

2014-2015 ACADEMIC YEAR
GRADUATE CATALOG



CENTRAL WASHINGTON UNIVERSITY

Letter of Greeting from the President of CWU



Greetings,

I'm delighted to welcome you to the 2014-2015 school year. It is my pleasure to extend warm greetings to new and returning students.

Central Washington University is a vibrant and innovative place. We serve more than 10,000 students at a residential campus in Ellensburg, at satellite campuses throughout the state, and at our online campus, "Finish Line," which has more online degree programs than any other university in Washington.

Our students benefit from personal attention in small classes from professors for whom teaching is the highest priority. Our commitment to hands-on learning makes education exciting and relevant.

At CWU, student success is the focus and measure of everything we do. We work to provide students with exciting, diverse, personalized, and distinctive opportunities for learning and recreation. I encourage you to join a club, participate in student government, volunteer in the community, or become a member of a research team. CWU has many opportunities that will enrich your educational experience.

We are also committed to providing students a learning environment built on principles of respect, support and encouragement. Those values are essential to achieving individual excellence. During your time here, I encourage you to take advantage of the performances, exhibitions, sporting, research, and other activities we provide especially for students. I hope you will also explore the mountains, rivers, and historic communities in the Kittitas Valley.

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 to attend this remarkable university.

Sincerely,

A handwritten signature in black ink that reads "James L. Gaudino". The signature is written in a cursive, flowing style.

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 inquiries to the Administrator, Equal Opportunity and Professional Development and Title IX Coordinator, Bouillon 205, Ellensburg, WA 98926-7425, 509-963-2205; oeo@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 for those 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 Center, Bouillon Hall, room 203F	(509) 963-3523
Associated Students (ASCWU), Student Union and Recreation Center, 2nd Floor	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 305	963-3103
International Studies and Programs, International Center	963-3612
James E. Brooks Library	963-1901
Office of Admissions, Mitchell Hall, first floor	963-1211
President's Office, Barge Hall, room 314	963-2111
Provost, Barge Hall, room 302	963-1401
Registrar Services, Mitchell Hall, first floor	963-3001
Student Employment	
• I-9 and W'4, Bouillon 140	963-1202
• Regular Student Employment (non-work study), Bouillon Hall, room 140	963-1202
• Work Study, Barge Hall, room 115	963-1611
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 Police and Parking 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 2014 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 28	Registration Assignment	Log into MyCWU to view enrollment appointment for web
April 28	Schedule Goes Live	View in MyCWU
April 28	Advising Begins	FALL 2014 advising
May 12-June 20	Registration	For continuing students (<i>During the assigned enrollment appointment</i>)
August 1	OPEN ENROLLMENT	Students may add/drop classes until change of schedule period ends.
September 10	Leave of Absence	Students not attending FALL quarter must submit request
September 24	CLASSES BEGIN	First day of classes for FALL
September 30	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 30	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 30	Audit and Credit/No Credit	Deadline to declare audit and credit/no credit
October 1-7	\$25 Late Registration Fee	Instructor signature required to enroll
October 7	\$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. 8-Nov. 4	\$50 Late Registration Fee	Instructor, Department Chair, and Dean signatures required to enroll
October 15	Faculty Development Day/ Study Day for Students	No classes-instructional study day/administrative offices open
October 24	\$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. 3-Dec. 5	Registration for WINTER	See Winter 2015 calendar
Nov. 5-Dec. 5	\$75 Late Registration Fee	Instructor, Department Chair, and Dean signatures required
November 11	Veterans Day	No classes/administrative offices closed
November 26-28	Thanksgiving Recess	No classes/administrative offices open November 26 No classes/administrative offices closed November 27-28
December 5	Course Challenge Form Deadline	Deadline to submit course challenge forms to Registrar Services
December 5	Classes End	Last day of class instruction
December 8-11	FINAL EXAMS	See exams schedule
December 11	End of Quarter	End of Quarter
December 16	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

GRADUATION DEADLINES

Oct. 23	Deadline for 50 percent refund with complete withdrawal	July 3	Deadline to apply for baccalaureate degree for FALL
Nov. 7	Uncontested withdrawal period deadline	Sept. 24-30	Master's degree final folder check for FALL needs to be requested during first week of classes
Dec. 5	Hardship withdrawal petition deadline	Oct. 3	Deadline to apply for baccalaureate degree for WINTER
Dec. 5	Complete university withdrawal	Nov. 26	Complete all master's degree requirements for FALL graduation

WINTER 2015 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 20	Registration Assignment	Log into MyCWU to view enrollment appointment for web
October 20	Schedule Goes Live	View in MyCWU
October 20	Advising Begins	WINTER advising
Nov. 3- Dec. 5	Registration	For continuing students (<i>During the assigned enrollment appointment</i>)
December 15	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 6	CLASSES BEGIN	First day of classes for WINTER
January 12	Change of Schedule Period Ends	Add/Drop classes- <i>Drops completed prior to this date or by the close of business on this date will not appear on transcripts or have tuition assessed.</i>
January 12	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 12	Audit and Credit/No Credit	Deadline to declare audit and credit/no credit
January 13-20	\$25 Late Registration Fee	Instructor signature required to enroll
January 19	Martin Luther King Jr. Holiday	No classes/administrative offices closed.
January 20	\$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. 21-Feb. 18	\$50 Late Registration Fee	Instructor, Department Chair, and Dean signatures required
January 28	Faculty Development Day/ Study Day for Students	No classes-instructional study day/administrative offices open
February 5	\$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. 9-Mar. 13	Registration for SPRING	See SPRING 2015 Calendar
February 16	President's Day	No classes/administrative offices closed
Feb. 19-Mar. 13	\$75 Late Registration Fee	Instructor, Department Chair, and Dean signatures required
March 13	Course Challenge Form Deadline	Deadline to submit course challenge forms to Registrar Services
March 13	Classes End	Last day of class instruction
March 16-19	FINAL EXAMS	See exam schedule
March 19	End of Quarter	End of Quarter
March 24	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

GRADUATION DEADLINES

Feb. 4	Deadline for 50 percent refund with complete withdrawal	Oct. 3	Deadline to apply for baccalaureate degree for WINTER
Feb. 20	Uncontested withdrawal period deadline	Jan. 6-12	Master's degree final folder check for WINTER needs to be requested during first week of classes
March 13	Hardship withdrawal petition deadline	Jan. 16	Deadline to apply for baccalaureate degree for SPRING
March 13	Complete university withdrawal	March 13	Complete all master's degree requirements for WINTER graduation

SPRING 2015 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 26	Registration Assignment	Log into MyCWU to view enrollment appointment for web registration
January 26	Schedule Goes Live	View in MyCWU
January 26	Advising Begins	SPRING advising
Feb. 9-March 13	Registration	For continuing students (<i>During the assigned enrollment appointment</i>)
March 17	OPEN ENROLLMENT	Students may add/drop classes until change of schedule period ends.
March 23	Leave of Absence	Students not attending SPRING quarter must submit request
March 31	CLASSES BEGIN	First day of classes for SPRING
April 6	Change of Schedule Period Ends	Add/Drop classes- <i>Drops completed prior to this date or by the close of business on this date will not appear on transcripts or have tuition assessed.</i>
April 6	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 6	Audit and Credit/No Credit	Deadline to declare audit and credit/no credit
April 7-13	\$25 Late Registration Fee	Instructor signature required to enroll
April 13	\$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 14-May 11	\$50 Late Registration Fee	Instructor, Department Chair, and Dean signatures required
April 22	Faculty Development Day/ Study Day for Students	No classes-instructional study day/administrative offices open
April 30	\$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 4-June 24	Registration for SUMMER	See SUMMER Calendar
May 11- June 19	Registration for FALL	See FALL 2015 Calendar
May 12-June 5	\$75 Late Registration Fee	Instructor, Department Chair, and Dean signatures required
May 21	Source Day	Instructional day - Research projects
May 25	Memorial Day	No classes/administrative offices closed
June 5	Course Challenge Form Deadline	Deadline to submit course challenge forms to Registrar Services
June 5	Classes End	Last day of class instruction
June 8-11	FINAL EXAMS	See exams schedule
June 11	End of Quarter	End of Quarter
June 13	COMMENCEMENT	Commencement Ceremonies - Ellensburg
June 14	COMMENCEMENT	Commencement Ceremonies - Kent
June 16	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

GRADUATION DEADLINES

April 29	Deadline for 50 percent refund with complete withdrawal	Jan. 16	Deadline to apply for baccalaureate degree for SPRING
May 15	Uncontested withdrawal period deadline	Mar. 31- Apr. 6	Master's degree final folder check for SPRING needs to be requested during first week of classes
June 5	Hardship withdrawal petition deadline	April 10	Deadline to apply for baccalaureate degree for SUMMER
June 5	Complete university withdrawal	June 5	Complete all master's degree requirements for SPRING graduation

SUMMER SESSION 2015 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 13	Schedule Goes Live	View in MyCWU
April 13	Advising Begins	SUMMER advising
May 4-June 24	Registration	Summer Session
June 22	CLASSES BEGIN	Classes begin for six-week and full session
June 24	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 24	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 29-July 3	\$25 Late Registration Fee	Instructor signature required to enroll
July 3 (observed)	Independence Day holiday	No classes/administrative offices closed
July 6	\$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 6-31	\$50 Late Registration Fee	Instructor, Department Chair, and Dean signatures required
July 22	\$100 Fee -Unpaid Tuition and Fees	\$100 fee assessed on unpaid tuition and course fee balances. Student has 100 percent tuition liability.
July 31	Six-week Session Classes End	Last day of class instruction for six-week session
August 4	Grades Due	Six-week session grades due by 10 p.m., submit via MyCWU
August 21	Full Session Classes End	Last day of class instruction for full session
August 25	Grades Due	Full session grades due by 10 p.m., submit via MyCWU

WITHDRAWAL DEADLINES

GRADUATION DEADLINES

July 17	Deadline for 50 percent refund with complete withdrawal	April 10	Deadline to apply for baccalaureate degree for SUMMER
July 17	Uncontested withdrawal period deadline	June 22-26	Master's degree final folder check for SUMMER needs to be requested during first week of classes
July 24	Hardship withdrawal petition deadline for six-week session	July 2	Deadline to apply for baccalaureate degree for FALL 2015
July 24	Complete university withdrawal for six-week session	Aug. 7	Complete all master's degree requirements for SUMMER graduation
Aug. 14	Hardship withdrawal petition deadline for full session		
Aug. 14	Complete university withdrawal for full session		

FALL 2015 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 (<i>During the assigned enrollment appointment</i>)
August 15	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.
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

GRADUATION DEADLINES

Oct. 22	Deadline for 50 percent refund with complete withdrawal	July 2	Deadline to apply for baccalaureate degree for FALL 2015
Nov. 6	Uncontested withdrawal period deadline	Sept. 23-29	Master's degree final folder check for FALL needs to be requested during first week of classes
Dec. 4	Hardship withdrawal petition deadline	Oct. 2	Deadline to apply for baccalaureate degree for WINTER
Dec. 4	Complete university withdrawal	Nov. 27	Complete all master's degree requirements for FALL graduation

WINTER 2016 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 (<i>During the assigned enrollment appointment</i>)
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	<i>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.</i>
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 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 (<i>During the assigned enrollment appointment</i>)
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- <i>Drops completed prior to this date or by the close of business on this date will not appear on transcripts or have tuition assessed.</i>
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

GRADUATION DEADLINES

April 27	Deadline for 50 percent refund with complete withdrawal	Jan. 15	Deadline to apply for baccalaureate degree for SPRING
May 13	Uncontested withdrawal period deadline	Mar. 29- Apr. 4	Master's degree final folder check for SPRING needs to be requested during first week of classes
June 3	Hardship withdrawal petition deadline	April 8	Deadline to apply for baccalaureate degree for SUMMER
June 3	Complete university withdrawal	June 3	Complete all master's degree requirements for SPRING graduation

SUMMER SESSION 2016 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 21	Schedule Goes Live	View in MyCWU
March 21	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. Student 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

GRADUATION DEADLINES

July 15	Deadline for 50 percent refund with complete withdrawal	April 8	Deadline to apply for baccalaureate degree for SUMMER
July 15	Uncontested withdrawal period deadline	June 20-24	Master's degree final folder check for SUMMER needs to be requested during first week of classes
July 22	Hardship withdrawal petition deadline for six-week session	July 1	Deadline to apply for baccalaureate degree for FALL 2016
July 22	Complete university withdrawal for six-week session	Aug. 12	Complete all master's degree requirements for SUMMER graduation
Aug. 12	Hardship withdrawal petition deadline for full session		
Aug. 12	Complete university withdrawal for full session		

History, Mission, Vision and Core Values

History

Central was established in 1890 as Washington State Normal School by the first legislature to fulfill the intent of the 1889 Enabling Act for Statehood. In 1891, doors opened for classes. Ellensburg Normal School became Central Washington College of Education in 1937, Central Washington State College in 1961, and Central Washington University in 1977.

