the evolution of astrophysical systems. Prerequisite: PHYS 301.

PHYS 317. Modern Physics I (4). Topics in physics including relativity, particle physics, and history of modern physics. Analyzing physical systems using calculus, algebra, and trigonometry. Prerequisites: MATH 173 and either PHYS 113 and PHYS 113LAB, or PHYS 183 and PHYS 183LAB.

PHYS 318. Modern Physics II (4). Topics in physics including quantum physics and atomic structure. Analyzing physical

systems using calculus, algebra, and trigonometry. Prerequisite: PHYS 317.

PHYS 320. Electrical Circuits I (5). Application of fundamental concepts of electrical science in linear circuit analysis and the use of mathematical models in the analysis of electric components and circuits. Co-requisites: MATH 376 and PHYS 321. Prerequisites: PHYS 183 and PHYS 183LAB.

PHYS 331. Laboratory Practices and Techniques (3). Topics in experimental techniques with emphasis in electronic systems. Prerequisites: PHYS 183 and 183LAB. One class meeting and six hours laboratory per week.

PHYS 333. Experimental Physics I (3). Topics in experimental techniques used in physics. Prerequisite: PHYS 331. One class meeting and six hours laboratory per week.

PHYS 334. Experimental Physics II (3). Topics in experimental techniques used in physics. Prerequisite: PHYS 333. One class meeting and six hours laboratory per week.

PHYS 342. Thermodynamics (4). The laws of thermodynamics and its application to macroscopic systems. Co- or prerequisite: PHYS 318.

PHYS 351. Analytical Mechanics I (3). Introduction to advanced physical concepts and mathematical techniques associated with dynamic systems including conservation laws, mpm-conservative forces, oscillating systems, non-inertial reference frames, and central-force motion. Prerequisites: PHYS 183 and PHYS 183LAB. Co- or prerequisites: MATH 273 and MATH 376.

PHYS 352. Analytical Mechanics II (3). Further study of dynamic systems. Introduction to coordinate transformations, variational principles, Lagrangian and Hamiltonian methods, and nonlinear systems. Prerequisite: PHYS 351.

PHYS 361. Computational Physics (4). Numerical methods of studying physical properties of realistic systems. FORTRAN, IMSL/MATH Library, and MATHEMATICA will be introduced. Prerequisites: PHYS 183 and PHYS 183LAB. Co-requisite: MATH 265.

PHYS 363. Optics (4). The mathematics of wave motion, electromagnetic theory, propagation of light, geometrical optics, and physical optics. Includes the experimental investigation of optical phenomena. Prerequisites: MATH 173, and PHYS 113 and PHYS 113LAB, or PHYS 183 and PHYS 183LAB. Three class meetings and two hours laboratory per week.

PHYS 381. Electromagnetic Theory I (4). Topics in electrostatics including electric fields, electric potential, Gauss' law, electrostatic energy, and multipole expansions. Prerequisites: PHYS 183 and PHYS 183LAB and MATH 265 and MATH 273.

PHYS 382. Electromagnetic Theory II (4). Topics in electrostatics and magnetostatics including the electrostatics of polarizable media, vacuum magnetostatics, magnetostatics in matter, and introduction to the Maxwell equations. Prerequisite: PHYS 381.

PHYS 383. Electromagnetic Theory III (4). Topics in the Maxwell equations, electrodynamics, and electromagnetic waves. Prerequisite: PHYS 382.

PHYS 392. Exploring Physics Teaching II (2). Inquiry-based learning course that enhances preparation for teaching physics using best-practice pedagogies, lesson planning, and action research. Prerequisite: PHYS 292. May be repeated up to 6 credits.

PHYS 396. Individual Study (1-6).

PHYS 398. Special Topics (1-6).

PHYS 461. Advanced Computational Physics (4). Applications of standard numerical modeling techniques to physics problems involving nonlinear and/or differential equations, including wave propagation, fluid flow, thermodynamics, electrodynamics, and particle physics. PHYS 461 and PHYS 561 are layered courses; students may not receive credit for both. Prerequisites: MATH 376 and PHYS 361.

PHYS 463. Fundamentals of Lasers (4). Overview of laser technology with emphasis on laser characteristics, safety, and applications. Prerequisite: PHYS 363.

PHYS 474. Quantum Mechanics I (4). Methods of quantum mechanics and applications to physical systems. Examples from nuclear, atomic, and molecular physics. Prerequisites: PHYS 318 and MATH 376.

PHYS 475. Quantum Mechanics II (4). Methods of quantum mechanics and applications to physical systems. Examples from nuclear, atomic, and molecular physics. Prerequisites: PHYS 474.

PHYS 489. Senior Assessment (1). An end-of-major course consisting of curriculum review and program assessment activities. Prerequisites: senior

standing and admission to the physics major. By permission.

PHYS 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. By permission. May be repeated for credit. Grade will either be S or U.

PHYS 491. Workshop (1-6).

PHYS 492. Laboratory Experience in Teaching Physics (2). By permission. May be repeated up to 6 credits.

PHYS 495. Undergraduate Research (2). By permission. May be repeated up to 12 credits.

PHYS 496. Individual Study (1-6).

PHYS 498. Special Topics (1-6).

PHYS 499. Seminar (1).

Political Science Courses

POSC 101. Introduction to Politics (5). The basic ideas around which political debate revolves and from which political institutions evolve. SB-Found Human Adaptations (W).

POSC 210. American Politics (5). Origin and development of the United States government; structure, political behavior, organizations, and processes; rights and duties of citizens. For general education (breadth) credit, a student must be enrolled in or have completed ENG 101. SB-Perspectives on Cultures and experiences of U.S.

POSC 230. State and Local Government (5).

POSC 260. Comparative Politics (5). Comparative political analysis, utilizing a variety of methods and theoretical approaches; application to selected western and non-western systems. Recommended to precede other courses in comparative politics.

POSC 270. International Politics (5). Conditions and principles governing the contemporary nation-state system. SB-Perspective on World Culture (W).

POSC 298. Special Topics (1-6).

POSC 311. Women and Politics (5). The politics of human sexuality: men's and women's rights, sex roles, sexual discrimination, laws governing sexuality, and related issues.

POSC 313. The Legislative Process (5). The Congress of the United States, drafting of bills, legislative leadership, the committee system, relation to executive and judicial branches, pressure groups.

POSC 314. American Presidency (5). The office of the chief executive: its constitutional, political, and administrative processes.

POSC 315. Political Campaigns and Elections (5). Evaluations of campaign techniques and practices; campaign financing and expenditures; voting behavior; election theory; elections and public policy.

POSC 316. Latinos and the U.S. Political System (5). This course examines the political reality of Latinos in the United States: a diverse population made up largely of Mexican, Puerto Rican, Cuban American, and other Latinos of Central and South American origins.

POSC 318. Political Parties and Interest Groups (5). Theories of party systems; elitism and pluralism; party organization, functions, and activities; status, functions, and activities of interest groups in the public policy-making process.

POSC 320. Public Administration (5). Setting, purpose, functions, and performance of public bureaucracy in the United States.

POSC 325. Introduction to Public Policy (3). Institutional context, politics and processes of agenda setting and policy formulation, implementation, evaluation, change and termination in the United States.

POSC 340. Politics and American Capitalism (5). A survey of the interrelationship of the worlds of politics and business enterprise in American history; analysis of relevant philosophical and ideological arguments; case studies in such areas as industrial and trade policy.

POSC 341. Politics and Religion (5). The impact of religion upon American political thought and behavior.

POSC 342. U.S. Foreign Policy (5). Factors, processes, and techniques in the formulation and execution of the foreign policy of the United States.

POSC 343. The Politics of the U.S. Mexico Border (5). This course examines the politics of the United States and Mexico border region focusing on the important role of the state in the development of policies affecting one of the longest border regions in the world. Topics covered in the course include the politics of border regions and the national state, and the diverse policy concerns of the region from economic development and immigration, to ecological degradation, and health concerns.

POSC 350. Introduction to Public Law (5). Legal bases and

structure of governmental organization; fundamental doctrines and principles of constitutional, international, and administrative law.

POSC 361. Latin American Politics (5). A comparative introduction to the political systems, cultures, and histories of Latin America and to prominent theories on democracy and political and economic development.

POSC 362. European Politics (5). Comparative analysis of political cultures, civil societies, parties and elections, and systems of governance in a selection of European countries.

POSC 363. Russian Politics (5). Evolution, patterns, and comparative analyses of the Russian polity.

POSC 365. African Politics (5). Comparative analysis of the political systems of the African continent, including historical, social, economic, and international contexts.

POSC 366. Government and Politics of East Asia (5). An introduction to the politics and governments of selected East Asian countries. Focus will center on China, Japan, and Korea.

POSC 367. Politics of Japan (5). Investigation and analysis of politics and government in contemporary Japan.

POSC 369. Korean Politics (5). Political systems, institutions, and processes of contemporary North and South Korea.

POSC 372. Politics of Globalization (5). Inquiry in the nature and trends of globalization from the economical, political, and cultural perspectives, and their impacts on our way of life. Roles of government, non-government organizations, and global institutions will be examined.

POSC 373. International Politics of the Pacific Rim (5). Political and economic relations of the contemporary Pacific Rim. Special focus on North America, Russia, and East Asia.

POSC 375. The Middle East and International Politics (5).

POSC 376. International Organization (3). Background, concepts, structure, and functions of international organization.

POSC 378. International Political Economy (5). Political problems of management and development in the global economy and the prospects for creating improved mechanisms at the international level and for less-developed countries.

POSC 398. Special Topics (1-6).

POSC 410. Contemporary Issues in American Politics (3-5). Focus on specific contemporary issues in US politics, with emphasis on in-depth analysis and utilization of available research tools. Subject matter will vary by instructor and with the changing nature of the American political scene.

POSC 411. American Indian Politics and Sovereignty (4). Examines American Indians as sovereign nations and as participants in U.S. politics. Some comparison with native peoples in other western polities. Provides historical and contemporary overview of legal and political experiences of American Indians.

POSC 429. Research Seminar in Public Policy (3-5). Review of theory and methods, proposal for policy analysis, preparation, and presentation of policy analysis. Prerequisites: POSC 320 or 325 or by permission.

POSC 441. Politics and Film (5). Since its inception, film has been used to convey political ideas and ideologies, as well as offer social and political criticism. This class will examine the techniques film directors and writers use to "manipulate" the viewing audience.

POSC 451. Introduction to Constitutional Law (5). Role of the United States Supreme Court in shaping governmental structure of the United States.

POSC 452. The Constitution and Human Rights (5). Role of the United States Supreme Court in the development of political and social rights.

POSC 453. The Constitution and War (5). Americans like to believe that the Constitution is a constant--in effect during times of peace and during times of war. The truth is more complicated. If history is our guide, the Constitution has been far more "flexible" in times of was than most Americans would like to admit. This class examines how the nation and its presidents have applied the Constitution during times of extreme crisis.

POSC 460. Contemporary Issues in Comparative Politics (3-5). Focus on a specific contemporary issue in the field of comparative politics, with an emphasis on in-depth analysis and utilization of available research tools. Subject matter will vary with the instructor and with the changing nature of world politics. May be repeated by sub-topic two times, for a maximum of 10 credits.

POSC 470. Contemporary Issues in International Relations (3-5). Focus on specific contemporary issues in the field of international politics, with an

emphasis on in-depth analysis and utilization of available research tools. Subject matter will vary with the instructor and with the changing nature of world politics. May be repeated by sub-topic two times, for a maximum of 10 credits.

POSC 475. International Human Rights (5). A survey of internationally recognized human rights, analysis of relevant international laws, case studies in women's rights, minority rights, and humanitarian policies.

POSC 481. Early Political Thought (5). Plato to Machiavelli.

POSC 482. Early Modern Political Thought (5). Political thought in the 16th, 17th, and 18th centuries.

POSC 483. Recent Political Thought (5). Political thought in the 19th and 20th centuries.

POSC 485. American Political Thought and Culture (5). The ideas and circumstances that have shaped the political culture of the U.S., as reflected in the works of selected political theorists, politicians, and literary figures.

POSC 488. Introduction to Political Science Methods and Research (5). Class will introduce students to the research methods of political scientists. Taught in a seminar format, the class will engage in an original research project culminating in a peer-reviewed article submission to an academic journal. Students will learn to write literature reviews, collect data, analyze data using SPSS, and write academic research papers. By instructor permission.

POSC 489. Senior Assessment (2). A "capstone" course designed to assess students' mastery of fundamental knowledge of politics and of writing and analytical skills. Co- or prerequisites: POSC 101, POSC 210, POSC 260, POSC 270, and either POSC 481, POSC 482, POSC 483, or POSC 485 and senior standing.

POSC 490. Cooperative Education (1-12). An individualized, contracted field experience with business, non-profit organizations or government. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. By permission. May be repeated for credit up to maximum of 12 credits. Grade will either be S or U.

POSC 496. Individual Study (1-6).

POSC 498. Special Topics (1-6).

POSC 499. Seminar (1-5).