Central Washington University is one of six state-assisted institutions offering bachelor's, master's and educational specialist degrees. The board of trustees is the university's governing board. Seven of the board's eight members are appointed for six-year terms by Washington's governor with consent of the state Senate. The governor appoints one student trustee annually.

Mission

The mission of Central Washington University is to prepare students for enlightened, responsible, and productive lives; to produce research, scholarship, and creative expression in the public interest; and to serve as a resource to the region and the state through effective stewardship of university resources.

Vision

Central Washington University (CWU) is a dynamic, creative, and inclusive environment that promotes engaged learning and scholarship. It is distinguished regionally for the rigor of its curriculum and scholarship, for the excellence of its pedagogy, for the vibrancy of its co-curricular and residential experiences, for its commitment to providing access to higher education, and for its efforts to advance the social and economic health of the region. It is typified by an entrepreneurial spirit that establishes it as a national leader in higher education. It has a strong commitment to engaged learning and scholarship, internationalism, sustainability, inclusiveness, and life-long learning.

Core Value

Central Washington University exists to advance society through the essential activities of teaching, discovery, and service. While no one of these core elements is meaningful in isolation from the others, CWU finds it necessary to prioritize its efforts in relation to its mission, vision, values, goals, and resources. In order to maximize the value of each of the elements of its mission, CWU emphasizes the integration of scholarship, teaching, and public service. As a public comprehensive university, CWU strives to create an engaging learning environment and therefore places its highest priority on teaching, learning, and student success.

The faculty is comprised of scholar-teachers working in the interests of their disciplines, and the region. CWU

encourages individualized programs of student success and promotes undergraduate and graduate student-faculty partnerships that are actively engaged in discovery, creative expression, and engaged learning.

As a community dedicated to the principles of academic freedom, CWU must be an environment that promotes reasoned, civil, and lightened discourse and creative expression without fear of reprisal, ridicule, or exclusion. CWU's educational environment must empower each person with the freedom to explore, to evaluate, and to learn.

CWU must also strive to serve its region by addressing pressing economic and social issues. As a comprehensive university, CWU must use its intellectual capacity not only to contribute to disciplinary literatures, but also to assist area business, social, and government leaders in strengthening and diversifying the area's economic base, to help create a sustainable natural environment, and to address critical social issues.

CWU is also a place where people gather to live and to work. It must therefore be a place that enables people to grow and to prosper. In keeping with the academic values of shared governance and reasoned dialogue, the university must be open, transparent, and empowering. It follows, then, that CWU is committed to the following shared values:

Student success: CWU believes that student success is best achieved by providing supportive learning and living environments that encourage intellectual inquiry, exploration, and application. CWU believes that learning is best achieved in small classroom or group settings with ample opportunities for individualized instruction, mentoring, advising, and programming.

Access: CWU believes in providing educational opportunities to as many qualified students as possible. CWU believes that restrictions of place, time, and finances can be overcome through the effective use of partnership with community colleges and by effective and efficient use of learning, communication, and social technologies.

Engagement: CWU believes that learning, research, and creative expression are enhanced by engagement with external partners. CWU believes that as a publicly-funded institution, it has a responsibility to help address the social and economic challenges faced by our communities.

Inclusiveness: CWU believes that diversity of peoples, cultures, and ideas is essential to learning, discovery, and creative expression. CWU believes that all faculty, staff, and students must be and must feel physically, professionally, and emotionally safe in order to fully engage in and benefit from the university experience.

Shared governance: CWU believes that shared governance is most effective when information systems and decision-making processes are both robust and transparent. CWU believes that communication channels should be open and two-way and that faculty, staff, and students should be empowered to participate in the governance systems.

Facilities: CWU believes that state-of-the-art, safe, and attractive facilities enhance the working and learning environments of faculty, staff, and students. CWU also believes that state-of-the-art technologies provide leverage for the efforts of faculty, staff, and students.

Safety: CWU believes it has a responsibility to providing a working and learning environment that is both physically and emotionally safe. CWU believes this responsibility extends to the off-campus environment of its full-time, residential students.

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, Office for Equal Opportunity, Bouillon Hall, room 205, 509-963-2206 or farmer@cwu.edu. She also serves as one of the university's Title IX coordinators. Please contact Pam Wilson, Associate Director of Disability Services for any questions or concerns related to disability-related laws and institutional policies. Bouillon Hall, room 140, 509-963-2018.

ACCREDITATION AND MEMBERSHIP

The university is accredited by the Northwest Commission on Colleges and Universities (NWCCU). Some academic 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

Graduate Studies and Research

The university provides quality graduate programs in selected fields, taught by a faculty committed to excellence in teaching and research. A hallmark of this university is to offer our graduate students:

- Small classes
- Opportunities to work closely with professors
- An excellent learning environment
- Low tuition
- Hands-on research experience
- An attractive setting in a friendly community

Administration and Organization

The Office of Graduate Studies and Research welcomes visits and inquiries from graduate students and prospective graduate students. Our staff is here to assist the academic community, both in the area of graduate studies as well as in the sphere of grants and sponsored research.

Dean

Kevin Archer, PhD

Associate Dean

Robyn Brammer, PhD

Director of Research and Sponsored Programs

Julie Guggino

Program Coordinator

Lynn Niemi

Admissions Program Coordinator

Justine Eason

Post-admissions Program Coordinator

Dawn Anderson

Fiscal Specialist

Diane Houser

Barge Hall, room 305M

509-963-3101
masters@cwu.edu
www.cwu.edu/masters

Business hours: 8 a.m. through 5 p.m., Monday through Friday (PST), except holidays.

General Information

The graduate experience at CWU is challenging, rewarding, and exciting. Like every quality experience, it is subject to certain rules and policies to ensure high academic standards. It is the responsibility of graduate students to familiarize themselves with these and the policies of the programs in which they are enrolled. Central believes in equal educational and employment opportunity for all without regard to race; color; creed; national origin; gender; age; marital status; or any sensory, physical, or mental handicap.

Additional information concerning university policies and regulations applicable to graduate programs, including accreditation, institutional memberships, grading practices, mission and roles, and tuition and fees, may be found in various sections of this catalog. Consult the Table of Contents or Index for further information.

Definition of a Graduate Student

A graduate student is anyone duly admitted to graduate study at CWU, and who is officially enrolled in a graduate program here. Graduate programs offered include master's degree programs, educational specialist degree programs, fifth-year and other certification programs, and non-degree study as a resident or visiting graduate student.

Application and Admission to Graduate Study

Central Washington University offers the following graduate degrees:

Education Specialist

- School Psychology

Master of Arts

- English: Literature
- English: TESOL
- History
- Theatre

Master of Arts for Teachers

- Mathematics

Master of Education

- Higher Education
- Instructional Leadership
- Literacy
- Master Teacher

- School Administration
- Special Education

Master of Fine Arts

Master of Music

Master of Professional Accountancy

Master of Science

- Biology
- Chemistry
- Computational Science
- Mental Health Counseling
- Engineering Technology
- Experimental Psychology
- Exercise Science
- Family and Consumer Sciences
- Geological Sciences
- Health and Physical Education
- Law and Justice
- Nutrition
- Primate Behavior
- Resource Management

Graduate Certificate

In addition to the degree programs available, CWU offers the following graduate certificate programs. (see Graduate Certificate Programs for details):

Continuing Principal's Certificate
Continuing Program Administrator
Educational Staff Associate Certificate
Endorsement-only Program
Fifth-year of Study for Continuing or Professional Certificate
Renewal of Initial or Residency Certificate
School Psychologist

Admissions Information

Central offers admission to applicants who have high potential for success in their chosen graduate disciplines. We seek to admit people with diverse backgrounds in order to enhance the learning environment for all students.

Admissions decisions are based upon a combination of factors. These include grade point average, letters of recommendation from professors or others able to critically assess an applicant's ability to succeed in a graduate program, a written statement of purpose, standardized test scores (if applicable), academic preparation for work in the proposed field, and the applicant's interests as matched with those of faculty.

Types of Admission

CWU distinguishes three types of admission: regular, probationary, and conditional.

Regular: To be eligible for regular admission, an applicant must have earned a bachelor's degree from a recognized four-year college or university in the U.S. or the equivalent from an institution abroad. The applicant must demonstrate, in the opinion of the faculty and the dean of Graduate Studies and Research, the ability to successfully complete a master's degree. The applicant must also have achieved at least a 3.0 (B) average in all coursework attempted during the last 90 quarter hours (60 semester hours) of study. The Computational Science program requires a GPA of 3.25 during the last 90 quarter hours.

Probationary: An applicant who does not meet the minimum GPA admissions requirements, but who shows promise of success in a graduate program, may be considered for admission. He or she may be admitted on probationary status, based on departmental recommendations and a favorable review by the dean of Graduate Studies and Research. If admitted, the applicant is placed on probation for one quarter, during which time he or she must complete at least 10 credits of coursework approved by the home department. A grade point average of 3.0 (B) or more is required. Upon meeting this requirement and with the favorable recommendation of the department, the student will be fully admitted and allowed to continue toward candidacy for a degree. If the student is unable to achieve a 3.0 GPA, he or she will be dropped from the program.

Conditional: An applicant may also be conditionally admitted to master's programs when he or she does not fully meet admission requirements. Typically, such admittees lack certain field-related experiences and/or required background knowledge. An applicant may also be admitted to this category pending receipt of the official transcript(s) indicating completion of the bachelor's degree. A conditionally admitted student will achieve regular status when the condition has been satisfied and the admitting department recommends advancement to regular status.

Confirmation Deposit

A nonrefundable \$55 tuition deposit is required to verify acceptance of the offer of admission. This deposit will be applied toward the student's first-quarter tuition. This payment is due by May 1 for fall quarter, November 1 for winter quarter, and January 1 for spring quarter, or within two weeks of the date of acceptance, whichever is later. The confirmation deposit is not required for summer quarter. Fees are subject to change when tuition rates are revised. A letter of intent may also be required by some departments.