Primate Studies Courses

PRIM 220. Procedures in Captive Primate Care (1). Laboratory procedures to ensure physical, social, and psychological well-being of captive nonhuman primates: sanitation, safety, medical care, diet, USDA requirements, and socio-psychological factors.

PRIM 320. Laboratory Research in Primatology (1-3). Laboratory research under the supervision of a program professor. May be taken concurrently with and as a supplement to other 300- 400-level ANTH/BIOL/PSY/PRIM courses. Prerequisite: PRIM 220. May be repeated up to 6 credits. Grade will either be S or U.

PRIM 450. Primate Behavior and Ecology Capstone (1). A capstone course designed to assess students' mastery of fundamental knowledge of primatology through submission of a portfolio of work collected throughout the program. Includes exit interview with program director. Prerequisite: senior standing.

PRIM 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. By permission. May be repeated for credit. Grade will either be S or U.

PRIM 495A. Directed Research in Primatology (1-5). By permission. May be repeated for credit. Grade will be either S or U.

PRIM 495C. CHCI Directed Research (1-10). Directed primatological research at the Chimpanzee and Human Communication Institute. Prerequisite: PRIM 220. By permission. May be repeated for credit. Grade will either be S or U.

Psychology Courses

PSY 101. General Psychology (5). An introduction to the science of behavior. SB-Found Human Adaptations.

PSY 200. Introduction to the Major (1). Orientation to the psychology major. Prerequisite: must be declared with a psychology major program. Grade will either be S or U.

PSY 205. Psychology of Adjustment (5). The nature of the adaptive process and the means by which people adjust to their environment. SB-Found Human Adaptations (W).

PSY 235. Relationships and Personal Development (3). Development of interpersonal relationships from initial encounters to stable commitments. Major focus on interaction patterns in intimate relationships. PSY 235 and FSCF 235 are cross-listed courses; students may not receive credit for both.

PSY 275. Community Development in Residence Halls (3). Components of successful student development in residential settings. Educational philosophy of residence halls, community development, and problem solving. Credits do not apply toward psychology degree major or minor. Prerequisite: permission of instructor. Grade will either be S or U.

PSY 295. Laboratory Experience in Psychology (1-5). Not more than 5 credits of PSY 295, PSY 295C, PSY 495, and PSY 495C combined may be applied to a 45-credit psychology major and not more than 10 credits, combined, may be applied to a 60-credit major. May be repeated up to 10 credits. Grade will either be S or U.

PSY 295C. CHCI Laboratory Experience (1-5). Laboratory experience at the Chimpanzee and Human Communication Institute. Prerequisite: permission of department chair. PSY 101 is also a recommended prerequisite. Course fee will be assessed. May be repeated. Not more than 5 credits of PSY295, PSY 295C, PSY 495, and PSY 495C combined may be applied to a 45-credit psychology major and not more than 10 credits, combined, may be applied to a 60-credit major. May be repeated for credit. Grade will either be S or U.

PSY 298. Special Topics (1-6).

PSY 299. Seminar in Psychology (3).

PSY 300. Research Methods in Psychology (5). Addresses basic experimental and non-experimental research designs and strategies, as well as the APA-approved professional writing style. Includes both lecture and laboratory experiences. PSY 362 is a recommended co-requisite.

PSY 301. Learning (5). Addresses basic theory and research related to classical and operant conditioning, stimulus control, and memory. Prerequisite: PSY 300.

PSY 303. Analysis of Everyday Behavior (4). Environmental, cognitive, and biological influences on behavior in daily life. Prerequisite: PSY 101.

PSY 310. Multicultural Issues in Psychology (4). An examination of human behavior in cultural context. Emphasizes the role and influence of culture on thought, behavior, relationships and society. Discusses the influence of race, ethnicity, social class, gender, age, religion/spirituality and sexual orientation. Cross-cultural research theory, and methodology are also examined. Prerequisite: PSY 101.

PSY 312. Queer Theory and Sexuality (4). This interdisciplinary course introduces students to the academic field of lesbian and gay studies through examination of the history, politics, theories, culture, and community of those who identify as lesbian, bisexual, gay, transgender, and queer.

PSY 313. Developmental Psychology (4). Cognitive, social-emotional, and physical development through the lifespan. Prerequisite: PSY 101 or by permission.

PSY 314. Human Development and the Learner (4). Development from conception through adolescence.

PSY 315. Psychology in the Schools (4). Psychology applied in school settings including principles of learning, instruction, and behavior management.

PSY 340. Teaching of Psychology (3). Prerequisites: completion of course in which teaching or assisting is to be done and approval of department chair. May be repeated up to 6 credits. Grade will either be S or U.

PSY 346. Social Psychology (4). Social influences on individual behavior.

PSY 350. Sleep and Dreaming (4). Research and theory concerning the functions and dysfunctions of sleep and dreaming. Prerequisite: PSY 101.

PSY 352. Application of Adult Development Theories (2). This course is designed to provide students with a broad understanding and application of theories on adult development and aging. Service-learning is integral and students will be involved with older adults though cooperating local agencies. May be repeated up to 4 credits.

PSY 362. Introductory Statistics (5). Descriptive statistics and introduction to inferential statistics through one-way analysis of variance. Prior coursework in finite math is recommended.

PSY 363. Intermediate Statistics and Research Methods (5). Experience with the design, execution, analysis, interpretation, and communication of psychological experiments in addition to data

management and statistical software skills. Four hours lecture and two hours lab each week. Prerequisite: PSY 300 and PSY 362.

PSY 396. Individual Study (1-6).

PSY 398. Special Topics (1-6).

PSY 401. Psychology of Sport (4). Current theory and research on sports psychology; application of psychological interventions in sports and fitness. Prerequisite: PSY 101.

PSY 413. Conservation Psychology (4). Interaction between thought processes, behavior, and environmental decision-making as they relate to environmental change and sustainability. PSY 413 and PSY 513 are layered courses; students may not receive credit for both.

PSY 415. Behavioral Medicine and Health Psychology (4). The application of psychology to the understanding of illness and to its prevention and treatment with special emphasis on current health topics (e.g., stress, HIV/AIDS). PSY 415 and PSY 515 are layered courses; students may not receive credit for both. Prerequisite: PSY 101. Formerly, PSY 455; students may not receive credit for both.

PSY 420. Psychology of Language (4). Basic principles of language, cognition of language, language development, theories of linguistic structure and brain function as it relates to language processing. PSY 420 and PSY 520 are layered courses; students may not receive credit for both. Formerly, PSY 473; students cannot receive credit for both.

PSY 421. Human Neuroanatomy (4). An introduction to the anatomical organization and basic functional/clinical principles of the major systems of the human brain and their relations to disease and behavior. PSY 421 and PSY 521 are equivalent courses; students may not receive credit for both.

PSY 438. Substance Abuse and Dependence (5). Overview of substance abuse from psychological and systems perspectives. Models of addiction and problematic use are explored. Issues including dual diagnosis, family system and cultural considerations, and theories of intervention and treatment are discussed. PSY 438 and PSY 538 are layered courses; students may not receive credit for both.

PSY 442. Evolutionary Psychology (4). Application of principles of evolution to understanding of human and non-human behavior and cognition. PSY 442 and PSY 542 are layered courses; students may not receive credit for both.

PSY 444. Tests and Measurements (4). Psychological and educational tests, theory, and practice. PSY 444 and PSY 544 are layered courses; students may not receive credit for both. Prerequisites: either PSY 362 or BUS 221 or MATH 311.

PSY 445. Clinical, Counseling, and Community Psychology (5). History, current trends, fields of employment, professional ethics, methods of psychological diagnosis, and treatment. Prerequisite: PSY 101.

PSY 447. Psychology of Adolescence (4). Physiological, cognitive, and social aspects of maturation; problems of vocational choice and of increasing autonomy. Prerequisite: PSY 101.

PSY 448. Sexual Behavior (4). The scientific study of the learned and innate bases of sexual behavior in humans and lower animals. Prerequisite: PSY 101.

PSY 449. Abnormal Psychology (4). Symptoms, etiology, and treatment of psychopathology and behavior problems. Prerequisite: PSY 101.

PSY 450. Sensation and Perception (4). Research, theoretical models of sensory and perceptual processes. Prior coursework in cell function recommended. Prerequisites: PSY 300.

PSY 452. Adult Development and Aging (4). Principles of adult psychological development and the aging process. Examination of adult behavior, life-styles, crises in adult development, and cognitive, personality, and intellectual changes with aging.

PSY 453. Theories of Personality (5). Focus on the scientific study of how and why people differ from each other. Personality psychology addresses questions regarding shared human nature, dimensions of individual differences, and unique patterns of individual behavior. Prerequisite: PSY 101.

PSY 454. The Helping Interview (3). Theory and practice of supportive interviewing skills.

PSY 456. Industrial and Organizational Psychology (4). Application of psychological principles to personnel and organizational problems in labor, industry, government, education, and the military.

PSY 460. Cognitive Psychology (5). Methods and theories of human cognition and information processing. Prerequisite: PSY 300.

PSY 461. History and Systems of Psychology (5). Historical

development and persistent theoretical problems of contemporary psychology. Prerequisite: PSY 101.

PSY 465. Psychology and the Law (4). How the discipline of psychology contributes to our understanding of matters related to the law.

PSY 467. Child Psychopathology (3). Discovery and treatment of the severely maladjusted child; the home, school, and community in relation to the child's mental health; relevant resources and research. Prerequisites: PSY 313 or 314.

PSY 472. International Counseling and Psychology (3). This course immerses students within a cultural group and examines how psychological and counseling services are provided within that society. The location for the course varies by year. Students will learn about a society's available services, health care provision, relationship/child-rearing traditions, common prejudices, and economic values. PSY 472 and 572 are layered courses. Prerequisite: PSY 101. May be repeated up to 6 credits.

PSY 476. Psychopharmacology (4). Common drugs, psychotherapeutic agents and hallucinogens. Behavioral effects and physiological mechanisms.

PSY 478. Behavioral Neuroscience (4). Problems, methods, and techniques of neurophysiology and the physiology of human and infrahuman behavior patterns. Prior coursework in cell function recommended. Prerequisites: PSY 300.

PSY 479. Comparative Psychology (4). Seminar in the study of behavior and cognition across species. This course is listed under the graduate version of PSY 576; students may not receive credit for both.

PSY 483. Psychology of Gender (4). The psychology of gender from a social psychological perspective, which examines implications of gender roles, schemas, and stereotypes. Prerequisite: PSY 101.

PSY 484. Violence and Aggression (4). Violence and aggression directed toward self, others, and society. Problems of prevention and treatment, related ethical and legal issues. Prerequisite: PSY 101.

PSY 489. Senior Assessment (2). An end-of-major course. Portfolio review, career planning, and program evaluation activities. Prerequisites: PSY 200 and admitted to a psychology major and senior standing. It is recommended that this class is taken in the last academic quarter. Grade will either be S or U.

PSY 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prerequisite: prior approval required. May be repeated for credit. Grade will either be S or U.

PSY 491. Workshop (1-6).

PSY 493. Field Research (1-12). Individual or group off-campus experience in the field study of psychological phenomena. May be repeated for credit.

PSY 495. Directed Research (1-5). Not more than 5 credits of PSY 295, PSY295C, PSY 495, and PSY495C combined may be applied to a 45-credit psychology major and not more than 10 credits, combined, may be applied to a 60-credit major. Prerequisite: PSY 101 By permission. May be repeated for credit. Grade will either be S or U.

PSY 495C. CHCI-directed Research (1-5). Directed research at the Chimpanzee and Human Communication Institute. Course fee will be assessed. Not more than 5 credits of PSY 295, PSY 295C, PSY 495, and PSY 495C combined may be applied to a 45-credit psychology major, and not more than 10 hours combined may be applied to a 60-credit major. May be repeated up to 10 credits. Grade will either be S or U.

PSY 496. Individual Study (1-6).

PSY 497. Undergraduate Honors Thesis (2-6). By invitation of department chair. Research supervised by three-member committee of the department of psychology. Prerequisite: admission to the Departmental Honors Program. May be repeated up to 6 credits.

PSY 498. Special Topic (1-5).

PSY 499. Seminar (1-5).

Religious Studies Courses

RELS 101. World Religions (5). Survey of the major world religions (Judaism, Christianity, Islam, Hinduism, Buddhism, Confucianism, Daoism), including their tenets, practices, and evaluation of the human condition. AH-Philosophies and Culture World (W).

RELS 201. Sacred Books of the World (5). Comparative study of religious thought and literature from eastern and western classics: Upanishads, Bhagavad-Gita, Dhammapada, Tao Te Ching, Hebrew Bible, New Testament, Koran. AH-

Philosophies and Culture World (W).

RELS 351. Religions of China and Japan (5). Historical development of Daoism, Confucianism, Shinto, and East Asian Buddhism within China and Japan, from their origins to the present. Analysis of beliefs, practices, symbols, and institutions.

RELS 352. Religions of India (5). Historical development of Hinduism, Buddhism, Sikhism, and Jainism within India, from their origins to the present. Analysis of beliefs, practices, symbols, and institutions.