Applying to CWU

CWU welcomes applications from all those who meet our minimum requirements for admission. To apply, visit our Web site at www.cwu.edu and click on the apply now link or obtain a set of our application materials from:

CWU School of Graduate Studies and Research
400 East University Way
Ellensburg, Washington 98926-7510

A completed application file consists of the following materials received by the School of Graduate Studies and Research:

1. A completed application for graduate admission.
2. A written statement of educational and professional objectives.
3. Three letters of recommendation written by professors or others capable of assessing your potential for success in a graduate program.
4. Official transcripts from all universities and colleges attended.
5. Graduate Record Examination (GRE) or Graduate Management Admissions Test (GMAT) scores if required by the program. Scores should be no more than five years old at the time of application.
6. A non-refundable application fee of \$50 payable at the time of filing application. Application fees may be paid by check, credit card (MasterCard and Visa only), or cash (please do not send cash through the mail). If you wish to pay by check, make it payable to Central Washington University and send it, along with the other application materials, to the School of Graduate Studies and Research. If you prefer to pay by credit card, you may telephone the Cashiers Office (509-963-2224) with this information to make a payment. Cash transactions should be made in person at the Cashiers Office, Barge Hall, room 104.

International Applicant

In addition to the above requirements, all international applicants must complete the following:

1. If the applicant's native language is not English, he or she is required to submit one of the following: a) a minimum Test of English as a Foreign Language (TOEFL) iBT, score of 79 (scores should be no more than two years old at the time of application) b) a minimum International English Language Testing Systems (IELTS) academic score of 6.5 (scores should be no more than two years old at the time of application) or c) a baccalaureate degree from an

accredited U.S. university or an accredited international university where the main language of instruction is English. Please note that the Department of English requires a TOEFL IBT score of 88 or an IELTS academic score of 6.5.

2. International applicants are also required to complete a confidential financial statement and submit evidence that sufficient funding is available in U.S. currency through personal resources and/or a sponsor for one academic year's experience at CWU.
3. Foreign university transcripts must be accompanied by a course-by-course transcript evaluation. You may find further information regarding the evaluation and agencies that are accepted by CWU at www.cwu.edu/masters/prospective-international-students.

Application Deadlines

The priority deadlines for submitting all application materials are as follows:

February 1 for fall quarter
April 1 for summer quarter
October 1 for winter quarter
January 1 for spring quarter

Deferred Admission

If a department and the School of Graduate Studies and Research wish to admit an applicant to a program that has no space available for a particular quarter, a deferred admission may be offered. The quarter for which admission is deferred will be negotiated between the applicant and the department. If both agree, the applicant will be asked to accept or decline in writing the deferred admission, which will be valid for up to one year from the term in which the person was to have matriculated. If the applicant agrees to defer admission, no new application or application fee will be required. He or she will be expected to pay the non-refundable confirmation deposit of \$55, and to obtain the concurrence of the home department and the dean of Graduate Studies and Research concerning the quarter in which he or she wishes to enroll.

An applicant who has been admitted to graduate study, but who wishes to defer matriculation to a subsequent quarter, may do so with the written authorization of the home department and the graduate office's concurrence. Such a deferment will be valid for up to one year from the term in which the student was to have matriculated. If the department is unable or unwilling to provide this authorization, the applicant will be obliged to reapply for admission, pay the admission application fee, and provide additional documents as needed.

Application for Certification and Non-degree Study

The university offers those seeking professional credentials, but who do not wish to pursue a master's degree, the opportunity to become post-baccalaureate students. Applications for admission to this status may be obtained from the Office of Admissions.

Applicants for the continuing certificate must contact the Certification Office to organize an approved program.

Applicants for the school psychology program leading to certification must also submit references and GRE scores. Admission procedures to this certification programs is the same as for graduate program admission.

Assistantships and Financial Aid

CWU offers a number of assistantships during the academic year to beginning and continuing graduate students. Graduate assistantships are available in each of our graduate program departments. Nearly two-thirds of the university's graduate assistants teach; the remainder serve as research assistants, with a few performing university service functions.

Applicants must:

1. be fully admitted to a master's degree program and registered with at least 10 credits (of these, at least 5 credits must be numbered 501 or higher unless on an approved Course of Study form) at the commencement of the contract period
2. be recommended to the position by the department where the appointee would be assigned; and
3. demonstrate a high level of professional and academic promise.

The priority deadline for assistantship application is February 1.

Full-time assistantships require an average of 20 hours of service per week and enrollment in at least 10, but not more than 14, credit hours per quarter, and a minimum grade point average of 3.0 each quarter. All graduate assistantship appointments are made with a formal written contract letter from the dean of Graduate Studies and Research. Assistantship award announcements are not made until after April 15.

For further information and application forms, interested persons should contact the Office of Graduate Studies and Research at www.cwu.edu/masters.

Financial aid is available through the university from federal and state funds for students demonstrating financial need. Applications for financial aid may be obtained from the Office of Financial Aid and should be

submitted no later than March 15. Employment opportunities, both on and off campus, are typically available.

Master's Degree Regulations

General Regulations

The following are the general regulations governing master's degrees. Additional requirements established by specific departments and programs may be found in this catalog under the special headings of these units. Before a decision to enter into a particular graduate degree program is made, the student is urged to communicate directly with the department to determine the most current program requirements. The student is responsible for seeking academic advising in the department or program of the specialization chosen. The department can assist in many of the details necessary to completing program requirements, especially early in the student's program.

Please note that each graduate department is headed by a chair who is responsible for working with graduate students in developing individual courses of study, establishing graduate committees, and in advising graduate students. Some graduate departments also have a graduate coordinator. In such cases, graduate students are expected to work with this person as the program's chief officer for graduate affairs. In all matters relating to university regulations, the dean of Graduate Studies and Research is the final arbiter, though he or she consults with departmental officers in carrying out these duties.

Graduate-Level Credit

Graduate-level credit is given for all courses at CWU numbered at the 500 level and above. However, courses which are specifically numbered "500" are reserved for professional development courses and cannot be counted toward a master's degree.

Graduate courses numbered 501 and above are typically restricted to students who have earned a bachelor's degree and who have formally been admitted to a graduate program of the university. Some courses may also require competitive admission to a specific departmental graduate program.

Undergraduate-Level Credit

Courses at the 100, 200, and 300 level are not applicable to a master's degree at CWU. Courses at the 400 level may be accepted for credit toward a graduate degree at CWU provided that they are taken after the student has been admitted to the master's degree program and are

approved as part of the student's official course of study. In such cases, graduate students are expected to perform at a high level, while completing requirements additional to those expected of undergraduates enrolled in the course.

Transferring Credit To CWU Graduate Degree Programs

Courses taken prior to formal admission to a CWU master's degree program may be considered for transfer to a CWU master's degree program provided that the criteria below are met.

A total of 15 graduate quarter credits may be applied to a CWU master's degree, of which no more than 9 quarter credits (6 semester credits) may be from accredited institutions offering graduate degrees other than CWU.

Credits accepted in transfer are those that are part of an accredited institution's regular graduate degree programs. In cases where courses sought for transfer generate both undergraduate and graduate credit, students receiving transfer credit are expected to have elected the course(s) at the graduate level and thus have completed more qualitatively and quantitatively than those who have taken the course(s) for undergraduate credit. Credit sought for transfer must be graded "B" or higher and must have been completed no more than six years before the date of the student's master's degree program completion. Credit hours only, not grades, may be transferred. The cumulative grade point average is computed for grades earned as a master's student at CWU.

All credits intended for transfer must be recommended for approval by the departmental/program chair or graduate coordinator as a part of the official course of study filed with the Office of Graduate Studies and Research. Before transfer credit can be considered part of a graduate student's program, an official transcript from the registrar of the institution from which the credit is to be transferred must be received by the graduate office.

Credits used to fulfill requirements for another master's degree, either at CWU or elsewhere, will not be transferred towards a CWU master's degree. Credit for short courses, attendance at conferences, brokered courses, workshops, and pass-fail courses are normally not accepted in transfer. Credit from any non-accredited institution or accredited institution not approved for graduate study will not be accepted for transfer. Credit obtained within the state of Washington from an accredited institution whose main campus is outside of the state will be considered for transfer only by special petition to the dean of Graduate Studies and Research. The university reserves the right to determine the acceptability of transfer credit from any institution.

Course Challenge (Credit by Examination)

Under certain circumstances, the university may award credit or waive requirements based on course challenges or prior learning experience. 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 a course.

Credit/No Credit

Graduate students may take advantage of the credit/no credit option as a way to explore academic areas in which they are interested. Credit/no credit courses will not be counted toward master's degrees nor will they be computed in the graduate grade point average. Students are allowed to select one class per quarter for a credit/-no-credit grade. A student electing this option must designate a class as credit/no credit during registration or during change of schedule period. The credit/no credit option is distinct from courses graded on a satisfactory/unsatisfactory (S or U) basis (see S or U grading).

Credits from Extension, Workshops and Correspondence Activity

Not more than a combined maximum of 8 credits of workshop courses (591s) may be applied toward a master's degree. Courses numbered 491 are not applicable to master's degree credit.

Credits earned in correspondence courses are not applicable to any master's degree.

Academic Policies

Scholastic Standards

Any graduate student in a master's program whose cumulative grade point average falls below 3.0 at the end of any quarter will be placed on academic probation for the next academic quarter. While on probation, a student may not hold a graduate assistantship. If, after one quarter of probation, the student fails to raise her or his cumulative grade point average to 3.0 or above, the student will be dropped from the university. Students may not receive a master's degree from Central if their cumulative grade point average is below 3.0.

The cumulative grade point average is calculated using all courses taken after admission into a graduate program, whether part of the approved course of study or not. Grades for all courses included on the course of study must average at least 3.0 (B). Credit will not be accepted for courses on the course of study in which a grade lower than "C" is earned.

Student Study Load

The normal course load for graduate students not holding a graduate assistantship is 10-16 credits per quarter, 10-14 for those with assistantships. Graduate assistants taking over 14 credits must have approval from the Office of Graduate Studies and Research. For a graduate student not holding an assistantship, a study load of 17-19 credits may be approved by the chair or graduate coordinator of the department of the student's specialization. Loads above 19 credits are not normally permitted. Exceptions may be made only by the dean of Graduate Studies and Research.

Maximum Time Limit to Degree Completion

No credit earned more than six years before the date of the master's degree award may be counted as part of the degree credit requirement except as may be approved by formal action by the dean of Graduate Studies and Research. This includes applicable work transferred from other institutions.

Master's degree students are expected to complete all requirements for the master's degree within six years from the date of first enrollment. Students seeking to interrupt their studies may do so with the approval of the chair or graduate coordinator of the home department, but must pay a non-refundable fee for registration as an on-leave student. This fee covers four successive academic quarters beginning with fall quarter. While on leave, graduate students retain library privileges. If a degree program is not completed during the six-year period from the quarter for which a student was admitted, the student must reapply to the university. If readmitted, only those credits graded B or higher and completed no more than six years from the date of the student's program completion may be counted toward the degree.

Continuous Registration

All master's degree students, including students in attendance only during summer quarter, must satisfy the continuous registration requirement each fall quarter or summer to maintain active status. Students whose master's program runs throughout the academic year will be assessed this fee every fall quarter. Students whose program meets primarily in the summer months will be assessed the on-leave fee at the beginning of summer quarter. A master's degree student may register as a full-time, part-time, or as an on-leave student to satisfy the requirement. Students desiring on-leave status are required to pay a \$40 fee each fall quarter. Failure to maintain continuous registration will be taken by the university to signify the student's resignation from the program. Students who resign and later wish to resume study toward a degree must reapply for admission and complete all steps outlined for master's admission. Readmission cannot be guaranteed.