RELS 353. Judaism (5). Historical development of Judaism from its beginning to the present. Analysis of beliefs, practices, symbols, and institutions. Prerequisites: RELS 101 or RELS 201 or permission of instructor.

RELS 354. Christianity (5). Historical development of Christianity, from its origins to the present. Analysis of beliefs, practices, symbols, and institutions.

RELS 355. Islam (5). Historical development of Islam, from its origins to the present. Analysis of beliefs, practices, symbols, and institutions. Prerequisites: RELS 101 or RELS 201 or permission of instructor.

RELS 376. Contemporary Religious Thought (5). Explores the nature of post-modern and/or contemporary philosophic, as well as religious thought, west and east, related to such topics as the nature of religion, the idea of God, the problem of evil, inter-religious dialogue and religious pluralism. Formerly, PHIL 376. May be repeated up to 10 credits.

RELS 398. Special Topics (1-6).

RELS 401. The Daoist Tradition (5). An examination of the textual and cultural tradition associated with Daoism, China's indigenous high religion.

RELS 402. Religion and Film (5). An examination of religious themes in film, including the portrayal of specific religious traditions and sacred narratives. Films will be selected from a wide range of possibilities, including foreign productions.

RELS 403. Buddhist Thought and Practice (5). In depth study of the Buddhist tradition, including its practices, philosophy, and historical development across Asia, and its introduction to the West.

RELS 410. The Legacy of the Hebrew Bible (5). A multi-disciplinary exploration of the Hebrew Bible, seeking to understand both the Bible's influence on and perception in a variety of disciplines (e.g. art, literature, music, film).

RELS 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. By permission. May be repeated for credit. Grade will either be S or U.

RELS 491. Workshop (1-6). May be repeated for credit.

RELS 494. Undergraduate Thesis Preparation (2). Preparation for writing undergraduate thesis. Prerequisite: junior standing or above and permission of instructor. Grade will be either S or U.

RELS 495. Undergraduate Thesis (3). Produce an original substantive thesis-driven paper based on independent research. Prerequisite: RELS 494 and advanced standing. By permission.

RELS 496. Individual Study (1-6).

RELS 497. Honors Thesis (3). Produce an original , thesis-driven honors level paper based on original research. Paper will be reviewed by a second departmental reader and presented in an open forum. Prerequisites: PHIL 494, advanced standing, and admission to the Philosophy and Religious Studies Departmental Honors Program.

RELS 498. Special Topics (1-6).

RELS 499. Seminar (3-5).

Retail Management Technology Courses

RMT 320. Principles of Merchandising Management for Micro Brewing (5). Emphasis on micro brewing merchandising and operations. Focus within channel on selling, distribution, promotion, policies, and regulations. Prerequisites: admittance to the Craft Beer Trade Certificate Program or permission from the instructor.

RMT 330. Principles of Retailing (4). Introduction to retailing including retail stores, merchandising, operations, store location and layout, internal organization, buying, personnel management, inventory control, and sales promotion.

RMT 335. Retail Information Technology (4). Use of contemporary technology in collecting, analyzing, and interpreting retail management data and writing and presenting retail management reports.

RMT 340. Principles of Selling (4). Introduction to selling, its role in the economy, the sales process, types of selling,

planning the sale, and sales organization.

RMT 345. Sustainable Retailing (3). This course will introduce principles and practices of sustainable retail operations. The course will enable students to provide guidance, leadership and support to retail organizations in the development, implementation, and assessment of successful sustainable operations.

RMT 350. Omni Channel Retailing (4). Examines the progress and application of omni channel retailing. Prerequisite: RMT 330.

RMT 366. Customer Relationship Management (4). Developing and maintaining strong customer relationships is paramount to a successful business. Students learn to manage prospects and current customers by using information technology. Prerequisite: junior standing or above.

RMT 379. Internship Planning (1). Preparation of an internship experience.

RMT 467. Retail Management (4). Retail store ownership and management, including startup, location, market analysis, customer service, organization, merchandise management, human resource management, sales promotion, and financial planning. Prerequisites: RMT 330 and senior standing.

RMT 485. International Retailing (4). Emphasis on international retailing and global trade. Focus on cross-cultural differences, work environments, policies and regulations. RMT 485 and FCSA 485 are cross-listed courses; students may not receive credit for both. Prerequisite: RMT 330.

RMT 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Available summer only. Prerequisite: RMT 379. By permission. May be repeated for credit. Grade will either be S or U.

RMT 492. Practicum (5-15). Prerequisite: permission of department chair. Grade will either be S or U.

RMT 493A. Undergraduate Research Practicum (1-3). Conduct research under direct supervision of a professor with specific learning agreement required. ADMG/IT/RMT 493A are cross-listed courses; students may only receive credit for one. By permission. May be repeated for up to 3 credits. Grade will either be S or U.

RMT 493B. Undergraduate Assistant Practicum (1-3). Assist in monitoring, supervising, supporting, and tutoring instruction under direct supervision of a professor with specific learning agreements required. ADMG/IT/RMT 493B are equivalent courses; students may only receive credit for one. By permission. May be repeated for up to 3 credits. Grade will either be S or U.

RMT 496. Individual Study (1-6).

RMT 498. Special Topics (1-6).

RMT 499. Seminar (1-5).

Recreation and Tourism Courses

RT 150. Experience Leadership Project (1). A unique experiential transition program held off-campus (camp/outdoors/community) designed to provide students with the skills and networks to develop leadership skills and Wildcat spirit.

RT 201. Introduction to Recreation and Tourism (3). History, organizational structures, goals and objectives, policies and procedures within agencies, organizations, and businesses in the private, voluntary, government, and tourism sectors.

RT 222. Recreation Programming and Activities (3). The essential skill of recreation programming will be developed. Games and activities appropriate for playgrounds, camps, and community centers are learned, along with socialization, education, trust building, and outdoor adventure. Prerequisite: permission of instructor.

RT 272. Lodging Operations I (3). Examines the rooms division and front office functions critical to hotel operations. Includes the guest cycle, personnel supervision, sales techniques in the reservation process, and hotel organization and operation.

RT 292. Practicum (1-3). Forty on-the-job hours of practical experience per 1 credit hour earned. Four additional hours may be applied toward the recreation tourism elective area. A minimum of one credit must be taken as a service-learning activity. May be repeated for credit.

RT 293. Outdoor Leadership Training (2). Develop a student outdoor leader with the skill sets capable of leading groups safely in an outdoor environment pursuit. In addition, students will learn and apply group development theory.

RT 296. Individual Study (1-6).

RT 298. Special Topics (1-6).

RT 299. Seminar (1-5).

RT 300. Challenge Course Leadership (4). Students will develop leadership skills using the challenge course. Specifically, students will learn and use facilitation techniques to improve group and individual interaction.

RT 309. Facility Planning and Sustainable Design (4). Study of basics of site and facility development including laws and regulations, procedures, sustainable concepts, site analysis, populations, universal design, and utility of design.

RT 330. Sustainable Resources for Recreation and Tourism (3). The framework of sustainability is used to examine how values, policy, management, and practices direct and affect the use of recreation and tourism areas that are both natural resource-based and part of the built environment.

RT 333. Outdoor Adventures in Public Lands (4). This course is designed to provide students an experiential education in outdoor recreation within public lands. Students will explore how ideas become thoughtful practice in outdoor adventure program. Ability to hike and camp in wilderness areas.

RT 337. Tour and Interpretive Program Development (3). Methods, techniques, and skills used in the planning, development, and presentation of resource based interpretive programs and visitor tours. This course will include theoretical understanding of the interpretive process and practice of new skills.

RT 350. Tourism and Recreation for Special Groups (2). Distinguishing needs of special populations, mentally ill, disabled, aged, and others. Attention to the ADA. Observations of selected population groups.

RT 355. Sustainable Tourism: Contemporary Issues (2). Students will explore contemporary issues, trends, policies, and practices shaping the tourism field, and how principles of sustainable tourism are affecting tourism planning, management, and operations. Prerequisite: junior standing or above.

RT 360. Outdoor Survival (3). Students will gain an introductory knowledge in winter survival. Specifically, students will gain a hands-on experience in learning to protect themselves and gain a sense of self-control in a harsh environment.

RT 361. Technology for Recreation and Tourism (2). This course will focus on software being used in the RT industries. Student will use software utilized in the profession to schedule facilities, programs and staff, register participants and track usage and revenue.

RT 371. Tourism Essentials (3). Students will survey the global travel and tourism system, including consumer demand and motivations, tourism suppliers and intermediaries, modes of travel, visitor attractions, marketing and entrepreneurship, destinations, and impacts of tourism on people and communities. Prerequisite: six credits of RT prefix courses or permission of instructor.

RT 373A. Supervision in the Hospitality Industry (3). Basics of supervising programs, personnel, and facilities with emphasis on practical supervisory skill development.

RT 373D. Convention and Meeting Management (5). Students will be presented with the mechanics of planning and managing meetings and conventions of a business nature.

RT 373E. Resort Management (5). Presentation of management topics applied to the hospitality industry.

RT 374. Festivals and Events (3). Students will learn the purposes, mechanics, and leadership skills required for planning and executing community festivals and special events of a social nature.

RT 379. Cruise Line Industry (3). An overview of the cruise industry including: cruise lines, ships, history of cruising, human resource practices, marketing, design, terminology, and future trends.

RT 380. Supervision in the Hospitality Industry (5). This is a broad based course on the role and functions of a supervisor. It presents strategies for supervising programs, facilities, and especially personnel. Case studies are used to practice supervisory skill development. Prerequisite: junior standing or above.

RT 381. Recreational Sports Management (3). Organization and implementation of recreational sports programs in community recreation settings. Emphasis on facilities, personnel, materials and supplies, tournament bracketing and other practical considerations.

RT 382. Community Recreation (3). Preparation for positions in community-based organizations to include non-profits and municipalities, grant writing,

board-staff relations, community capacity building, and social marketing. Prerequisite: junior standing or above.

RT 386. International Travel II (3). Overview of selected Europe and Africa destinations and their travel, tourism, hospitality, and recreation industries. Touristic importance, including economic, political, population, geography, social systems, and cultural characteristics. Put on reserve 9/16/2014. Last taught in 2010. Will go inactive 8/24/17.

RT 393A. Leisure Service Agency Visitations: Public Recreation Agencies (1-3). Field visits, usually from two to three days in duration. Review of facilities, programs, and clientele with agency leader/supervisor/manager. May be repeated for credit under different subtitle.

RT 393M. Leisure Service Agency Visitations: Community Centers (1-3). Field visits, usually from two to three days in duration. Review of facilities, programs, and clientele with agency leader/supervisor/manager. May be repeated for credit under different subtitle.

RT 393N. Rt Vis:Destinations (1-3). Field visits, two to three days in duration. Review of facilities, programs and clientele with agency leader/supervisor/manager. May be repeated for credit under different titles. May be repeated up to 3 credits.

RT 393Q. Leisure Service Agency Visitations: Transportation (1-3). Field visits, usually from two to three days in duration. Review of facilities, programs, and clientele with agency leader/supervisor/manager. May be repeated for credit under different subtitle.

RT 398. Special Topics (1-6).

RT 405. Hospitality Catering (3). Basics of off-premise catering including menu planning, budgeting, logistics, and marketing. NUTR 405, RT 405, and RT 505 are equivalent courses; students may not receive credit for more than one.

RT 431. Recreation Administration of Retreats and Camps (3). Methods, techniques, skills, and trends in programming for longer stays at retreats, residences, and camps. Topics include socialization, education, trust-building, staffing, team-building, outdoor adventure, risk management, budgeting, equipment and facilities.

RT 452. Regional Wine Tourism (4). Wine tourism is an American growth industry. Unlike in Europe, support for wine tourism in the USA is regional. This course offers an academic and hands-on approach to regional wine tourism that will assist RT and GWS graduates. GWS 452 and RT 452 are cross-listed courses, students may not receive credit for both. Prerequisites: nine credits of upper division GWS or RT courses or permission of instructor.

RT 454. Wine Tourism Applications (4). Students conduct research on sectors of the wine tourism industry in Washington State such as wine trails, wine clubs, regional wine associations and wine festivals. The student conducts hands-on research that may be useful to these sectors. Prerequisite: GWS 452 or RT 452. GWS 454 and RT 454 are cross-listed; students may not receive credit for both.

RT 471. Tourism Planning and Sustainable Development (3). The planning process is studied in connection with the development of sustainable tourism, taking into consideration the impact of development on the economic, social, fiscal, environmental, and political fabric of communities.

RT 473. Air Travel and Tourism (3). Examines the airline industry, its components and methods of operation; the interaction with other segments of the industry. Procedures for working with the airlines. Prerequisite: RT 201.

RT 474. Lodging Operations II (3). Analysis of hotel performance and forecasting, with tools typically used in a lodging environment.

RT 479. Cruise Line Workshop (2). Students will learn the ports, ports of call, and cruise lines of the Pacific Northwest. A visitation will be made to selected cruise offices and ports. Prerequisite: RT 379. By permission.

RT 480. Tourism Administration (4). Contemporary problems and issues, basic applied research, organizational development, policy formulation, human resources, inventory, and program personnel evaluation processes. Prerequisites: FCSG 220 and HRM 381 or MGT 380, senior standing, and admission to the RT major or minor.

RT 484. Legal Liability and Risk Management (4). Aspects of personnel law, premises in liability, Americans with Disabilities, and procedures for managing risk for the recreation and tourism professional.

RT 485. Events Administration (4). This capstone course

includes a study of contemporary issues within the field of event planning and coordination, basic applied evaluation, organizational development, policy formulation, human resources, inventory, and applied program and event planning. Prerequisites: senior standing and a minimum of nine credits of upper division RT coursework or permission of instructor.

RT 486. International Travel III (3). Overview of selected Asia, Australia, and South Pacific destinations and their travel, tourism, hospitality, and recreation industries. Touristic importance including economic, political, population, geography, social systems, and cultural characteristics.

RT 487. Outdoor Recreation Issues (3). This course addresses recent and breaking issues in the outdoor recreation field. The course involves readings and discussions in both the classroom and field environments. Prerequisite: permission of instructor.

RT 488. Recreation Management (4). Contemporary issues, basic applied evaluation, organizational development, policy formulation, human resources, inventory, and program planning. Prerequisites: FCSG 220, senior standing, and admission to the recreation and tourism major or minor.

RT 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. A learning agreement is created by the student to identify and plan the directed and supervised study under the guidance of a tourism mentor. Forty hours required per credit. Prerequisites: admission to the recreation and tourism major or minor, a minimum GPA of 2.25 in the major, and permission of advisor. May be repeated for credit. Grade will either be S or U.

RT 491. Workshop (1-6).

RT 496. Individual Study (1-6).

RT 498. Special Topics (1-6).

RT 499. Seminar (1-5).

Russian Courses

RUSS 151. First-year Russian (5). Conversational approach with intensive oral-aural drill. Firm foundation in basic structural principles of the language. Courses must be taken in sequence.

RUSS 152. First-year Russian (5). Conversational approach with intensive oral-aural drill. Firm foundation in basic structural principles of the language. Prerequisite: RUSS 151. Courses must be taken in sequence.

RUSS 153. First-year Russian (5). Conversational approach with intensive oral-aural drill. Firm foundation in basic structural principles of the language. Prerequisite: RUSS 152. Courses must be taken in sequence.

RUSS 251. Second-year Russian (5). Thorough review of Russian grammar and graduated readings in Russian prose and poetry with discussions conducted in Russian. Courses must be taken in sequence.

RUSS 252. Second-year Russian (5). Thorough review of Russian grammar and graduated readings in Russian prose and poetry with discussions conducted in Russian. Prerequisite: RUSS 251. Courses must be taken in sequence.

RUSS 253. Second-year Russian (5). Thorough review of Russian grammar and graduated readings in Russian prose and poetry with discussions conducted in Russian. Prerequisite: RUSS 252. Courses must be taken in sequence.

RUSS 298. Special Topics (1-6).

RUSS 341. Intermediate Composition and Grammar (3). Prerequisite: RUSS 253. Declared Russian majors and minors only. Should be taken in sequence with RUSS 441.

RUSS 342. Intermediate Composition and Grammar (3). Prerequisite: RUSS 341. Declared Russian majors and minors only. Should be taken in sequence with RUSS 441.

RUSS 398. Special Topics (1-6).

RUSS 441. Advanced Composition and Grammar (3). Prerequisite: RUSS 342. Declared Russian majors and minors only.

RUSS 445. Topics in Russian Language (2). This course is based on a systematic and functional approach to Russian grammar; from morphology to syntax and text. Prerequisite: permission of instructor. May be repeated up to 10 credits.

RUSS 462. Russian Cinema (4). Explores the cultural and historical context of Soviet and post -Soviet film, including exchanges between art and politics, expressions of national identity, depictions of ethnicity, gender and class, and the development of cinematic institutions.

RUSS 496. Individual Study (1-6).

Science Education Courses

SCED 215. STEM Outreach Field Experience (1-2). Applied field experience in communication and teaching science, technology, engineering, and mathematics (STEM) concepts

to children. Involves planning and conduction demonstrations, lessons, and activities. Outreach outside of class time is required. Prerequisites: 2 courses with a prefix of ANTH or BIOL or CHEM or ENST or GEOG or GEOL or MATH or PHYS or SCED. May be repeated up to 4 credits.

SCED 301. Interdisciplinary Science and Engineering Inquiry (5). Interdisciplinary investigation of applied life, physical, and Earth science concepts applicable to K-8 classrooms using integrated contexts. Applied inquiry processes are used to increase student knowledge, skills, and dispositions. Six lecture/lab hours per week.

SCED 311. Science Concepts for Teachers (5). An in-depth examination for the science concepts applicable to K-12 classrooms using an individualized and inquiry-based approach. Online and community recourses are utilized to enhance existing science content knowledge and understanding.

SCED 322. Science Education in the Elementary School (4). Techniques, selection of materials and appropriate subject matter for the various grade levels. Demonstrations and student investigative activities for use in classroom science teaching. Prerequisite: current WSP/FBI fingerprint clearance, and conditional or full admission to the Teacher Certification Program.

SCED 324. Science Education in Middle and Secondary Schools I (3). Methods, techniques, and materials appropriate for teaching science in secondary schools. Curriculum, planning, and experiments for use in teaching. Prerequisites: EFC 330 and SCED 301, current WSP/FBI fingerprint clearance, and admission to the Teacher Certification Program.

SCED 325. Science Education in Middle and Secondary Schools II (3). Applied field experience for teaching science in secondary schools. Planning, instruction, and management for teaching science. Enrollment is subject to full admission to the Professional Education Program. Prerequisites: SCED 324, admission to the Teacher Certification Program, and current WSP/FBI fingerprint clearance .

SCED 354. Science, Society and the Teaching Community (3). Teacher candidates will learn the nature and context of science, compare science with other ways of knowing, describe the relationship between science and the community, gain skills in integrating community resources with the classroom. Prerequisite: current WSP/FBI fingerprint clearance, and admission to the Teacher Certification Program.

SCED 398. Special Topics (1-6).

SCED 411. Field Experience in Communicating Science to the Public (2). Applied field experience in communicating science to the public. Methods, techniques, materials, and practices for effective communication of scientific ideas, and methods. SCED 411 and SCED 511 are layered courses, students may not receive credit for both. Prerequisite: senior standing. May be repeated up to 4 credits.

SCED 422. Advanced Teaching Strategies in Elementary Science (3). Further develop knowledge and skills of elementary science teaching with a particular emphasis on the science inquiry process, assessment of student knowledge and cross-curricular integration. Prerequisite: SCED 322.

SCED 487. Teaching Middle and Secondary Science Seminar (2). Students compile knowledge, skills, and dispositions evidence and reflect on performance relative to professional standards. Students discuss current secondary science education issues, participate in program assessment, prepare for endorsement exam, and complete an electronic portfolio. Prerequisite: students must plan to teach within a year of enrolling in this course.

SCED 491. Workshop (1-6).

SCED 492. Teaching Middle School Mathematics and Science (2). Prospective teachers will learn and use the methods and materials needed to teach middle school students mathematics and science with emphasis on the use of experiments, manipulatives, problems solving, cooperative learning, and communication of understanding. Prerequisite: MATH 324 or EDEL 323 or SCED 324 or SCED 322, current WSP/FBI fingerprint clearance, and application to the Teacher Certification Program. Formerly, SCED 323, students may not receive credit for both. By permission.

SCED 495. Science Education Research (1-3). This course introduces pre-service science teachers to qualitative and quantitative methods of action research. Course requires completion of a research project of the student's design. Prerequisite: current WSP/FBI fingerprint clearance, and admission to the Teacher

Certification Program. May be repeated up to 6 credits.

SCED 496. Individual Study (1-6).

Supply Chain Management Courses

SCM 310. Supply Chain Management (5). Adoption of a supply chain orientation toward business management which emphasizes the inter-functional and inter-firm relationships that contribute to improving coordination of operations and performance of organizations that participate in various types of supply chains. Prerequisites: (BUS 221 and ECON 201 and admission to a College of Business major); OR (BUS 221 and ECON 201 and declaration of a Supply Chain Management minor or certificate); OR (admission to a College of Business Graduate Program); OR (BUS 221 and ECON 201 and admission to the Integrated Energy Management Program).

SCM 420. Lean/Six Sigma Processes (5). Development and deployment of Lean Management and Six Sigma management techniques in a manufacturing and supply chain environment. Prerequisite: BUS 221.

SCM 425. Procurement and Supply Management (5). Purchasing processes, procurement cycle analysis, research to support purchasing decisions, supplier relationship development and management, negotiations, commodity planning, costing, pricing, and value analysis related to the purchasing of products and services. Prerequisites: SCM 310 with a minimum grade of C AND admission to a College of Business Major; AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25) OR (SCM 310 with a minimum grade of C AND declaration of a Supply Chain Management minor or certificate); OR (SCM 310 with a minimum grade of C AND admission to the Integrated Energy Management Program).

SCM 435. Supply Chain Operations (5). Advanced methods and models for planning, management, and decision making involving aspects of supply chain management operations including inventory, transportation, location, purchasing, and other related analyses. Emphasizes integration and coordination of resources for productivity improvement. Prerequisites: SCM 310 with a minimum grade of C AND admission to a College of Business Major; AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25) OR (SCM 310 with a minimum grade of C AND declaration of a Supply Chain Management minor or certificate); OR (SCM 310 with a minimum grade of C AND admission to the Integrated Energy Management Program).

SCM 450. Logistics and Transportation (5). Logistics activities associated with warehousing and distribution of materials, sub-assemblies and finished good. Transportation mode and service assessment, selection, economics, policy and governmental regulation. Carrier selection and management. Prerequisite: SCM 310 with a minimum grade of C AND admission to a College of Business Major; AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25) OR (SCM 310 with a minimum grade of C AND declaration of a Supply Chain Management Minor or Certificate); OR (SCM 310 with a minimum grade of C AND admission to the Integrated Energy Management Program.

SCM 475. Global Trade and Supply Chain Management (5). Global supply chain activities emphasizing integration of transportation, inventory, warehousing, facility location, customer service, materials handling, packaging, and information. Analysis of product and service delivery and the associated trade, cultural, and legal factors and influences. Prerequisite: SCM 310 with a minimum grade of C AND admission to a College of Business Major; AND completion of the College of Business Foundation courses (ACCT 251 and ACCT 252 and BUS 221 and BUS 241 and MATH 153 or MATH 154 or

MATH 170 or MATH 172 or MATH 173 and ECON 201) with a minimum C- grade in each course and a minimum collegiate GPA of 2.25); OR (SCM 310 with a minimum grade of C AND admission to the Integrated Energy Management Program).

SCM 480. Supply Chain Strategy (5). Integration of concepts learned throughout supply chain curriculum into a combined analysis of comprehensive cases incorporating strategic and tactical decision making throughout the supply chain planning and implementation process. Prerequisites: (SCM 310 and SCM 435 with a minimum grade of C) AND (SCM 425 and SCM 475). One of SCM 425 or SCM 475 can be taken concurrently to SCM 480. Admission to a College of Business major or declaration of a Supply Chain Management minor or certificate OR admission to the Integrated Energy Management Program.

Safety Education Courses

SED 298. Special Topics (1-6).

SED 382. Driver Task Analysis (3). Introduction to traffic safety education, the highway transportation system, driver task analysis, classroom instruction techniques. Prerequisite: SED 180.

SED 398. Special Topics (1-6).

SED 481. Teaching Traffic Safety Education: Classroom and Simulation Instruction (3). Methods, materials and techniques for teaching classroom and simulation. Experience in teaching beginning drivers. Prerequisite: SED 382 and current WSP/FBI fingerprint clearance.

SED 482. Teaching Traffic Safety Education: In Car (5). Methods, materials and techniques for teaching in dual-control vehicles. Experience teaching beginning drivers. Prerequisite: SED 382 and current WSP/FBI fingerprint clearance.

SED 484. Safety Program Supervision (3). Development and management of a total school safety program. Prerequisite: SED 382.

SED 491. Workshop (1-6).

SED 496. Individual Study (1-6).

SED 498. Special Topics (1-6).

SED 499. Seminar (1-5).

Safety and Health Management Courses

SHM 101. Evolution of Workplace Safety and Health (4). This course is designed to introduce students to the origins and development of the occupational safety and health field in the American workplace through the study of historical events (human suffering resulting from occupational accidents, industrial disasters, workplace injuries and diseases) their social impacts, and the results of those experiences as expressed in economics, legal, behavioral, and ethical societal changes.

SHM 201. Introduction to Safety and Health Management (1). Overview of safety and health management profession, credentials, societies, organizations, application of math and science. Prerequisite: students must be freshmen or sophomore standing.