Graduate Committee

Every master's degree candidate must have a graduate committee of at least three members. Interdisciplinary membership is strongly recommended. In some departments, a student may choose her/his committee in consultation with an advisor; in others, the chair or graduate coordinator assigns graduate committees. In either case, the graduate student is expected to work with the department chair or graduate coordinator in forming her/his committee. The student must submit a Graduate Committee and Option Approval Form to the graduate office. If approved, the committee becomes the student's official advisory committee. The thesis or non-thesis project advisor is the student's graduate committee chair and generally is a faculty member in the department of specialization.

Only a regular member of the graduate faculty may serve as chair of a graduate committee. Adjunct faculty may serve as committee members with the approval of the dean of Graduate Studies and Research.

Under unusual circumstances, and with the written recommendation of a graduate student's home department or program and the approval of the dean of Graduate Studies and Research, an associate member of the graduate faculty may serve as co-chair of a student's graduate committee. The associate member will serve as co-chair along with a regular member of the graduate faculty. The minimum number of members needed for a graduate committee will remain at three.

The Graduate Faculty

At CWU, graduate professors are teachers and mentors, as well as active researchers and artists. They blend instructional and research activities and in so doing afford our graduate students the benefit of state-of-the-art research and creative experience with personalized instruction.

Course of Study

All candidates must complete at least 45 credits (some programs require more credits) as outlined in an official course of study, endorsed by the department chair or graduate coordinator and the committee chair and filed with and approved by the Office of Graduate Studies and Research. The credit on the course of study must be separate and distinct from credit applied toward any other degree. Course of study forms are available in the graduate office, Barge Hall, room 305.

The course of study should be filed before a graduate student has completed 25 quarter credits leading to the master's degree; however, it may be required prior to that for financial aid purposes. No more than 15 quarter credits completed at CWU before the quarter of formal admission

will be accepted on the official course of study for the master's degree, although the department and the graduate office reserve the right to limit the use of such credit, or not count it at all. Graduate students are urged to discuss the counting of such credit as soon after being admitted as possible. An approved course of study must be on file with the graduate office before the graduate committee and an Option Approval form will be considered for approval.

The official course of study reflects the credit required to meet requirements for the master's degree. Unless revisions are approved by the department chair or graduate coordinator and the dean of Graduate Studies and Research, the student must complete satisfactorily or be currently enrolled for all credit specified before advancement to candidacy or before the degree award will be processed. Each graduate student, as part of degree requirements must complete a thesis, project and/or comprehensive examination (see below for information about culminating projects).

The student's graduate advisor or committee chair, in consultation with the department chair and/or graduate coordinator, works with the student in designing a program of study. Once agreed upon, the student prepares an official course of study form obtained from the graduate office, which is then endorsed by the department chair or graduate coordinator, along with the student's committee chair. Upon receipt in the graduate office, each course of study is reviewed to ensure that it meets the minimum requirements of the institution.

Individual Studies Programs

Individual studies master's degree programs are intended to allow highly motivated students to pursue an interdisciplinary course of study combining coursework from more than one discipline, where no such formal master's degree program is in place. Individual studies master's program proposals must show academic rigor, be programmatically coherent, and intellectually sound. Final approval of such programs resides with the dean of the School of Graduate Studies and Research and the chair of the Academic Standards Committee of the Graduate Council.

Prospective applicants seeking to pursue an individual studies master's degree must contact the dean of the School of Graduate Studies and Research and the chair of Academic Standards Committee of the Graduate Council to discuss the feasibilities of the desired program.

Credits Required

A graduate student must complete at least 45 quarter credits (some programs require more credits) in the 400, 500, and above credit level groups. At least 25 of the total

required credits for the degree must be numbered 501 or above.

Some departments restrict the number of credits below the 500 level. Please consult the departmental listings in this catalog for specific additional credit level requirements.

At least 30 credits appearing on the course of study for the master's degree must be on a graded scale (not S or U). Credit/no credit courses will not be counted toward a master's degree at CWU.

Culminating Experience

All students pursuing the master's degree must demonstrate their ability to communicate effectively in writing by satisfactorily completing one or more of the following: (a) a thesis; (b) a written report of a field study, internship, or creative project; and/or (c) a comprehensive written examination. In programs allowing the option, the student's graduate committee in the area of specialization will decide with the student whether to carry out (a), (b), and/or (c) above. A prospectus of the thesis, field study, internship, or creative project must be approved by the student's committee before work begins. The report on the thesis, field study, internship, or creative project must conform to standards described in thesis regulations which are available in the Office of Graduate Studies and Research.

Thesis

A thesis is a written study prepared by the student that demonstrates her or his ability to conduct original, independent research. The thesis topic must be approved in its preliminary stages by the student's graduate committee, the chair of the department of specialization or graduate coordinator, and the dean of Graduate Studies and Research. A form for certifying thesis completion is available in the Office of Graduate Studies and Research.

The thesis must be prepared according to standards of format, style, typeface, and paper quality, as outlined in thesis regulations available at the Office of Graduate Studies and Research. The graduate student is expected to work closely with the thesis advisor and thesis committee in the conception, design, and execution of the thesis. Working with the thesis committee chair, a graduate student will submit copies of the thesis to the committee at least two full weeks in advance of the final examination. Draft copy must be provided with sufficient lead-time to allow faculty to review and critique it. It is very important that the student maintain close contact with committee members during thesis preparation. At the appointed time, the student will defend her or his work before the committee. The thesis defense grade will be assigned as either satisfactory or unsatisfactory. Jointly written thesis are not permitted.

Approval of a thesis is a two-stage process. First, if successfully defended, it must receive the written approval of all committee members. Second, it must be reviewed and approved by the graduate office. If approved by the thesis committee, a thesis approval page and the thesis grade report should be signed by all members of the committee after required corrections, if any, are made. Once the graduate student has prepared the thesis in the format required by the graduate office, and has double checked to ensure that all style and format rules have been observed, he or she should submit the thesis for review to the office.

The thesis must include an abstract (150 words or less) described in thesis regulations available in the Office of Graduate Studies and Research. Three original copies of the completed approved thesis, with pages in proper order, must be submitted to the graduate office and accepted for binding before the student will be cleared for graduation.

The graduate office and the student share in the cost of binding the thesis. Each student pays a binding fee that helps defray the cost of binding the original and two copies of the thesis. Thesis binding fees are \$75 for three copies. Two copies are deposited in the library and one copy is given to the student. Students not wishing to retain a copy for themselves should submit the original copy plus one other in accordance with the above instructions. He or she will be assessed \$50 in binding fees.

Graduate students whose research involves human subjects or vertebrate animals may not commence research without first obtaining clearance to do so from the appropriate institutional review board. (See Institutional Review Board or Animal Care and Use Committee below.)

Institutional Review Board Approval

Central is concerned that no research conducted at this institution by its faculty or its students expose people who participate as subjects to unreasonable risk to their health, general well-being, or privacy. Therefore, all CWU-affiliated research, including student research projects which involve human subjects, must be reviewed by the university's Human Subjects Review Committee (HSRC), CWU's institutional review board for the protection of human subjects. Students apply for HSRC review by filling out an application form, which can be obtained online at www.cwu.edu/~hsrc or from the HSRC office. Early contact with the human protections administrator is recommended. No research can be initiated prior to formal approval.

Animal Care and Use Committee

Graduate students whose research involves vertebrate animal subjects may not commence research without first obtaining clearance from the Animal Care and Use Committee. Forms for applying for review may be obtained in the Office of Graduate Studies and Research or online at www.cwu.edu/~masters.

Project

Several departments allow a student to complete a project rather than a thesis. This is done in instances where the faculty and student determine that a special project, rather than a master's thesis, will strengthen the student's learning experience. Typically, projects are completed in professional programs.

Exam

Some departments allow a student to complete a written exam rather than a thesis or project. Please see individual program information.

Completing Degree Requirements

Final Folder Evaluation

All graduate students must contact the Office of Graduate Studies and Research for a final review of their file no later than the first week of their anticipated final quarter as soon as they have registered. At this evaluation, candidacy requirements, grade point average, course of study completion, and examination scheduling will be processed. Advancement to candidacy and final examination scheduling will not be permitted except during the final quarter.

Final Examination

After the student has registered and been cleared to proceed toward completion through a folder check by the graduate office, he or she must pass oral and/or written examinations covering courses, seminars and thesis, or such other examination as necessary to complete degree requirements. A permission form authorizing the final examination will be issued by the graduate office after a final evaluation of the student's course of study has been completed and once the student has met the final quarter enrollment requirements.

At least two weeks prior to the final examination, four (4) copies of a "brief" must be submitted to the Office of Graduate Studies and Research. A sample brief is included in the thesis/non-thesis guidelines available at the graduate office or online at the graduate studies webpage, www.cwu.edu/~masters. Copies will be distributed to the student's graduate faculty committee prior to the examination. One copy will remain in the student's file.

For the final examination, an outside representative of the graduate faculty will routinely be assigned by the Office of Graduate Studies and Research.

Final Quarter Enrollment Requirement

A student admitted to a master's degree program must be registered for a minimum of two (2) credits at the university during the quarter the master's degree is conferred. Enrollment for this purpose should be completed during the usual early registration or regular registration periods to ensure degree conferral if requirements are met.

The permit for scheduling the final examination, approved by the committee, must be filed in the Office of Graduate Studies and Research at least three weeks in advance of the examination. The final examination must be scheduled between the hours of 7 a.m. and 6 p.m., Monday through Friday, when the university is in session (not between quarters). Final examinations are conducted by the candidate's committee and are open to the faculty. The committee alone shall decide upon the merit of the candidate's performance. Final assessment of the examination will be reported on a satisfactory/unsatisfactory basis. The candidate shall pass the examination if two-thirds of the official graduate faculty committee members so indicate. In the event of an unsatisfactory final examination, a second examination may be scheduled upon the endorsement of the major department chair and with the approval of the dean of Graduate Studies and Research for the subsequent quarter with at least two months intervening.

All degree requirements must be completed within the same or next quarter from the exam date. Failure to complete remaining requirements by the end of the next quarter will result in requiring the final examination to be retaken.

A student whose name has been placed on the degree list for a particular quarter but who does not complete the requirements for degree conferral by the published deadline (two weeks before the last day of finals) and who does complete all the requirements by the last day of that quarter, will receive the degree the following quarter without further registration.

Advancement to Candidacy

A student becomes eligible for advancement to candidacy for a master's degree upon fulfillment of the following requirements:

1. Completion of the course requirements as set forth in the course of study;
2. Completion of the thesis, project or exam where appropriate;

3. Attainment of a cumulative grade point average of 3.0 (B) or higher for all courses taken since admission to the graduate program and all work included in the course of study;
4. Completion of additional departmental requirements, e.g., proficiency in a foreign language;
5. Fulfillment of the statute of time limitation (six years) requirement; and
6. Passing of an oral and/or written examination covering courses, seminars, and thesis, or other examinations deemed necessary by the major department.

Graduation

Application for a master's degree must be submitted to the Office of Graduate Studies and Research by the stated quarterly deadline. (The application is generated by the graduate office.) The application will not be completed without payment of binding and degree fees. The fee for the master's degree is \$14 plus a \$1 student benefit fee. The application is for a specific quarter of degree conferral. If requirements are not met, the student must reapply and pay the fees for degree conferral in a subsequent quarter.

Candidates for the master's degree are encouraged to participate in the commencement exercises following the completion of degree requirements. See the academic calendar in the front of this catalog for deadline dates to arrange for regalia.