SHM 301. Fundamentals of Safety and Health Management (3). This course covers the fundamental aspects of safety and health, applicable standards, risk management, performance metrics, hazard recognition/controls, industrial hygiene, environmental management, fire safety, systems safety, ergonomics, hazardous materials, fleet safety, emergency management, and accident investigation. Prerequisite: admission to the safety and health management major, safety and health management minor, or occupational safety technology minor.

SHM 323. Construction Safety and Health (3). A comprehensive course that covers the safety and health regulations and practices pertaining to the construction industry. Prerequisite: CMGT 265 or SHM 301.

SHM 325. Manufacturing Safety and Health (3). A comprehensive course that covers the safety and health regulations and practices pertaining to the manufacturing/general industry. Prerequisites: SHM 301 or instructor permission or admission to technology education major or industrial technology major (BAS or BS) or technology education broad area major.

SHM 351. Incident Analysis (3). Review of accident investigation methodologies that include accident response, evidence collection, analysis techniques, developing and communicating recommendations to prevent recurrence. It includes drug/alcohol testing, claims management, return to work/rehabilitation programs, and preparation for lawsuits and deposition. Prerequisites: SHM 301 and SHM 323 or SHM 325. Co-requisite: SHM 352.

SHM 352. Systems and Design (3). It provides an overview of system safety concepts,

qualitative and quantitative system safety analysis techniques (failure mode and effect analysis, hazard and operability studies, fault tree analysis), and design for safety concepts. Prerequisites: MATH 130 and SHM 301. Co-requisite: SHM 351.

SHM 353. Risk and Insurance (4). An introduction to the concept of risk management, including: risk definition, identification, assessment and management techniques. Includes the fundamentals of various insurance related to the safety and health profession, loss control techniques, and legal foundations in safety and health management. Prerequisite: SHM 301 or admission into safety and health management major or minor.

SHM 371. Emergency Planning and Preparedness (4). It introduces students to: workplace hazards associated with natural and man-made disasters; the countermeasures to minimize its effects; required coordination between various government agencies; business continuity planning, and the role of emergency/disaster planning and preparedness in a workplace safety program. Prerequisite: SHM 301.

SHM 375. Transportation and Fleet Safety (4). Program management relating to fleet safety including transportation systems loss control management, fleet management, and driver safety training. Prerequisite: SHM 301.

SHM 377. Hazardous Materials Management (4). The management of hazardous materials, including best practices and federal regulations associated with the transportation, storage, use, and disposal of hazardous materials in the workplace. Prerequisites: SHM 351 and either CHEM 101, CHEM 111/111LAB, or CHEM 181/181LAB.

SHM 379. Facility and Building Safety (4). Program management relating to facility and building safety including basic concepts of fire safety, fire prevention, fire protection, accessibility, confined spaces, indoor air quality and ventilation, and walking-working surfaces. Prerequisite: SHM 351.

SHM 423. Advanced Construction Safety Management (4). This course will cover advanced construction safety management techniques such as contractor pre-qualification, leading and lagging indicators, design for construction safety, LEED and safety, safety in contract management, 3D technology in construction safety, safety and quality, and SCSH rating system. Prerequisite: SHM 323 or permission of instructor.

SHM 471. Fundamentals of Industrial Hygiene (4). An introduction to the basics of industrial hygiene that includes: the anticipation, evaluation, and control of workplace environmental stressors (chemical, physical, and biological) that can impact the health, comfort, or productivity of the worker. Prerequisite: SHM 351 and BIOL 201.

SHM 472. Ergonomics (3). It provides the basics of ergonomics in the work environment: musculoskeletal disorders, assessment of ergonomic risk factors, workplace design, evaluation of lifting and material handling activities, and the role of ergonomics in a comprehensive workplace safety program. Prerequisites: SHM 471.

SHM 474. Safety and Health Management Systems (4). It provides a systems-based approach to managing safety programs, with the help of major consensus standards such as ANSI/AIHA Z10, OHSAS 18001, and OSHA VPP. Prerequisite: SHM 353.

SHM 475. Management System Auditing (4). Procedures to externally monitor: auditing, data collection, safety and health management systems, assessment strategies, consulting and contracts. Prerequisites: SHM 474, either SHM 477 or IET 481, and either PSY 456 or MGT 386.

SHM 477. Environmental Management (4). It provides an overview of federal environmental legislation's (CWA, CAA, RCRA, and CERCLA) and their practical application in the work environment. The course will also introduce the ISO's environmental management system 14000 series. Prerequisites: SHM 353 and SHM 377.

SHM 480. Safety and Health Laboratory (2). It provides hands-on experience with various safety measurement instruments used in the profession. It includes training strategies using safety equipment/situations encountered in the workplace. Prerequisites: PHYS 106, SHM 471 and SHM 490. Available winter 2015.

SHM 481. Evolving Issues in Safety and Health Management (2). Presentations and case studies by practicing safety professionals on contemporary and future safety

and health management topics. Prerequisite: SHM 490.

SHM 485. Safety and Health Management Capstone (3). Students will apply the principles of safety and health management to solve real world safety issues through various real world projects. The course will help prepare the students for the transition from student life to employment as a safety and health professional. Prerequisites: SHM 490 or permission of instructor. By permission.

SHM 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. A minimum of 67 clock-hours of field experience is required for one academic credit. Prerequisites: SHM 301, and SHM 351, and SHM 352, and SHM 353, and SHM 371 or by permission. May be repeated up to 6 credits. Grade will either be S or U.

SHM 491. Workshop (1-6).

SHM 496. Individual Study (1-6).

SHM 498. Special Topics (1-6).

SHM 499. Seminar (1-5).

Science Honors Program Courses

SHP 301. Science Honors Junior Seminar: Elements of Scientific Research (2). The process of science from a multi-disciplinary perspective, including the historical development of scientific methods and reasoning, effective experimental design, and the interpretation of measurements.

SHP 401. Science Honors Capstone Seminar (2). Skills and techniques for communicating the results of scientific research. Students prepare the final draft of their Science Honors thesis as part of the coursework.

SHP 497. Science Honors Thesis (1). Completion of Science Honors thesis. Strategies for effective oral presentation of scientific work will also be covered. Students must present results of Science Honors project at SOURCE. Prerequisites: SHP 401 and admission to the Science Honors Program. Grade will either be S or U.

Sociology Courses

SOC 101. Social Problems (5). An introduction to the study of contemporary issues such as poverty, military policies, families, crime, aging, racial, ethnic conflict, and the environment. SB-Perspectives on Cultures and Experiences of U.S. (W).

SOC 107. Principles of Sociology (5). An introduction to the basic concepts and theories of sociology with an emphasis on the group aspects of human behavior. SB-Found Human Adaptations (W).

SOC 291. Workshop (1-6).

SOC 296. Individual Study (1-6).

SOC 299. Seminar (1-5).

SOC 301. Introduction and History of Social Service Agencies (5). Introduction to the fields of social welfare, health services and corrections; organization and function of agencies.

SOC 305. American Society (5). Introduction to the social structure and processes of American society; emphasis on institutions such as government, family, schools, and religion, and processes such as conflict, change, stratification, mobility, and communication. Prerequisite: sophomore standing or above. SB-Perspectives on Cultures and Experiences of U.S. (W).

SOC 307. Individual and Society (5). An analysis of the relationship between social structure and the individual.

SOC 310. Social Service Methods and Casework (5). Casework interviewing techniques and skills, traditional and contemporary methods, emphasis upon developing a personal casework style. Prerequisite: SOC 301.

SOC 320. Death and Dying (5). An analysis of social attitudes, practices, and institutions associated with death and dying in American society.

SOC 325. Aging (5). Problems and advantages of growing old in society; post-parental families, retirement, the economics of pensions, importance of interaction in old age, residential facilities, geriatric medicine, and dying.

SOC 326. Demography of Contemporary World Populations (5). Demographic analysis, fertility and the birth control movement, mortality and life expectancy, and migration. Involves use of computers.

SOC 327. Sociology of Health (5). The social causes of disease and illness behavior, organization of medical care and comparative health systems.

SOC 331. Sociology of Sport (5). Sports and games as social phenomena.

SOC 338. Political Sociology (5). Major theories of power in society. Analysis of the political/economic structure of society as it determines the differential access to social power by different social groups.

SOC 343. Child Abuse (5). An analysis of the causes, consequences of and prospects for dealing with the phenomena of child abuse and neglect in American society.

SOC 344. Juvenile Delinquency (5). A study of social factors causing delinquency in youth; major theories, analysis of treatment and control.

SOC 345. Deviance (5). A survey of approaches to the field of deviance with emphasis on contemporary work and focus on the problematics of the field.

SOC 346. Criminology (5). A study of the adult criminal, criminal behavior, and criminality in human societies.

SOC 348. Women and Crime (5). This course will critically assess the current theoretical and empirical literature on female criminality and social control.

SOC 349. Law and Society (5). Law is studied through the major sociological perspectives by examining law and its relations with the economy, policy, family, religion, socioeconomic production, social class, gender, and race and ethnicity. Prerequisite: SOC 107.

SOC 350. Social Theory I (5). An introduction to social theory through study of early social thinkers, emphasizing the works of Durkheim, Marx, and Weber. Prerequisites: SOC 107 and 10 units of sociology 300-and-above level courses.

SOC 351. Sociology of Work (5). An historical view of the impact of technology on society and social change. Importance of work as an institution. How work relates to the other social institutions, to culture, and to the development of personality.

SOC 352. Punishment and Corrections (5). Origin, maintenance, structure, and function of institutions of punishment and correction with particular emphasis on American society; problems of change in punishment and corrections.

SOC 354. Minority Experience (5). Explanations will be identified for institutional racism common to the history and character of American minorities. SOC 354 and ETS 354 are cross-listed courses; students may not receive credit for both.

SOC 356. Sociology of Gender (5). A review and analysis of the development, maintenance, and consequences of masculine and feminine social roles.

SOC 357. Sociology of Families (5). Theory and research about familial interaction and society.

SOC 358. Sociology of Sexualities (5). Exploration of how sexualities are socially constructed and controlled. This course we use a sociological lens to examine how sexualities directly and indirectly shape our daily lives, adopting both a life-course and cross-cultural perspectives to understand the fluidity of sexuality.

SOC 359. U.S. Feminist Movements (5). This course analyzes the structure and dynamics of U.S. social movements based on gender, as well as the participation of women in other social movements, and the changing status of women in American society. Prerequisite: SOC 107.

SOC 362. Social Movements (5). Causes, organizational problems, consequences of revolutions, and political, religious and social movements.

SOC 363. Methods of Social Research (5). Principles and applications of social research methods. Prerequisites: SOC 107 and 5 units of sociology 300+ level courses or permission from the instructor.

SOC 364. Data Analysis in Sociology (5). Prerequisite: SOC 363.

SOC 365. Minority Groups (5). Study of the social formation of minority groups in American society, their historical development, current conditions, and issues.

SOC 366. Sociology of American Indians (5). This course presents a sociological approach to Native American society. Specifically, it explores social institutions in Indian Country including political, economic, family, religious, and educational systems. Understanding the American Indian experience in relation to broader society is emphasized.

SOC 367. Sociology of Religion (5). The social organization of religious experience in small and large societies and the relationship of religious beliefs to human life.

SOC 369. Mass Media and Society (4). Relationship of the mass media to social institutions; including philosophy, responsibilities, regulations, and criticism. Variable topic, may be repeated for up to 8 credits under a different title. COM 369 and SOC 369 are cross-listed courses; students may not receive credit for both. May be repeated for credit.

SOC 370. Social Change (5). Social processes, institutional development and revolutions.

SOC 371. Globalization (5). Examines globalization and its impact on social institutions, social structures, cultures, and social relationships within and

between different societies. Prerequisite: SOC 107.

SOC 375. Sociology of Conflict (5). Major theories of conflict in society. Applications of theories to contemporary United States. Investigation of major factors related to societal power and conflict.

SOC 376. Sociology of the Military and Veterans in U.S. Society (5). Sociology of the military as a societal institution, active duty military personnel, and veterans. The course surveys the structures and societal impacts of military institutions, the demographic and social patterns of military life, and the transition to civilian life.

SOC 380. Social Ecology (5). The structure and development of human communities as they interact with environmental conditions.

SOC 382. Sociology of the Future (5). A sociological analysis of predictions of the future. Principal questions will revolve around the effects of technology on social structure and the individual.

SOC 386. Seminar on Racism (5). An advanced level of study examining the nature and dynamics of social forces in American society that produce the phenomena of racism. The changing forms of racism that occur historically at the intersection of class and gender oppression.

SOC 398. Special Topics (1-6).

SOC 399. Seminar (1-5).

SOC 415. Urban Sociology (5). Growth, structure, and functions of the city; their relationships to surrounding and rural areas, urban ecological patterns, planning, and the problems of urban living. Prerequisites: SOC 107 and 10 units of sociology 300-and-above level courses.

SOC 425. Sociology of Education (5). Impact of culture on schools. Examination of contemporary social trends and relationships among church, school, and government; contributions of sociology to the area of education in its broadest sense.