Second Master's Degrees

Students seeking a second master's degree must be admitted to the second program in accordance with admission regulations and must complete an approved course of study (of at least 45 credits) distinct from the courses offered for the first master's degree.

Graduate Certificate Programs

In addition to the degree programs outlined above, the following graduate certificate programs are offered at the university.

Continuing Principal's Certificate

Continuing Program Administrator

Educational Staff Associate Certificate:

- School Counselor
- School Psychologist

Endorsement-only Program

Fifth Year of Study for Continuing or Professional Certificate

Renewal of Residency Certificate

Residency Program Administrator

Application forms and further information can be obtained from the office of the associate dean of the College of Education and Professional Studies located in Black Hall, room 228. The Certification Office is open daily, Monday through Friday, from 8 a.m. to 5 p.m. General inquiries and information regarding the fifth-year program and teacher certification should be addressed to the certification director. The telephone number is 509-963-2661.

Renewal of the Residency Teaching Certificate

The residency teaching certificate is valid for five years from the date of issuance and may be renewed once for a two-year period when the following requirements are met:

1. The individual completes a residency certificate renewal application, which may be secured from the office of the associate dean of the College of Education and Professional Studies.
2. The individual has completed all coursework requirements for the continuing certificate or has completed at least 15 quarter hours of coursework since last certificate was issued.

Continuing Certificate

Candidates for the continuing certificate must meet the following requirements:

1. Have a valid residency teaching certificate
2. Verify at least one year of full time teaching experience
3. Complete 45 credits of upper-division (300 level or higher) coursework, including courses in abuse, staff development and supervision, research and evaluation, and referral agencies.

To maintain the continuing certificate, each person must complete 150 clock hours of approved in-service education and/or 15 college or university credits every five years.

Professional Certificate

In addition to meeting requirements for the residency teaching certificate, candidates for the professional certificate must meet the following:

1. Completion of provisional status employment in a public or an approved private school defined as two years contracted teaching in the same district
2. Completion of an approved performance-based college/university professional certificate program. Please contact the office of the associate dean, College of Education and Professional Studies for application and information
3. Completion of coursework in issues of abuse.

To maintain the professional teaching certificate, an individual must complete 150 clock hours of in-service training every five years. Some of the clock hours must

relate to one of the six state salary criteria and some must relate to one of the three standards for the professional teaching certificate.

Endorsement-Only Program

CWU's Endorsement-only Program is available to certified teachers who hold the Washington State 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 submit an application (available online at www.cwu.edu/~cert) and official transcripts. A credit evaluation of the applicant's records will be completed by the Certification Office, routed to the endorsing department for approval, and then forwarded to the applicant.

School Administration Certificates

Central has been authorized by the State Board of Education to recommend issuance of residency and continuing principal's certificates valid for service as vice principal, assistant principal, or principal of elementary, middle, junior high, and/or high schools. The university is also authorized to recommend issuance of the program administrator certificate as director of instructional leadership or special education. These programs of preparation include formal study and internship experiences. (See Master of Education, Administration, Special Education, or Instructional Leadership.)

Requirements for the residency certificate include:

1. Possession of a valid teacher or educational staff associate (whichever is appropriate) certificate
2. Completion of the master's degree
3. If the master's degree is already earned from an accredited institution, please check with the school administration program director regarding program requirements
4. Three years of successful, contracted teaching experience in a state-approved K-12 setting is required
5. One academic year as an administrative intern at the level for which certification is being sought.

Requirements for the continuing certificate include:

1. Three years of full-time experience as a practicing administrator (for continuing principal certificate, experience must be as principal, vice principal or assistant principal)
2. Completed of all requirements for residency certificate.

Persons seeking further information are invited to correspond with the school administration program director in the education department.

Special Certificates

Preparation for special certificates, authorized by the State Board of Education, is available at Central. Programs leading to the educational staff associate certificate are available in school counseling and school psychology.

Programs leading to certification in specific vocational areas are available in business education, marketing education, diversified occupation, family and consumer sciences, and trade and industrial (including health occupations and technical education.) For information regarding these programs, please contact the specific departments.

Applications for the school counselor or school psychologist ESA certificate can be obtained from the psychology department and are processed through the office of the associate dean of the College of Education and Professional Studies.

Those interested in other special certificates should contact the Washington State Director of Certification, Office of the Superintendent of Public Instruction, Old Capital Building, P.O. Box 47200, Olympia, WA 98504-7200.

Master's Degree and Certification

Please note that a graduate student enrolled in a master's degree program does not necessarily satisfy all certification requirements by completing the master's degree. Students pursuing master's degrees in combination with certificate programs should maintain contact with the department of their specialization and with the office of the director of certification to ensure that all requirements are met.

University Centers

Central Washington University has eight 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 the University Centers website at cwu.edu/admissions/cwu-center-locations. For more information about the University Centers, contact Melanie Plam, Director of Operations, University Centers and Community College Relations.
Phone: 509-963-3710
E-mail: palm@cwu.edu

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:

- MA Law and Justice
- MEd Master Teacher
- MEd School Administration
- MPA Professional Accountancy

CWU-Lynnwood

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

Degree Programs:

- 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 & Physical Education: Athletic Administration Specialization – Online Only
- MS Master of Science in Health & Physical Education – 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:

- MEd Master Teacher

CWU-Wenatchee

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

Degree Programs:

- MEd Master Teacher

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).

College of Arts and Humanities

Administration and Organization

Dean

Marji Morgan, PhD (Hebeler Hall, room 202)

Associate Dean

Rodney Bransdorfer, PhD (Hebeler Hall, room 202)

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 bachelor's 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 102)

Environmental Studies

Anne Johansen, PhD (Science, room 207D)

Ethnic Studies

Delores Cleary, PhD (Farrell, room 442)

Women's and Gender Studies

Cynthia Coe, PhD (Language and Literature Building, room 318)

College of Business

Administration and Organization

Dean

Kathy Martell, PhD (Shaw-Smyser Hall, room 129)

Associate Dean

Laura Milner, PhD (Shaw-Smyser Hall, room 126)

509-963-1955

Fax: 509-963-3042

www.cwu.edu/business

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
- Certificates in:
 - 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. In addition, upper-division coursework in support of major programs is offered at three Eastern Washington centers: Wenatchee, Moses Lake, and Yakima. Please refer to departmental listings in this catalog for more information about each 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 major program prior to enrolling in 300- and 400-level courses within the college. Application forms are available on-line as well as at CWU Centers and at the Ellensburg main campus department offices. The application form must be completed and returned to the appropriate office along with copies of current transcripts. Applications are only accepted at new student orientations. The applicant must be in good academic standing.

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. 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 with those endorsed by the Washington Society of CPAs preferred. Credits for current students participating in a CWU study abroad program will be evaluated by the Office of the Registrar.

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. 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).

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

Connie Lambert, PhD (Black Hall, room 228)

Associate Dean of Professional Studies

Ethan Bergman, PhD (Black Hall, room 228)

509-963-1975

Fax: 509-963-1049

Interim Associate Dean of Education

Virginia Erion, PhD (Black Hall, room 228)

509-963-1935

Fax: 509-963-1049

www.cwu.edu/education-professional-studies

The primary role of the College of Education and Professional Studies (CEPS) is to support the mission of the university by offering and supporting educational opportunities of the highest quality for students. The mission of the college is to prepare enlightened leaders for the professions and for society-leaders who will commit themselves to socially responsible citizenship in a global society. From the college's perspective, its role is fulfilled by creating and nurturing an academic environment where quality and excellence are synonymous with achievement. Each academic unit of the college has developed specific goals and objectives to complement this mission.

Departments

Advanced Programs: Henry Williams, EdD (Black Hall, room 241-25)

Aerospace Studies (AFROTC): Jason Densley, Lt. Colonel, USAF (Peterson Hall, room 203)

Aviation: Amy Hoover, PhD (Black Hall, room 225-1)

Educational Foundations & 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 Dorothy Chase, 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 (ROTC): 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)

Center for Teaching and Learning

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.

The CTL director is Connie Lambert. For information about the School Administrator program, contact the Department of Advanced Programs. For information about the school counselor and school psychologist programs, contact the Department of Psychology.

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.

College of the Sciences

Administration and Organization

Dean

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

Associate Dean

David M. Darda, PhD (Dean Hall, room 130)

Staff

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

509-963-1866

Fax: 509-963-1977

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 bachelor's 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 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, PhD
Science Building, room 302
509-963-2811

Computer Science:

James Schwing, 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:

Timothy Englund, PhD
Bouillon Hall, room 108
509-963-2103

Physics:

Andy Piacsek, PhD
Lind Hall, room 201A
509-963-2727

Political Science:

Bong Soon Yoon, PhD
Psychology Building, room 415
509-963-2408

Psychology:

Stephanie Stein, PhD
Psychology Building, room 421
509-963-2381

Science Education:

Martha Kurtz, 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 107
509-963-2929

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:

Anthony Gabriel, PhD
Dean Hall, room 320
509-963-1166

Steve Hackenberger, PhD

Dean Hall, room 349
509-963-3224

Science Honors:

Audrey Huerta, PhD
Lind Hall, room 118-A
509-963-2718

Science Talent Expansion Program (STEP):

Wendy Bohrsen, PhD
Lind Hall, room 101
509-963-2835

Women's and Gender Studies:

Cynthia Coe, PhD
Language and Literature Bldg., room 318
509-963-2008

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 Johnsen, PhD
Science, room 207D
509-963-2164

Central Washington Archaeological Survey,
Anthropology:
Patrick McCutcheon, PhD
Dean Hall, room 340
509-963-2075
Steve Hackenberger, PhD
Dean Hall, room 349
509-963-3224

Chimpanzee and Human Communication
Institute (CHCI):
Mary Lee Jensvold, PhD
CHCI Building
509-963-2215

Community Counseling and Psychological
Assessment Center:
Robyn Brammer, PhD
Psychology Building, room 427
509-963-3669

Cultural Resources:
Pat Lubinski, PhD
Dean Hall, room 338
509-963-3601

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

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 <http://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 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 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 Instructional Leadership
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
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
BA/BS Specialized Studies

Online Minors

Administrative Management Minor
Family Studies Minor
Latino and Latin American Studies Minor
Law and Justice 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

Accounting Department

College of Business
Ellensburg (E)
Shaw-Smyser Hall, room 327
CWU-Des Moines (D)
CWU-Lynnwood (L)

509-963-3340
Fax: 509-963-2875

www.cwu.edu/accounting

See the website for how this program 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

Ronald R. Tidd, PhD, CPA (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)
James H. Thompson, PhD, (D)
Ke Zhong, PhD (D)

Assistant Professor

Clemense E. Ehoff, Jr., PhD, CPA (E)

Senior Lecturers

Melissa Becker (E)
Asher Wilson, MBA, JD, CPA (D)
Margaret A. Smith, MBA, CPA (E)

Staff

Lisa Woods, secretary

Master of Professional Accountancy

Overview

The Department of Accounting offers a master of professional accountancy degree. The program's objective is to help students increase their knowledge about accounting and business, while developing skills in critical thinking, oral and written communications, teamwork, and the use of information technology to research and

analyze accounting and business issues. MPA graduates will be able to identify and resolve such issues in a manner that complies with professional standards.

Admission Requirements

In addition to general regulations for admission to master's programs, admission to the master of Professional Accountancy Program requires the following:

1. Meet one of the following five degree requirements:

a. Bachelor's degree in accounting from an accredited U. S. university; or

b. Bachelor's degree in accounting from an accredited international university may be provisionally accepted. Full acceptance will be granted upon completion of the U.S. tax and business law courses listed below, with a 3.0 grade point average.