SOC 442. Social Welfare Policy (5). Review of U.S. social welfare policy, emphasis on 20th century social policies influencing nature of welfare state, and delivery of social services.

SOC 445. Social Inequality (5). The distribution of wealth, power, and prestige in society. Prerequisite: SOC 107.

SOC 446. Sociology of Immigration (5). This course will serve sociology and ethnic studies students by covering the topic of immigration, it's impact on the people immigrating as well as the citizens of the country they are immigrating to. ETS 446 and SOC 446 are cross-listed; students may not receive credit for both.

SOC 447. White-collar and Organization Crime (5). This course explores crimes by and against social organizations. Crimes by the organization include illegal behavior by corporations, governments, and crime syndicates. Crimes against the organization include illegal acts by trusted professionals. Prerequisite: SOC 107.

SOC 449. Contemporary Native American Cultures and Issues (4). Analysis of contemporary Native American cultures and issues, including tribal sovereignty, resource management, education, religion, economic, and health status, and cultural continuity, and adaptation. SOC 449 and ANTH 449 are cross-listed courses; students may not receive credit for both. Prerequisites: either ANTH 341, ANTH 347, SOC 366, AIS 103, or permission of instructor.

SOC 459. Organizations (5). Theory and research on the structure and development of organizations.

SOC 460. Community Structure and Organization (5). Community formation from inner-city to rural hamlet. Changes in community institutions and organizational life related to industrialization, politics, social stratification, and ethnicity. Students will conduct field research on specific community functions and social structures. Prerequisites: SOC 107 and 10 units of sociology 300-and-above level courses.

SOC 489. Senior Seminar (1). A senior capstone course. Portfolio review, career planning, and program evaluation activities. Prerequisite: senior standing and admission to the sociology major or social services major.

SOC 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prerequisite: prior approval required. May be repeated for credit. Grade will either be S or U.

SOC 491. Workshop (1-6).

SOC 492. Sociology Teaching Experience (1-5). Experience in the classroom and/or laboratory teaching. Prerequisites: senior standing and admission to the sociology major or permission

from the instructor. By permission. May be repeated up to 10 credits.

SOC 494. Research Practicum (1-5). Supervised experience in qualitative research. May be repeated up to 10 credits.

SOC 495. Sociological Research (1-15). Individual research project. Prerequisites: SOC 350, SOC 363, and SOC 364. May be repeated up to 15 credits.

SOC 496. Individual Study (1-6).

SOC 497. Honors Thesis (1-12). By permission.

SOC 498. Special Topics (1-6).

SOC 499. Seminar (1-5).

Spanish Courses

SPAN 151. First-year Spanish (5). Develop elementary skills in listening, speaking, reading, and writing. For students with the equivalent of fewer than two years high school Spanish. Courses must be taken in sequence.

SPAN 152. First-year Spanish (5). Develop elementary skills in listening, speaking, reading and writing. For students with the equivalent of fewer than two years high school Spanish. Prerequisite: SPAN 151, or by placement exam. Courses must be taken in sequence.

SPAN 153. First-year Spanish (5). Develop elementary skills in listening, speaking, reading, and writing. For students with the equivalent of fewer than two years high school Spanish. Courses must be taken in sequence. Prerequisite: SPAN 152, or by placement exam.

SPAN 181. Intensive Review of First-year Spanish (5). Intensive review of first-year Spanish for students with the equivalent of two years of high school Spanish who wish to continue with second-year Spanish. Prerequisite: either at least two years of high school Spanish, SPAN 151, or SPAN 152.

SPAN 251. Second-year Spanish (5). Develop intermediate skills in listening, speaking, reading, and writing. Courses must be taken in sequence. Prerequisites: SPAN 153, or by placement exam.

SPAN 252. Second-year Spanish (5). Develop intermediate skills in listening, speaking, reading, and writing. Courses must be taken in sequence. Prerequisite: SPAN 251, or by placement exam.

SPAN 253. Second-year Spanish (5). Develop intermediate skills in listening, speaking, reading, and writing. Courses must be taken in sequence. Prerequisite: SPAN 252, or by placement exam.

SPAN 261. Spanish for Heritage Speakers I (5). An introduction to academic Spanish for heritage speakers. This course is the first in a three quarter sequence that is designed to prepare heritage speakers of Spanish for more advanced study. Areas of focus will include grammar terminology, spelling, accentuation, ready and writing. Advisor approval or Spanish placement test results. Prerequisites: SPAN 153, or by placement exam.

SPAN 262. Spanish for Heritage Speakers II (5). An introduction to academic Spanish for Heritage Speakers. This course is the second in a three quarter sequence that is designed to prepare Heritage Speakers of Spanish for more advanced study. Areas of focus will include grammar terminology, spelling, accentuation, reading and writing. Advisor approval or Spanish Placement Test results needed. Prerequisites: SPAN 261, or by placement exam.

SPAN 263. Spanish for Heritage Speakers III (5). An introduction to academic Spanish for heritage speakers. This course is the third in a three quarter sequence that is designed to prepare heritage speakers of Spanish for more advanced study. Areas of focus will include grammar terminology, spelling, accentuation, reading and writing. Advisor approval or Spanish placement test results. Prerequisites: SPAN 262, or by placement exam.

SPAN 298. Special Topics (1-6).

SPAN 301. Introduction to Spanish and Latin American Literature (4). This transitional course will prepare students for advanced literature courses by introducing the tools for analysis and critique of literary works in the various genres. Lectures, readings, and discussions will be conducted in Spanish. Prerequisites: SPAN 341 or SPAN 345. Declared Spanish majors and minors only.

SPAN 310. Hispanic Civilizations and Cultures (4). This course focuses on the study of major historical and cultural events that have shaped Spanish-speaking societies. Lectures, readings, and discussions conducted in Spanish. Prerequisites: SPAN 341 or SPAN 345, or by permission.

SPAN 341. Spanish Composition and Grammar I (4). Development of writing skills through the practice of grammar, vocabulary, and rhetorical devices. SPAN 341 and SPAN 345 are equivalent courses; students may not receive credit for both.

Prerequisite: SPAN 253, or by placement exam. Declared Spanish majors and minors only.

SPAN 342. Spanish Composition and Grammar II (4). Further development of writing skills through the practice of grammar, vocabulary, and rhetorical devices. SPAN 342 and SPAN 346 are equivalent courses; students may not receive credit for both. Prerequisite: SPAN 341.

SPAN 343. Spanish Conversation (4). Development of speaking and listening skills through the practice of grammar, vocabulary, and communicative strategies. Prerequisite: SPAN 253.

SPAN 345. Composition and Grammar for Heritage Speakers I (4). Grammar, composition and conversation for academic purposes for heritage speakers of Spanish. SPAN 341 and SPAN 345 are equivalent courses; students may not receive credit for both. Prerequisites: SPAN 263, or by placement exam. Declared Spanish majors and minors only.

SPAN 346. Composition and Grammar for Heritage Speakers II (4). Further development of grammar, composition, and conversation for academic purposes for heritage speakers of Spanish. SPAN 342 and SPAN 346 are equivalent courses; students may not receive credit for both. Prerequisite: SPAN 345.

SPAN 380. Contemporary Hispanic Literature and Cultures (4). This course examines contemporary Hispanic poetry, short story, drama and film. Lectures conducted in Spanish; most readings in Spanish. This course is an elective for Spanish majors, minors and Latino and Latin American Studies minors. Prerequisites: SPAN 341 or SPAN 345; and SPAN 301, or by permission of the instructor. May be repeated up to 12 credits.

SPAN 381. Hispanic and U.S. Latino Literatures and Cultures (4). This course examines Spanish American and U.S. Latino poetry, short story, drama, film, a novel, and essays. Lectures and discussions conducted in Spanish; most readings are in Spanish. Prerequisites: SPAN 341 or SPAN 345, and SPAN 301, or by permission.

SPAN 385. Spanish Phonetics (4). Analysis of the Spanish sound system. Students will learn to describe, recognize, and produce the sounds of standard Latin American Spanish. Other dialects will also be examined. Declared Spanish majors and minors only. Prerequisite: SPAN 253 or SPAN 263 or by placement exam.

SPAN 398. Special Topics (1-6).

SPAN 442. Spanish Translation and Interpretation (4). This course illustrates the specific semantic and syntactic aspects of Spanish in translation by examining a variety of texts and materials. Lectures, readings, and discussions in both English and Spanish. Prerequisites: SPAN 341 or SPAN 345. May be repeated for credit.

SPAN 443. Advanced Spanish Translation (4). This course acquaints the student with the various theories of translation, and the responsibilities involved in the act of translating. It also offers ample practice with English to Spanish translation, and Spanish to English translation in a variety of fields. Prerequisite: SPAN 442.

SPAN 445. Spanish Medieval Literature (4). This course analyzes the most representative works, literary genres, and movements of the Spanish Middle Ages. Lectures, readings, and discussions conducted in Spanish. Prerequisite: SPAN 301.

SPAN 446. Hispanic Cinema (4). Focuses on the analysis of films that represent different aesthetics and genres of Spanish, Latin American, and U.S. Latino film making. The course is offered in English to students of any discipline, and is a literature elective for Spanish majors and minors. Film critiques will be written in Spanish for Spanish majors and minors.

SPAN 447. Framing Latin American Cinema (4). The course taught online analyzes films that represent the convergent roads of different aesthetics and genres of Latin American film making: Mexico, The Caribbean, Central America and South America. The course is offered in English to students of any discipline, and it is a literature elective for Spanish majors and minors Latino, and Latin American minors.

SPAN 448. Framing South American Cinema (4). Course taught online to analyze films that represent the convergent roads of different aesthetics and genres of South American film making. The course is designed to provide students with knowledge of the rich and complex South American civilization and cultures. The course is offered in English to students of any discipline, and it is a literature elective for Spanish majors and minors, and

Latino and Latin American minors.

SPAN 449. Spanish Golden Age Literature (4). Novel, theatre, and poetry in 16th- and 17th-century Spain, including works by Cervantes, Lope de Vega, Calderon, or Quevedo. Prerequisite: SPAN 301.

SPAN 456. The Spanish and Latin American Short Story (4). Study of the short-story genre represented in works by major modern and contemporary Spanish and Latin American writers. Lectures, readings, and discussions conducted in Spanish. Prerequisite: SPAN 301.

SPAN 457. Latin American Theater (4). Study of dramatic and performance theories and of theatrical pieces from Latin American playwrights. Lectures, readings, and discussions conducted in Spanish. Prerequisite: SPAN 301. Put on reserve 9/16/2014. Last taught in 2009. Will go inactive 8/24/17.

SPAN 459. Latin American Poetry (4). Study of literary conventions of poetry and the major contemporary Latin American poets. Prerequisite: SPAN 301. Lectures, readings, and discussions conducted in Spanish.

SPAN 466. Spanish Poetry (4). Study of poetic theories and of main developments in the poetry of Spain. Prerequisite: SPAN 301.

SPAN 467. Spanish and Latin American Literature and Film (4). Literary criticism of major contemporary Spanish and Latin American fiction and its reflection in film. Prerequisite: SPAN 301. Lectures, readings, and discussions conducted in Spanish. Put on reserve 9/16/2014. Last taught in 2011. Will go inactive 8/24/17.

SPAN 491. Workshop (1-6).

SPAN 496. Individual Study (1-6).

SPAN 498. Special Topics (1-6).

Science Talent Expansion Program Courses

STEP 101. Scientific Perspectives and Experimentation I (2). First course in three-quarter freshman science series. Students will take an interdisciplinary approach toward scientific research centered on a single theme. Students must take STEP 101, 102, and 103 to receive credit for Applications of Natural Science breadth area. Prerequisite: enrollment in the STEP Program. NS-Application Natural Science.

STEP 102. Scientific Perspectives and Experimentation II (2). Second course in three-quarter freshman science series. Students gain practical introduction to the scientific process through designing and conducting experimental, computer, laboratory and/or field investigations. Students must take STEP 101, 102, and 103 to receive credit for Applications of Natural Science breadth area. Prerequisites: STEP 101 and enrollment in STEP Program. NS-Application Natural Science.

STEP 103. Scientific Perspectives and Experimentation III (1). Third course in three-quarter freshman science series. Topical survey of active research efforts by faculty and students in science, technology and mathematics fields at CWU. Students must take STEP 101, 102, and 103 to receive credit for Applications of Natural Science breadth area. Prerequisites: STEP 102 and enrollment in the STEP Program. NS-Application Natural Science (W).

STEP 301. Bridge Seminar I: Survey of Research Opportunities (1). First course in two-quarter sequence for incoming transfer students. Students are introduced to undergraduate research opportunities at CWU and learn to write an effective research proposal. Prerequisite: student must be enrolled in STEP Program. By permission.

STEP 302. Bridge Seminar II (2). Second course in a two-quarter sequence for incoming transfer students. Students develop research and critical thinking skills through careful reading of scientific publications and hands-on experiments. Prerequisites: STEP 301, and admission to the STEP program, or by permission of instructor. By permission.