ACCT 346, Income Tax Accounting
BUS 241, Legal Environment of Business

c. Bachelor's degree in business administration from an accredited university may be provisionally accepted. Full acceptance for provisionally accepted students shall result upon completion of the core accounting courses listed below with a 3.0 grade point average.

ACCT 305, Cost Accounting
ACCT 346, Income Tax Accounting I
ACCT 350, Intermediate Accounting I
ACCT 351, Intermediate Accounting II
ACCT 352, Intermediate Accounting III
ACCT 460 Auditing

d. Bachelor's degree in managerial/business economics from an accredited university may be provisionally accepted. Full acceptance for provisionally accepted students shall result upon completion of the core business and accounting courses listed below with a 3.0 grade point average.

ACCT 305, Cost Accounting
ACCT 346, Income Tax Accounting I
ACCT 350, Intermediate Accounting I
ACCT 351, Intermediate Accounting II
ACCT 352, Intermediate Accounting III
ACCT 460, Auditing
BUS 241, Legal Environment of Business
MGT 489, Strategic Management

e. Bachelor's degree from an accredited university in an area other than accounting, business administration, or managerial/business economics may be provisionally

accepted. Full acceptance for provisionally accepted students will result upon completion of the following core business courses with a 3.0 grade point average and the core accounting courses with a 3.0 grade point average.

ACCT 251, Accounting I
ACCT 252, Accounting II
ACCT 305, Cost Accounting
ACCT 346, Income Tax Accounting I
ACCT 350, Intermediate Accounting I
ACCT 351, Intermediate Accounting II
ACCT 352, Intermediate Accounting III
ACCT 455 Accounting Information Systems
ACCT 460, Auditing
BUS 221, Introductory Business Statistics
BUS 241, Legal Environment of Business
ECON 201, Principles of Economics Micro
ECON 202, Principles of Economics Macro
FIN 370, Introduction of Financial Management
MGT 382, Principles of Management
MGT 489, Strategic Management
MKT 362, Essential Marketing Concepts

2. Applicants are required to submit a Test of English as a Foreign Language (TOEFL) Internet-based score of 79 or above or paper-based score of 550 or above or an International English Language Testing System (IELTS) score of 6.5 or above, if their native language is not English. 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 approved by the National Association of State Boards of Accountancy (NASBA), such as Education Credential Evaluations, Inc. (ECE), Foreign Academic Credentials Services (FACS), Global Services Associates (GSA), or World Education Services, Inc.

3. Applicants must submit Graduate Management Admission Test (GMAT) scores instead of Graduate Record Examination (GRE) scores. (At the program director's discretion, this requirement can be waived for applicants who request the waiver and have an undergraduate accounting degree from CWU and a GPA of 3.25 or higher in upper-division accounting courses). A minimum GMAT total score of 500 is desired for admission into the MPA Program. Admission to the program will be competitive based mainly on grade-point average and scores on the Graduate Management Admission Test (GMAT) using the following formula:

(Grade point average on a 4.0 scale X 200) = 800 points possible
+(GMAT) = 800 points possible
Total Score = 1,600 points possible

The factor will be used for the initial ranking of candidates for admission consideration. In addition to the factor rankings, the department may use other considerations to develop the final admissions list. Due to space considerations, a separate admissions list will be developed for each location. Students will be accepted into the program at a specific location and will be allowed to take classes only at that location. Students may not transfer to other locations without the permission of the department chair.

Master of Professional Accountancy

Program Requirements

To graduate with the MPA degree, the Office of Graduate Studies and Research requires a cumulative grade-point average of at least 3.0 in the courses listed in the student's course of study. The MPA program requires each student to take four accounting courses and five non-accounting courses. In addition, the student must successfully pass the comprehensive exam (ACCT 700) in the last quarter of coursework and comply with the procedural requirements of the university and the Office of Graduate Studies and Research.

No more than five elective credit hours may be transferred toward meeting the requirements of the MPA program. Subject to the approval of the department chair and the college dean or designee, those credits can be earned in other accredited graduate programs.

Required Courses

- ACCT 583 - Seminar Auditing **Credits:** (5)
- ACCT 700 - Master's Thesis, Project Study, and/or Examination **Credits:** (1)
- ECON 552 - Managerial Economics and Business Strategy **Credits:** (5)
- FIN 570 - Advanced Financial Management **Credits:** (5)
- MGT 525 - Strategic Management/Business Simulation **Credits:** (5)
- MGT 589 - Business Ethics **Credits:** (5)
- SCM 510 - Supply Chain Management Principles and Practices **Credits:** (5)

Select three courses from the following for 15 credits:

- ACCT 505 - Advanced Cost Accounting **Credits:** (5)

- ACCT 530 - Governmental and Non-profit Accounting **Credits:** (5)
- ACCT 546 - Income Tax Accounting II **Credits:** (5)
- ACCT 550 - Advanced Accounting **Credits:** (5)
- ACCT 561 - Fraud Examination **Credits:** (5)
- ACCT 565 - Current Issues in Information Technologies **Credits:** (5)
- ACCT 575 - International Accounting **Credits:** (5)
- ACCT 584 - Professional Writing and Speaking for the Accountant **Credits:** (5)
- ACCT 590 - Cooperative Education **Credits:** (1-5)
- ACCT 596 - Individual Study **Credits:** (1-6)
- ACCT 598 - Special Topics **Credits:** (1-6)
- BUS 541 - Advanced Business Law **Credits:** (5)

Total Credits: 46

Advanced Programs

College of Education and Professional Studies
 Ellensburg
 Black Hall, room 214-25
 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 Professors

Dennis Szal, EdD

Donald Wattman, EdD

Lecturer

Leona Lindvig, MEd, library media

Staff

Ayla Lewis, secretary senior

Department Information and Requirements

Programs included in the Department of Advanced Programs are masters and certification of education administration, administrative certifications in education, library media endorsement and professional certification in school administrator.

The master of education school administration or master

of education an instructional leadership degree programs prepare teachers for the residency principal's certificate or program administrator's certificate. A student shall complete 45 credits (school administrator or instructional leadership) in an approved course of study to be developed in consultation with the graduate advisor. There are also certificate programs available.

The Library Media Program qualifies students to become library media specialists for K-12 schools in Washington. A student shall complete 27 credits of required courses. Candidates must take and pass the WEST-E in library media prior to receiving endorsement.

Professional certification school administrator is for education administrators to renew their residency Principal or Program Administrator certificates (OSPI requirement).

Program Admission Requirements

In addition to general requirements for admission into the master's program, students desiring admission to the Department of Advanced Programs in Education must meet departmental requirements. Members of the appropriate program will review the student's application materials from the Office of Admissions and, if deemed necessary, may meet with the student before a recommendation for admission can be made.

Required Educational Foundations and Research Courses

EDF 510 is required of all students earning the MEd degree. The candidate further must choose at least three credits from the following: EDF 501, Educational Foundations; EDF 502, History of Education; EDF 503, Philosophy of Education; or EDF 504, Educational Measurement for Teachers. Related courses may be substituted with permission of the student's graduate advisor or committee chair, the chair of the department, and the dean of Graduate Studies and Research.

Administrative Certificates in Education

The Administrative Certification Program (ACP) qualifies students upon successful completion for their residency principal certificate or program administrator certificate in special education.

Master of Education

Faculty and Staff

Chair

Henry Williams, EdD

Professors

Henry Williams, EdD

Robert Perkins, PhD

Associate Professor

Heidi Pellet, PhD

Associate Dean

Jesse Nelson, PhD, Associate Dean of Student Achievement and Student Success

Adjunct Professors

John David, PhD

Jenna Hyatt, doctoral candidate

Higher Education, MEd

The degree 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, of the social sector. Program coursework provides students with a strong grounding in leadership/management/organizational development with particular attention to the higher education context.

Program Requirements

Incoming candidates are expected to meet the requirement for admission to the graduate programs at Central Washington University. To graduate with the M.Ed. in Higher Education, the Office of Graduate Studies and research requires a cumulative grade-point average of at least 3.0 in the courses listed in the student's coursework.

Course Requirements

Students will not be allowed to enroll in any of the courses until they have been admitted into the master of Higher Education Program.

Required Courses

- EDHE 510 - History of Higher Education **Credits:** (3)
- EDHE 511 - Research in Higher Education **Credits:** (4)
- EDHE 515 - College Student Development **Credits:** (3)
- EDHE 517 - Organizational Dynamics **Credits:** (3)

- EDHE 518 - Program Evaluation and Assessment **Credits:** (3)
- EDHE 525 - Organizational Communication in Higher Education **Credits:** (3)
- EDHE 572 - Leadership and Supervision in Higher Education **Credits:** (3)
- EDAD 577 - Diversity Leadership **Credits:** (3)
- EDAD 581 - Public School Finance **Credits:** (4)
- EDAD 589 - School Law **Credits:** (4)
- EDAD 596 - Individual Study **Credits:** (1-6)
- EDAD 700 - Thesis/Project Study/Exam **Credits:** (1-3)

Advisor-approved electives - Credits: (6)

Total Credits: 45

Instructional Leadership, MEd

The Master of Education Instructional Leadership Program prepares teachers for the residency program administrator certificate. A student shall complete 40 credits in an approved course of study to be developed in consultation with the graduate advisor. This program does not automatically qualify the student for the residency program administrator certificate, which requires that an applicant complete an application, be accepted to the Administrator Certification Program, and complete the required coursework in addition to a 12-credit, year-long internship. The MEd Instructional Leadership Program prepares individuals who can provide appropriate leadership and direction to the school professional staff and to the community by developing and implementing unified instructional programs in the district.

Admission Requirements:

One year of successful, contracted teaching experience in a K-12 classroom setting; minimum GPA 3.0; full admission to CWU; statement of objectives; three references, one must be from your current principal; transcripts from all institutions attended. Note: Completion of the master's degree does not automatically allow you to achieve the administrator's certificate.

Students will not be allowed to register for EDAD courses until they have been fully admitted to either the master's degree program or the Administrator Certificate Program. See your advisor if you have completed recent graduate coursework in intercultural education (i.e., EDF 507).

Required Courses

- Educational Foundations and Research Courses (to include EDF 510) Credits: (7)
- EDAD 577 - Diversity Leadership **Credits:** (3)

- EDAD 580 - Educational Administration **Credits:** (4)
- EDAD 581 - Public School Finance **Credits:** (4)
- EDAD 582 - School Curriculum **Credits:** (4)
- EDAD 583 - School and Community **Credits:** (4)
- EDAD 584 - School Supervision **Credits:** (4)
- EDAD 589 - School Law **Credits:** (4)
- EDAD 700 - Thesis/Project Study/Exam **Credits:** (1-3)

Department-approved electives - Credits: 3

Total Credits: 40

School Administration, MEd

The Master of Education School Administration Program prepares teachers for the residency principal's certificate. A student shall complete 45 credits in an approved course of study to be developed in consultation with the graduate advisor. This program does not automatically qualify the student for the residency principal's certificate, which requires that an applicant complete an application and be accepted to the Administrator Certification Program and complete the required coursework in addition to a 12-credit, year-long internship. The MEd School Administration Program prepares individuals who can provide appropriate leadership and direction to the school professional staff and to the community by developing a unified system for managing human resources; developing long-range plans, policies and goals, and; executing the policies developed by the district.

Admission Requirements:

One year of successful contracted teaching experience in a K-12 classroom setting; minimum GPA 3.0; full admission to CWU; statement of objectives; three references, one must be from your current principal; transcripts from all institutions attended. Note: Completion of the master's degree does not automatically allow you to achieve the administrator's certificate.

Students will not be allowed to register for EDAD courses until they have been fully admitted to either the master's degree program or the Administrator Certificate Program. See your advisor if you have completed recent graduate coursework in intercultural education (i.e., EDF 507).

Required Courses

- Educational Foundations and Research courses (to include EDF 510) **Credits:** (7)
- EDAD 577 - Diversity Leadership **Credits:** (3)
- EDAD 579 - School Personnel **Credits:** (4)

- EDAD 580 - Educational Administration **Credits:** (4)
- EDAD 581 - Public School Finance **Credits:** (4)
- EDAD 582 - School Curriculum **Credits:** (4)
- EDAD 583 - School and Community **Credits:** (4)
- EDAD 584 - School Supervision **Credits:** (4)
- EDAD 586 - The Principalship **Credits:** (4)
- EDAD 589 - School Law **Credits:** (4)
- EDAD 700 - Thesis/Project Study/Exam **Credits:** (1-3)

Total Credits: 45

Library Media-All Levels

This program is to qualify students to become Library Media Specialists for K-12 schools in Washington State. This is an intensive, eight-week, cohort program taught over two summers (four weeks the first summer, four weeks the second summer) with a nine-month practicum to take place between the first and second summers.

Required Courses

- EDLM 514 - Technology Tools for the Library **Credits:** (3)
- EDLM 516 - Application of Technology Resources **Credits:** (3)
- EDLM 526 - Instructional Methods in the Library **Credits:** (3)
- EDLM 536 - Survey of Children's and Young Adult Literature **Credits:** (3)
- EDLM 548 - Collection Development/Library Media **Credits:** (3)
- EDLM 558 - Cataloging and Classification for Library Media **Credits:** (3)
- EDLM 568 - Research and Information Fluency **Credits:** (3)
- EDLM 578 - Administration of Library Media Programs **Credits:** (3)
- EDCS 596 - Individual Study **Credits:** (1-6) (Must be taken for 3 credits)

Total Credits: 27

Residency Principal's Certificate

This certification program is available to individuals who already possess a master's degree or who are currently working on a MEd in school administration. Three years of successful, contracted teaching experience in a K-12 educational setting within the most recent five years is required before admission to the program is granted. Contact the Department of Advanced Programs for details and admission information.

Students will not be allowed to register for EDAD courses until they have been fully admitted to either the master's degree program or the administrator certificate program. See your advisor if you have completed recent graduate coursework in Intercultural Education (i.e., EDF 507).

Required Courses

- EDAD 577 - Diversity Leadership **Credits:** (3)
- EDAD 579 - School Personnel **Credits:** (4)
- EDAD 580 - Educational Administration **Credits:** (4)
- EDAD 581 - Public School Finance **Credits:** (4)
- EDAD 582 - School Curriculum **Credits:** (4)
- EDAD 583 - School and Community **Credits:** (4)
- EDAD 584 - School Supervision **Credits:** (4)
- EDAD 586 - The Principalship **Credits:** (4)
- EDAD 589 - School Law **Credits:** (4)
- EDAD 692 - Pre-autumn Internship **Credits:** (3)
- EDAD 693 - Intern School Administration **Credits:** (3-9)

Total Credits: 47

Residency Program Administrator Certificate

This Certification Program is available to individuals who already possess a master's degree or who are currently working on a MEd in school administration. Three years of successful, contracted teaching experience in a K-12 educational setting within the most recent five years is required before admission to the program is granted. Contact the Department of Advanced Programs for details and admission information.

Students will not be allowed to register for EDAD courses until they have been fully admitted to either the master's degree program or the Administrator Certificate Program. See your advisor if you have completed recent graduate coursework in Intercultural Education (i.e., EDF 507).

Required Courses

Additional courses may be required (e.g., special education and/or multicultural education) depending upon the background and experience of individual students.

- EDAD 577 - Diversity Leadership **Credits:** (3)
- EDAD 580 - Educational Administration **Credits:** (4)
- EDAD 581 - Public School Finance **Credits:** (4)
- EDAD 582 - School Curriculum **Credits:** (4)
- EDAD 583 - School and Community **Credits:** (4)
- EDAD 584 - School Supervision **Credits:** (4)
- EDAD 589 - School Law **Credits:** (4)
- EDAD 692 - Pre-autumn Internship **Credits:** (3)
- EDAD 694 - Internship in Improvement of Instruction and Curriculum Development **Credits:** (3-9)

Department-approved electives: Credits 3

Total Credits: 42

Residency Program Administrator Certificate (Special Education)

This certification program is available to individuals who already possess a master's degree or who are currently working on a MEd in special education or related field. Three years of successful, contracted teaching experience in a K-12 educational setting within the most recent five years is required before admission to the program is granted. Contact the Department of Advanced Programs for details and admission information.

Students will not be allowed to register for EDAD courses until they have been fully admitted to either the master's degree program or the Administrator Certificate Program. See your advisor if you have completed recent graduate coursework in intercultural education (i.e., EDF 507).

Required Courses

- EDAD 575 - Administration and Supervision of IDEA **Credits:** (3)
- EDAD 577 - Diversity Leadership **Credits:** (3)
- EDAD 580 - Educational Administration **Credits:** (4)
- EDAD 581 - Public School Finance **Credits:** (4)
- EDAD 584 - School Supervision **Credits:** (4)
- EDAD 692 - Pre-autumn Internship **Credits:** (3)
- EDAD 694 - Internship in Improvement of Instruction and Curriculum Development **Credits:** (3-9)

- EDSE 512 - Educational Rights of Individuals with Disabilities **Credits:** (3)

Total Credits: 33

Anthropology and Museum Studies Department

College of the Sciences
Ellensburg
Dean Hall, room 357

509-963-3201
Fax: 509-963-3215
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, biological anthropology
Tracy J. Andrews, PhD, 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 (emeritus), PhD, 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

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 (on sabbatical 2012-2013)

William C. Smith (emeritus), PhD, 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, CHCI
Joseph Lorenz, PhD, biological anthropology, anthropologist genetics, DNA, ancient DNA, genetics of American Indians, North America

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 jointly coordinates the master of science degree program in resource management with the geography department. For further information, see resource management.

Art Department

College of Arts and Humanities
Ellensburg
Randall Hall, room 100

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
Shari Stoddard, PhD, art education

Assistant Professors

Ellen Avitts, PhD, art history

David Bieloh, MFA, graphic design

Allyson Klutenkamper, MFA, photography

Staff

Jeff Cleveland, department maintenance

Heather Horn Johnson, gallery manager

Lynn Thompson, secretary senior

Department Information

The art department offers two graduate degree programs for students wishing to study visual art beyond the baccalaureate level. Each degree requires that candidates complete coursework in art concepts and criticism, art history, studio area of concentration, electives, and a creative thesis project.

The 45-credit, master of arts (MA) program offers students advanced study in the various studio areas. The MA is intended for students who desire graduate-level training in art and helps prepare them for various arts-related careers and for further advanced studies in art.

The 90-credit master of fine arts (MFA) is a terminal degree program providing students with professional levels of competency and experience in studio art. The MFA program qualifies students for careers as teachers in higher education, as professional studio artists, and for other studio-arts-related vocations. The following studio art concentrations are offered at Central:

Ceramics

Drawing

Jewelry and Metalsmithing

Painting

Photography

Sculpture

Wood Design

Policies and Procedures

Departmental policies and procedures regarding graduate study are fully described in the departmental "Graduate Handbook.

Application and Admission: In addition to the university regulations governing admission to graduate degree programs, the following specific regulations apply to both the MA and MFA programs:

A. Acceptance is primarily based on the student's potential as evidenced by a portfolio, previous coursework in art, goals consistent with departmental resources, and other experiences relevant to art making. Applicants may be asked to have a telephone interview with a faculty member in their area of studio

concentration before being admitted to a program.

B. Applicants are required to submit 20 examples of their recent work in the form of digital images on a CD (please follow digital images format directions below) and a printed image list. This documentation should represent the depth and breadth of the applicant's work. Students are strongly urged to visit the campus and arrange a personal interview with faculty members in their major area of concentration and with the art department chair prior to submitting an application. Consistent with the above criteria, applicants with undergraduate degrees in disciplines other than visual arts are encouraged to apply. The digital portfolio CD should be mailed directly to the Department along with copies of all application material.

Digital Images format: Dimensions of digital images should be 1920 pixels x 1920 pixels at 72 dpi. File format should be baseline JPG. The canvas background color should be black. If your image is horizontal there would be black horizontal bands on the top and bottom. If your image is vertical there would be black vertical bands on the left and right. Please include an image list to correspond with file names. Files should be named yourlastname001.jpg, (Your last name, the image number and the file extension). Submit your digital images on a CD (images only, do not embed in PowerPoint or Keynote).

Image List: Please include an image/work list. List the work submitted (numbered to correspond with digital images if you are submitting a CD). Include title, date completed, medium and dimensions.

Transfer of Credits: The general provisions for the transfer of credits are set forth under the catalog heading, "General Master's Degree Regulations."

Residence Requirements: Students must be in residence three consecutive full-time quarters (excluding summers). All studio credits, except those approved under the transfer of credit provisions, must be taken in residence. For these purposes, residence may include credits taken in travel study, internship programs, or other study taken elsewhere but listed on the approved course of study.

Graduate Committee: A committee of at least three faculty members will be organized by the student during the student's first quarter of residency. The members of this committee will be chosen in consultation with the student's committee chairperson. The chair of the committee, in consultation with the student, will schedule a meeting at least once each quarter. More frequent meetings may be scheduled. The purposes of these meetings are:

- To determine that the student is making satisfactory progress in the degree program
- To evaluate the student's studio work
- To identify problems and to offer solutions.

A first-year review will consist of an evaluation of the student's work, completed or in progress, including review of non-studio coursework. MFA/MA candidacy is contingent on successful progress in the following areas: studio work, knowledge of art history, and understanding of contemporary theory and criticism. Additional coursework may be required at the graduate committee's discretion.

Further details regarding the graduate committee process are provided in the graduate handbook.

Graduate Assistantships: Teaching or staff assistantships are awarded on a competitive basis. Assistants are granted by the dean of Graduate Studies and Research based upon the recommendation of the department chair.

Studio Space: Shared or individual studio workspace is provided to graduate students as available and will be allocated by the chair of the art department.

Studio Project: In order to successfully complete ART 700, Studio Project, the MFA/MA candidate must present a cohesive body of work completed in the last year of study as evidence of mastery in their area of concentration. This studio project is developed in consultation with the student's graduate committee and presented as a public exhibition. The studio project also requires students to present a written document that supports their body of work.

The written document must meet thesis format standards as required by the Office of Graduate Studies and Research.

Final Oral Examination: Upon completion of the studio project, the student will discuss and defend the project and the accompanying written document in an oral examination conducted by the graduate committee. Upon successful completion of the oral examination, the graduate committee will confer and render a determination of the success of the student's project.