Theatre Art Courses

TH 101. Appreciation of Theatre and Film (4). Viewing, discussing, and comparing film and live theatre performance. AH-Aesthetic Experience.

TH 107. Introduction to Theatre (4). Overview of the basic elements of the theatre arts and dramatic structure, and the environment for production of plays. Attendance at assigned outside events is required. AH-Aesthetic Experience (W).

TH 140. Introduction to Theatre Design (3). An introduction to the basic elements of design used to create unified scenery, costume, lighting, makeup, and sound designs with an emphasis in research and conceptualization.

TH 143. Private Voice Lessons (1-4). Individual vocal instruction in the musical theatre style. By

permission. May be repeated for credit. Grade will either be S or U.

TH 144. Foundations of Acting (3). Introduction to the theory and practice of acting craft, development of the actor's tools, basic acting techniques, including pantomime, vocal conditioning, improvisation, and scene study.

TH 148. Actor Conditioning – Monologue (1). Theory, technique, and practice of the acting craft with emphasis on choosing, analyzing, researching, and preparing monologues for audition and performance. Prerequisite: TH 244. May be repeated for credit. Grade will either be S or U.

TH 161. Intro to Technology 1: Costumes and Makeup (3). Basic introduction to costume construction and makeup application for the theatre. Emphasis on terminology, safe operating procedures and equipment use, basic techniques, and material identification. Required Lab. Prerequisite: admission to the BFA musical theatre or BFA performance specializations.

TH 162. Intro to Technology 2: Scenery and Lighting (3). Basic introduction to scenic construction and lighting systems common to the theatre. Emphasis on terminology, safe operating procedures and equipment use, basic techniques, and material identification. Required Lab. Prerequisite: admission to the BFA musical theatre or BFA performance specializations.

TH 166. Theory of Play Production (3). Theories of production are explored through basic script analysis and the examination of protocol and procedures in the resident production company and a variety of world theatre models.

TH 201. Dance Production Application (1-3). Skills learned in the classroom are applied to dance production work for public presentation. Prerequisite: admission to the theatre major. May be repeated up to 12 credits.

TH 202. Performance Studio (1-3). Skills learned in the classroom are applied to performance in studio work, which may be presented publicly. May be repeated up to 24 credits.

TH 215. Music Fundamentals for Musical Theatre I (3). Basic music terminology, fundamentals of notation, scales, and the study of basic rhythms. Ear training, interval singing, and melodic dictation. Prerequisite: 1 credit of MUS 154A.

TH 216. Music Fundamentals for Musical Theatre II (3). Study of major and minor scales, major and minor key signatures, major and perfect intervals, and continued study of rhythms. Interval and melodic singing, melodic dictation, and beginning of singing in counterpoint. Prerequisites: 2 credits of MUS 154A and TH 215.

TH 217. Music Fundamentals for Musical Theatre III (3). Study of diminished, half diminished, and augmented intervals and scales, basic conducting patterns, exploration of lead sheets, and modern chord notation. Continuation of interval, melodic, and counterpoint singing, as well as sight singing and the reading of rhythmic patterns. Prerequisites: 3 credits of MUS 154A and TH 216.

TH 243. Singing for Actors (1). An introduction to the mechanics of singing as applied to presentations of theatrical show music. May be repeated for up to 9 credits.

TH 244. Basic Acting I (3). Theory and practice of essentials of acting craft-development of the actor's tools, the voice, body, and imagination. Introduction to Satnislavski method, with viewpoints and composition.

TH 245. Basic Acting II (3). Theory and practic of essential acting craft–development of the actor's tools, the voice, body, and imagination. Physical theatre techniques, improvisation, scene study. Prerequisite: TH 244.

TH 246. Basic Acting III (3). Theory and practice of essential acting craft–development of the actor's tools, the voice, body, and imagination. Concentration on physical theatre techniques, scene study, and text analysis. Prerequisite: TH 245.

TH 248. Vocal Conditioning for the Actor (1). Study and application of the techniques used in the development of the actor's foundational vocal conditioning. Co-requisite: TH 245.

TH 249. Vocal Conditioning for the Actor II (1). Study and application of the techniques used in the development of the actor's foundational vocal shaping. Co-requisite: TH 246.

TH 252. Stage Dance (2). Study and directed practice of individual and group dance in modern musicals and operas. May be repeated up to 8 credits.

TH 256. Sound and Mixing - Aesthetics and Essentials (3). Students will gain an understanding of how to mix on a digital console. Audio/sound aesthetics and fundamentals

will also be the focus of this course. FVS 256 and TH 256 are cross-listed; students may not receive credit for both.

TH 261. Costume Technology (3). Basic theory and study of costume construction and fabrication for the theatre. Emphasis on terminology, safe operating procedures of sewing machinery, basic stitches, and fabric identification. Lab required. Prerequisite: admission to the theatre BA or BFA; or apparel design minor.

TH 266. Theatre Drafting (3). Supervised study and practice of drafting theatrical sets, properties, and light plots. Prerequisite: admission to the theatre major.

TH 267. Scene Technology (3). Scene construction, rigging, painting, and shifting techniques. Lab required. Prerequisite: admission to the theatre BA or BFA.

TH 268. Lighting Technology (3). Applied study of lighting instruments, lighting accessories, hanging, cabling, focusing, lighting control systems, safety, and maintenance. Lab required. Prerequisite: admission to the theatre arts BA or BFA, or film and video studies major.

TH 270. Stage Makeup (3). The history, functions, materials, and techniques of makeup as a theatrical art. Prerequisite: TH 166. Production application required.

TH 290. Cooperative Education Portfolio (1-6). A collection of individualized contracted field experiences with the industry. This contractual arrangement involves a student learning plan, with a cooperating employer, under faculty coordination, that must be completed prior to the first experience to be included in the portfolio. By permission. May be repeated up to 6 credits. Grade will either be S or U.

TH 294. International Theatre Experience Preparation (1). Preparation and planning toward a significant international experience where students explore culture, art and norms and society. Attention to itinerary, visa and passport requirements. Travel fees will be assessed as part of this course in anticipation of the overall cost of the international travel. OISP fee applies. May be repeated for credit up to 5 credits as topic changes. Grade will be S or U.

TH 295. Theatre Education Portfolio (1). Live Text portfolio will be employed to build professional portfolios, documenting theatre training, and compliance with state certification and NCATE standards. May be repeated for credit. Grade will either be S or U.

TH 298. Special Topics (1-6).

TH 300. Rehearsal and Performance (1-2). Open only to non-majors participating in theatre arts productions. Does not satisfy any requirement for the major. Course meets with appropriate application course and instructor. May be repeated for credit.

TH 301. Production Application (3). Skills learned in the classroom are applied to production work for public presentation. Different sections will be offered for participants in each area of the production team. Prerequisite: admitted to the theatre arts major or dance performance minor. May be repeated up to 18 credits.

TH 302. Performance Application (3). Skills learned in the classroom are applied to performance work on productions for public presentation. Prerequisite: admission to the theatre major. May be repeated up to 18 credits.

TH 303. Management Application (3). Skills learned in the classroom are applied to stage management work on productions for public presentation. Prerequisite: admission to the theatre major. May be repeated up to 18 credits.

TH 313. Writing for Children's Theatre (3). Prerequisites: TH 166, or admission to the English writing specialization.

TH 329. Directing I (3). Participation in and direction of fundamentals of applied directing. Prerequisites: TH 144 or TH 244 or instructor permission.

TH 330. Introduction to Playwriting (4). Fundamentals and practice in dramatic writing techniques and styles. Prerequisites: TH 107 and TH 166, or admission to the English writing specialization. May be repeated up to 8 credits.

TH 332. New Play Production (2). An exploration of the problems and techniques specific to the production of original, student-written plays. Participation in public performances of new plays, including weekend and evening activities is required. May be repeated for credit.

TH 333. Stage Combat Fundamentals (3). The study and practice of basic skills, techniques, and safety factors used in staging and performing violence for the stage and media. Focus is on falls, rolls, and unarmed combat. May include use of one historical

weapon. Prerequisites: TH 144 or TH 244.

TH 335. Movement for the Actor (3). The study and practice of various movement disciplines, such as Laban, Suziki, Feldenkrais, Chekhov, Lessac, or Alexander, to enhance flexibility and expressiveness of the actor's body in a variety of performance applications. Prerequisites: TH 144 or TH 244. May be repeated if content or title changes for up to 9 credits.

TH 342. Dialects for Stage and Screen (3). Dialect acquisition for use in stage and on-camera work. Dialects studied will include a range of material from British Standard, Cockney, New York, Irish, Scottish, and Southern, and will feature the implementation of phonetics and a proficient use of the vocal instrument. May be repeated if title changes. Prerequisite: TH 246. May be repeated up to 6 credits if topic changes.

TH 343. Singing for Actors II (1). An introduction to the mechanics of singing as applied to presentations of theatrical show music. Prerequisite: TH 243. May be repeated up to 9 credits.

TH 344. Intermediate Acting I (3). Character interpretation and scene study through script analysis and scene work. Prerequisite: TH 246. TH 344 and TH 345 to be taken in sequence.

TH 345. Intermediate Acting II (3). Character interpretation and scene study through script analysis and scene work. Courses are to be taken in sequence. Prerequisite: TH 344.

TH 350. Theatre and Arts Management I (4). Policy and practice of theatre and arts management including budgets, contracts, purchasing, staffing, and organizational development.

TH 351. Theatre and Arts Management II (4). Policy and practice of theatre and arts management including marketing, box office, purchasing, staffing, and audience development.

TH 352. Stage Dance II (3). Advanced study and directed practice of individual and group dance in modern musicals. Prerequisites: TH 252 and permission of the instructor. May be repeated up to 12 credits.

TH 353. Stage Properties (3). Research, methodology, design, and construction of stage props and furniture. Prerequisite: TH 267.

TH 354. Scene Painting (3). Study in the methodology and skills of scene painting, materials, and techniques.

TH 356. Stage Sound (3). Engineering and operation of the technologies for theatrical sound. Prerequisite: TH 166.

TH 357. Entertainment Rigging (3). Course is an introduction to the materials, equipment, methods and safety for entertainment rigging. Students will be exposed to a variety of rigging systems and their safe operation and maintenance. Prerequisite: TH 268 or permission of instructor.

TH 360. Stage Management (3). Techniques, communication methodology, resources, practices, and technical training for the stage manager. Prerequisite: TH 166.

TH 361. Stage Costuming (3). Further study of construction and fabrication for the stage. Emphasis on patterning, dyeing, and distressing costumes for the stage. Prerequisite: TH 261.

TH 362. Costume Crafts (3). Advanced study in fabric manipulation and the construction of costume crafts, and properties. Special focus on advanced dying techniques, fabric painting, distressing, millinery, jewelry, manipulation, and body padding. Prerequisite: TH 261.

TH 363. Theatre History I (4). From origins to the Elizabethan Era. Prerequisite: TH 107.

TH 364. Theatre History II (4). From the Elizabethan period to Ibsen. Prerequisite: TH 107.

TH 365. Theatre History III (4). From Ibsen to the present. Prerequisite: TH 107.

TH 366. Theatre Rendering (3). Exploration and application of various rendering styles and media for theatrical applications.

TH 367. Stage Scenery (3). Introduction to technical direction and auditorium management. Advanced stage scenery construction techniques are studied and applied. Prerequisite: TH 267.

TH 368. Stage Lighting (3). Study of electricity, color, distribution, drafting, lighting paperwork, and light programming. Prerequisites: TH 266 and TH 268.

TH 374. Introduction to Acting for the Camera (3). Introduction to the study and technique of acting for the camera. Topics may include the following; feature film, motion capture for animation and media, scenes and monologues on camera. Prerequisite: TH 344.

TH 375. Asian Drama (4). Survey of the traditional theatre, puppetry, and dance-drama forms of Asia. Historical development. Cultural and aesthetic aspects of the text in performance. Influence on

contemporary world theatre. Prerequisite: sophomore standing or above. By permission. AH-Aesthetic Experience (W)

TH 377. Staging Gender (4). Concepts of gender and their historical development are examined through analysis of dramatic literature, films, and contemporary performance culture. Prerequisite: sophomore standing or above.

TH 380. Studies in Drama (5). Intensive study of representative examples of drama. Prerequisites: ENG 302 and ENG 303, or admission to the theatre arts major. May be repeated up to 15 credits.

TH 382. Diverse Experiences in American Drama (4). Study of contemporary American multi-cultural plays by people of color and other ethnic groups. Prerequisite: ENG 101. AH-Aesthetic Experience (W).

TH 384. Puppetry (3). Survey of puppetry principles and their application to the classroom, recreational facility, and theatre. Production techniques. Analysis of literature adaptable to theatre form. Prerequisite: TH 166.

TH 393. Theatre Laboratory (1). Practical experience in all aspects of theatre production to better prepare for career opportunities. May be repeated up to 3 credits.

TH 398. Special Topics (1-6).

TH 400. Rehearsal and Performance (1-2). Open only to non-majors participating in theatre arts productions. Does not satisfy any requirement for the major. Course meets with appropriate application course and instructor. May be repeated for credit.

TH 401. Production Application (3). Skills learned in the classroom are applied to production work for public presentation. Prerequisite: admission to the theatre major. May be repeated up to 18 credits.

TH 402. Performance Application (3). Skills learned in the classroom are applied to acting work on productions for public presentation. Prerequisite: admission to the theatre major. May be repeated up to 18 credits.

TH 403. Management Application (3). Skills learned in the classroom are applied to stage management work on productions for public presentation. Prerequisite: admission to the theatre major. May be repeated up to 18 credits.

TH 415. Musical Theatre History and Literature I (3). The history of musical theatre from the inception of this uniquely American art form through the innovations of Oklahoma! The contributions of major lyricists, composers, directors, designers, performers, and choreographers, and an analysis of the works themselves, exploring the sociological relationships, ramifications, and cultural influences of the art form. Prerequisite: TH 365.

TH 416. Musical Theatre History and Literature II (3). The history of musical theatre from Oklahoma! to the inception of the rock musicals in the 1960s. The contributions of major lyricists, composers, directors, designers, performers, and choreographers, and an analysis of the works themselves, exploring the sociological relationships, ramifications, and cultural influences of the art form. Prerequisite: TH 415.

TH 417. Musical Theatre History and Literature III (3). The history of musical theatre from the rock musicals of the 1960s to the present. The contributions of major lyricists, composers, directors, designers, performers, and choreographers, and an analysis of the works themselves, exploring the sociological relationships, ramifications, and cultural influences of the art form.

TH 429. Directing II (3). Script study emphasizing the specific artistic and logistical preparation involved in directing a play. Culminates in directing selected scenes. Prerequisite: TH 329.

TH 433. Advanced Stage Combat (3). The study and practice of advanced skills, techniques, and safety factors used in staging and performing armed combat for the stage and media. Focus is on historical weaponry such as a single sword, rapier, and dagger, broadsword, and small sword. Prerequisite: TH 333. May be repeated for credit.

TH 435. Advanced Movement for the Actor (3). Advanced study in movement disciplines such as; Alexander, Fekdenkrais, Suzuki, or Rasaboxes. Prerequisite: TH 335. May be repeated up to 6 credits. Repeatable if course content changes.

TH 440. Advance Design Problems (3). Conceptualization, design, and application of advanced design techniques and theories through paper project or executed on mainstage productions in one of four areas: scenery, lighting, sound, or costumes. May be repeated for credit.

TH 444. Acting Styles (4). Performance skills applied to heightened texts and stylized comedy including Shakespeare, Wilde, Coward, and other major

playwrights. Prerequisite: TH 344. May be repeated up to 8 credits if content differs.

TH 445. Audition Techniques for the Stage (3). Exploration and practice of advanced techniques and materials required for professional stage auditions. Prerequisite: TH 345.

TH 446. Audition Techniques for the Camera (3). Exploration and practice of advanced techniques for professional camera auditions. Emphasis on auditions for commercials and preparing cold readings for on-camera auditions. Prerequisite: TH 445.

TH 452. History of Fashion (4). Historical changes in fashion and costume design from Egyptian period through eastern civilization to present. Social, political, and religious influences on fashions. FCSA 452 and TH 452 are cross-listed courses; students may not receive credit for both.

TH 456. Sound Design (4). Basic principles of sound design for theatre. The role of the sound designer in planning and developing a design with attention to research, cueing, the creation of media in supporting the production concept. Prerequisite: TH 140 or permission of instructor .

TH 460. Production Management (4). This course explores production management theory and practice, covering production estimating and budgeting, scheduling, and working with entertainment union contracts. Students will develop organization and communication skills specific to the duties of the production manager. Prerequisites: TH 166 and TH 360.

TH 461. Costume Design (4). Basic principles of design related to theatrical costumes. The role of the costume designer in planning and developing a sketch from the initial reading of the script through production, research, production meetings, and rendering technique. Prerequisites: either TH 361, both FCSA 388 and TH 366, or admission to the apparel design minor.

TH 464. Wig Creation, Styling, and Maintenance (3). The study and practice of creating, styling, and maintaining wigs for stage.

TH 465. Costume and Fashion Drawing (3). Sketching design ideas for theatrical costumes and street clothing in three-dimensional form with textural effects and color to present a realistic appearance on paper.

TH 467. Scene Design (4). Study, research, practice, and applied use of scenic design techniques and theory. Prerequisites: TH 266 and TH 340 and TH 366.

TH 468. Lighting Design (4). Basic principles of design related to lighting design for the theatre. This class examines the role of the lighting designer from initial reading of the script through production, research, production meetings, and creation of the light plot. Prerequisite: TH 366 and TH 368.

TH 474. Acting for Film and Television (4). Exploration and practice of advanced techniques in the acting of scenes for film and television. Topics may include; soap opera, feature film, and television sitcom techniques. Prerequisite: TH 374. May be repeated for credit if content changes.

TH 481. Kennedy-Center Festival (1-2). Participation in the annual Kennedy Center American College Theatre Festival and/or the Northwest Drama Conference. Prerequisite: admission to the theatre arts major or minor. May be repeated for credit. Grade will either be S or U.

TH 487. Theatre Pedagogy (4). Student will be given individualized instruction in teaching practices and will participate in journal writing, critiquing, counseling, coaching, advising, leading discussion, and grading. TH 487 and TH 587 are equivalent courses; students may not receive credit for both. May be repeated up to 8 credits.

TH 488. Introduction to Dramaturgy (3). An introduction to research applied to production including author, world of the play, and the socio-political influences surrounding the text and its time.

TH 489. Career & Portfolio Preparation (3). Techniques and practice in preparation of professional portfolio, resumes, and letters of application for employment in the entertainment industry. Prerequisites: admission to the theatre arts major and junior standing or above.

TH 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. By permission. May be repeated for credit. Grade will either be S or U.

TH 491. Workshop (1-6).

TH 492. Practicum in Devising and Touring Theatre (3-12). Advanced study in ensemble devised theatre, techniques and practice in the production

thereof, and practicum in touring such pieces to fringe festivals, and other alternate and/or educational venues. Permission of instructor. Prerequisite: current WSP/FBI fingerprint clearance. May be repeated up to 12 credits.

TH 493. Theatre Laboratory (1). Practical experience in all aspects of theatre production to better prepare for career opportunities. May be repeated up to 3 credits.

TH 494. International Theatre Experience (1-5). Travel and participation (as performer or audience) at an international theatrical experience in a variety of topics such as Winnipeg Fringe, Shakespeare in the UK, Japan's Theatre Traditions, Theatre for Social Justice, Prague Quadrennial of Design, or The Theatre of Carnival. Students will apply field research to written analysis and/or presentation during the term of study. OISP fee applies. May be repeated for up to 25 credits as topic changes. Grade will be S or U.

TH 495. Senior Research Project (3). Senior students shall present a research paper in a major area of interest. Prerequisite: admission to the theatre arts major. May be repeated for credit.

TH 496. Individual Study (1-6).

TH 498. Special Topics (1-6).

TH 499. Seminar (1-5).

University Seminar and Enrichment Courses

UNIV 101. Academic Advising Seminar (1). This course is designed for students to learn about the mission of the general education program and majors in order to make informed academic decisions and discover opportunities for personal growth. Basic Skills 1-GenEd Colloq.

UNIV 102. Strategies for College Success (2). Course will teach essential study skills for succeeding in and graduating from college. Students will learn how to develop habits that lead to academic success.

UNIV 103. Career Exploration (2). Designed to assist students in researching and assessing their career goals through classroom coursework and career-related interest and personality inventories.

UNIV 109. Introduction to Civic Engagement (2). The student will use civic engagement to identify and explore career interests and meet community needs. May be repeated for credit.

UNIV 201. Tutoring Strategies (1). Principles of individualized instruction for student paraprofessional tutors. Structuring tutorials, fundamental learning strategies, assessment strategies, communication skills, and integration of content mastery/learning skills. Prerequisite: at least 40 college level credits. Grade will be S or U.

UNIV 202. Online Tutoring Strategies (1). Principles of individualized online instruction for student paraprofessional tutors. Structuring online tutorials, fundamental learning strategies, assessment strategies, communication skills, and integration of content mastery/learning skills. Grade of B or higher in subject the student would like to tutor. At least 80 college-level credits, or by instructor permission. Grade will be S or U.

UNIV 250. Reading and Writing Enrichment (3). This class offers sophomores and juniors augmented instruction in reading and writing, building on concepts and skills learned in English 101 and 102. Prerequisite: ENG 101 and ENG 102 and sophomore or junior standing, and a GPA of 2.5 or less.

UNIV 295. Introduction to Undergraduate Research (2). This class will prepare students to conduct faculty mentored research and creative expression projects. By permission.

UNIV 297. Enrichment Course (1). Enrichment course on various topics for freshmen and sophomores to broaden their interest areas. May be repeated for credit.

UNIV 301. Career Management (2). Identify work suited to interests, personality, goals, and values. Maximize ability to obtain work in chosen field, manage career moves to maintain interest and growth through economic changes and life stages while minimizing economic dislocation.

UNIV 304. International Sustainable Development (5). Students will apply critical thinking skills, field observations, and reflective processing to explore and reveal the contextual impacts and opportunities associated with international sustainable development projects. Through cultural immersion and experiential learning in an international setting, students will engage in activities designed to broaden international perspectives while providing opportunities for personal growth. Prerequisite: acceptance into destination-

based partner program. May be repeated up to 12 credits.

UNIV 308. Civic Engagement Theory and Application (4). Student combines civic engagement theory and diversity sensitivity with real-world situations and major content to design and conduct a community project.

UNIV 309. Civic Engagement (2). Student will use program of study content knowledge to improve a community situation. May be repeated up to 12 credits. Grade will either be S or U.

UNIV 497. Enrichment Course (1). An enrichment course on varying topics for upper-division students to explore more deeply issues of academic interest. May be repeated for credit. Grade will either be S or U.

UNIV 597. Enrichment Course (1). An enrichment course on varying topics for graduate students to explore more deeply issues in their areas of academic focus. May be repeated for credit. Grade will either be S or U.

Womens and Gender Studies Courses

WGS 201. Introduction to Women's and Gender Studies (5). A survey of women's and gender studies from an interdisciplinary perspective. Basic terms, concepts, theories, and research methodologies will be introduced. Gender related issues will be examined from the historical, cross-cultural and cross-national perspectives. Meets the General Education writing requirement. SB-Perspectives on U.S. (W).

WGS 250. Introduction to Queer Studies (5). An interdisciplinary introduction to queer studies, investigating the historical and contemporary reality of those who identify as gay, lesbian, bisexual, transgender, and/or queer. SB-Perspectives, Cultures, Experiences of U.S.

WGS 384. Language and Gender (4). This course is designed to guide students to explore the active and rapidly expanding field of gender studies and language research dealing with how biological and cultural awareness of sexes are reflected in speech. WS 384 and ANTH 384 are cross-listed courses; students may not receive credit for both.

WGS 398. Special Topics (1-6).

WGS 488. Capstone Project (2). This course serves as the culminating experience for the women's and gender studies minor. Students will work with a faculty member on a service learning project, a research paper, or a creative project.

WGS 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. By permission. May be repeated for credit. Grade will either be S or U.

WGS 491. Workshop (1-6).

WGS 496. Individual Study (1-6).

WGS 498. Special Topics (1-6).

WGS 499. Seminar (1-5).

World Languages Courses

WL 200. World Cultures and Globalization (4). This course will explore the interaction and interdependence of cultures and identities in a globalized world through examination of various forms of cultural production in a number of global contexts.

WL 298. Special Topics (1-6).

WL 398. Special Topics (1-6).

WL 401. Introduction to Romance Linguistics (3). Analysis of the phonology, morphology, and syntax of the romance languages. Prerequisite: Two years of a romance language. Credits to be counted toward either French or Spanish major or minor.

WL 481. Methods and Materials for Language Teaching (4). Emphasizes the practical concerns of second- and foreign-language instruction. Explores as a group the theory underlying approaches incorporated into personalized teaching styles. Prerequisites: at least two 300-level courses or equivalent in a foreign language.

WL 482. Second- and Foreign-language Acquisition (4). This course explores second and foreign language acquisition/learning from an applied linguistics perspective. Prerequisite: WL 481. The focus of this course will be on the learner.

WL 483. Sociolinguistics (4). Concepts and methods of sociolinguistic analysis in first and second languages. Will examine differences among cultures in the relationship between language usage and inequality. ANTH 483 and WL 483 are cross-listed courses; students may not receive credit for both. Prerequisites: either ANTH 180, ENG 180, ANTH 381, or WL 481.

WL 490. Cooperative Education (1-12). An individualized, contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer

supervision, and faculty coordination. Department consent. May be repeated for credit. Grade will either be S or U.

WL 491. Workshop (1-6).

WL 496. Individual Study (1-6).

WL 498. Special Topics (1-6).