Master of Fine Arts in Art

Required Courses

- Art History, 400 level and above **Credits:** (12)
- Major Studio Concentration **Credits:** (40-56)
- Electives Outside Major Studio Concentration **Credits:** (12-24)

- ART 589 - Art Concepts and Criticism **Credits:** (3)
- ART 700 - Master's Thesis, Project Study, and/or Examination **Credits:** (1-12) (Must be taken for 12 credits)

Total Credits: 90

Biological Sciences Department

College of the Sciences
Ellensburg
Science Building, room 338

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

Program Description

The graduate program in biology is designed to provide training and expertise for those needing a terminal degree for entry-level biological science positions in state, federal, and tribal agencies, as well as for positions in private industry or teaching at the secondary or community college level. It serves other students by providing them with the skills and techniques required for further graduate study beyond the MS degree. Students considering further graduate study should work closely with their major advisor to design a program of coursework that meets the requirements for PhD programs. Graduate students in biology may tailor their program to emphasize a specific discipline within the biological sciences.

Admission

Admission is a two-step process. Applicants must first meet the general requirements for graduate study as determined by the Office of Graduate Studies and Research, and then the specific requirements of the Department of Biological Sciences. Items needed to enroll:

1. An undergraduate degree in biology or closely related field. Deficiencies in the student's undergraduate training as determined by the Department of Biological Sciences at the time of admission to the program must be removed

without graduate credit during the first year of graduate study.

2. Students must submit GRE scores for the general test. Students applying to the masters in biology with a specialization in biomedical sciences may substitute MCAT scores for GRE scores.
3. International students for whom English is a second language must provide TOEFL scores to demonstrate English proficiency.
4. Students must arrange for a graduate faculty advisor in the Department of Biological Sciences to serve as their major advisor.

Biology MS, Biomedical Sciences Specialization

Program Coordinator

James Johnson, PhD

Science Building, room 338J

Program Requirements

The coursework leading to the master of science in biological sciences will total at least 45 credits in the biological sciences and related subjects as outlined in an approved course of study filed with the Office of Graduate Studies and Research. The individual's program of coursework and thesis problem will be developed in consultation with the student's major advisor and other members of the student's graduate committee. Two quarters in residence are required.

Examinations

Candidates must pass an oral examination covering topics in their area of specialization and coursework taken for their degree at least one quarter prior to graduation. The final examination will consist of a public seminar to present the results of the thesis or project research as well as an oral exam administered by the student's thesis committee covering aspects of the thesis research.

MS Biology Core Requirements

- BIOL 501 - Research Methods and Techniques **Credits:** (4)
- BIOL 502 - Research Proposal Presentations **Credits:** (2)
- BIOL 505 - Current Topics in Biology **Credits:** (2) (Must be taken for 6 credits.)
- BIOL 595 - Graduate Research **Credits:** (1-10) (Must be taken for 10 credits.)
- BIOL 602 - Research Presentations **Credits:** (2)
- BIOL 700 - Master's Thesis, Project Study, and/or Examination **Credits:** (1-6) (Must be taken for 6 credits.)

Total Core Credits: 30

Department-approved electives - Credits: 15

Total Credits: 45

Biomedical Sciences Specialization

The Central Washington University master of sciences in biology with a specialization in biomedical sciences degree program is a professional as well as pre-professional course of study designed for students seeking careers in biomedical research or to help students become stronger applicants to medical school or other professional programs. Students who have already completed their course requirements or admission to the medical school can strengthen their candidacy by demonstrating their performance in some of the same courses taken by first-year medical students at the Pacific Northwest University of Health Sciences (PNWU) Doctor of Osteopathic Medicine Program and broadening their background as scientists by conducting an original research project with faculty at CWU while earning a master of science degree in biology.

Preferred admission to the Pacific Northwest University of Health Sciences Doctor of Osteopathic Medicine Program will be granted to students who:

- Successfully complete the MS in biology-specialization in biomedical sciences with a B average or higher
- Have a minimum MCAT score of 22
- Are approved by the admissions interview committee at PNWU.

Financial Obligations

Because this is a self-support program, no tuition waiver programs apply, and additional continuing education tuition applies.

MS Biology Core Requirements Credits: 30

Required Courses

- BIOL 521 - Cellular Sciences I **Credits: (4)**
- BIOL 522 - Cellular Sciences II **Credits: (4)**
- BIOL 523 - Cellular Sciences III **Credits: (4)**
- BIOL 553 - Medical Physiology I **Credits: (4)**
- BIOL 554 - Medical Physiology II **Credits: (4)**
- BIOL 555 - Medical Physiology III **Credits: (4)**

Total Credits: 24

Specialization Total Credits: 54

PNWU Admission Courses

The following elective courses are not required for completion of the specialization in biomedical sciences, but are required for preferred admission status to the PNWU Doctor of Osteopathic Medicine Program.

- BIOL 556 - Gross and Developmental Anatomy I **Credits: (4)**
- BIOL 557 - Gross and Developmental Anatomy II **Credits: (4)**
- BIOL 558 - Gross and Developmental Anatomy III **Credits: (6)**

Total Credits: 18

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

CWU is the lead/recommending institution for this program, which includes Pacific Lutheran University, Heritage University, and Western Washington University as partners. The goal of the consortia program is to prepare teachers in state-identified shortage areas for jobs in communities where they currently live. The minimum number of interns accepted into the program shall be 10; the maximum to be accepted shall be 25.

All courses, regardless of offering institution, will be completed, in-person, at CWU-Yakima, which is located at Yakima Valley Community College, Deccio Higher Education Building, 1000 S. 12th Avenue, Yakima, WA 98902. Distance education, K-20, or internet/hybrid classes will not be available for this program.

Admissions requirements are listed in the College of Education and Professional Studies section of the catalog following certification information.

Chemistry Department

College of the Sciences
Ellensburg
Science Bldg., room 302

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
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

Levente Fabry-Asztalos, PhD, organic
Dion Rivera, PhD, physical, analytical
Tim Sorey, PhD, chemistry education

Assistant Professors

Gil Belofsky, PhD, organic
Stephen Chamberland, PhD, organic
Yingbin Ge, PhD, physical
Todd Kroll, PhD, biochemistry

Lecturers

Jeff Bullock, MS, general
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
Don Davis, computer technician
Katie Johnston, stockroom assistant
Julie Khyler, safety officer
Lisa Stowe, secretary
Jeff Wilcox, instrument technician

Master of Science Chemistry

Program Objectives and Descriptions: The graduate program in chemistry is tailored to satisfy individual

student aspirations and is designed to provide knowledge, skills, and discovery within the chemical sciences. The program prepares candidates for professional employment in chemistry careers including industry, consulting, local, state and federal government, and for teaching at the community college or secondary level. Employed workers with a bachelor's degree may also seek additional training in the chemical sciences to enhance or expand their career prospects. Additionally, the program provides a foundation for further graduate studies beyond the MS level in chemistry and related fields.

Graduate students in chemistry can focus their studies in any of the major areas of chemistry, including biochemistry, organic, physical, analytical and inorganic chemistry, and chemistry education. Emphasis in a specific area through appropriate courses and seminars is enhanced by requisite graduate research. Practical and collaborative internship experiences through industrial, governmental, academic research, or community college teaching partnerships are possible. The department utilizes state-of-the-art and fully equipped laboratory facilities with an array of modern instrumentation and computational capabilities. Furthermore, it operates a state-certified environmental testing laboratory.

The chemistry graduate program at Central Washington University has three different options for obtaining a MS in chemistry: traditional thesis option, project option, and a BS/MS degree option. The traditional thesis option allows students to take advanced classes from the traditional areas of chemistry and to engage in intensive research in a very specific area related to chemistry. Most students finish this degree track within two years of starting the program. Students who choose the thesis option are given priority over other students in the program for teaching assistantships. The project-based option requires more course work than the thesis option, but allows students to submit a project rather than a traditional thesis. The option also allows for some flexibility if students are already employed in areas related to chemistry. Projects they may be engaged in as part of their employment might be used towards the project MS degree in chemistry with approval from the department. The chair of the student's project committee must be a member of the department's graduate faculty. The final option is a BS/MS degree and is only open to students who obtain their BS from Central Washington University. The degree track allows students to obtain an MS in chemistry within one year after obtaining the BS degree and has a project component associated with the degree rather than a thesis. Students in this program would need to follow the course requirements for the project MS degree in Chemistry. Since the BS/MS program requires students to complete work in a very regimented fashion, students who are interested in this option are

advised to discuss the option with their advisor and the graduate program coordinator by the quarter of their junior year.

Program Admission Requirements: Admission to CWU requires a bachelor's degree from an accredited institution. In addition, applicants must earn a minimum of a 3.0 grade point average (GPA) in all course work attempted in at least the last 90 quarter (60 semester) hours of recognized academic work. Admission decisions are based on a combination of factors: GPA, letters of recommendation from professors and others able to critically assess success in a graduate program, statement of purpose, standardized test scores, academic preparation for work in the proposed field, and areas of research interests. Admission to the Chemistry Graduate Program requires an earned undergraduate degree in chemistry or a related field (equivalent to those offered at Central; see requirements for the BS and BA degrees in chemistry), and demonstrate a potential for superior scholarship. Applicants must provide GRE scores for the general test. If a chemistry background deficiency exists at the time of student admission, appropriate courses must be taken to fill these gaps during the first year of graduate study. International students for whom English is a second language must provide TOEFL or IELTS scores to demonstrate English proficiency.

Program Requirements: The MS degree in Chemistry requires a minimum of 45 credits of graduate coursework and research study culminating with a thesis. Sixteen of these credits are research and thesis related (CHEM 595, CHEM 700). The remaining 29 credits are earned from coursework (a minimum of 18 at the 500 level or above). Of the 29 credits, students are required to take at least twelve core credits in chemistry, enroll in CHEM 503, Introduction to Research, during their first year, and take at least one credit of CHEM 505, Current Topics in Chemistry. Four credits of seminar (CHEM 589 taken twice) are also required. This leaves 11 credits for elective courses. The first 2 credits of CHEM 589 consist of a research proposal written by the student and a one hour professional seminar based on this document. The research proposal should be a maximum of 10 pages in length (12 point, double spaced) and be composed of an introduction (including a brief survey of related work), objectives of proposed research, description of experimental approach, expected outcomes, a projected time line, and a safety appendix with standard operating procedures (SOPs) relating to their completed and proposed laboratory work (this appendix does not count toward the 10-page limit. The document is to be submitted to committee members at least one week before the scheduled seminar and must be approved by the committee as a condition of receiving credit. The student must successfully complete these credits by the end of

their third quarter in the graduate program. If the student has a situation that does not allow them to complete these credits by the end of their third quarter in the program they must meet with their graduate advisor and committee will work out an appropriate course of action. The second 2 credits of CHEM 589 are the final oral examination on the student's thesis project and are taken in the quarter the student defends. A written thesis has to be prepared and submitted to the committee members following procedures specified by the Office of Graduate Studies and Research. Candidates must also pass a final oral examination on their thesis project and coursework that is administered by the candidate's graduate thesis committee. Normal completion of the master of science requires two academic years and an intervening summer of study.

Program Requirements - Non-thesis MS option: The MS degree in Chemistry (non-thesis option) also requires a minimum of 45 credits of graduate coursework and a comprehensive project or cooperative study in place of a research thesis. Ten of these credits are related to the project (CHEM 590). The remaining 35 credits are earned from coursework. Of the 35 credits, students are required to take at least fifteen core credits in chemistry, enroll in CHEM 503, Introduction to Research, during their first year, and take at least one credit of CHEM 505, Current Topics in Chemistry. Four credits of seminar (CHEM 589 taken twice) are also required. This leaves 14 credits for elective courses. The first 2 credits of CHEM 589 consist of a project proposal or literature-based project written by the student and a one hour professional seminar based on this document. The literature-based proposal will be mostly reserved for those students who are in industry and cannot give a public presentation due to intellectual property concerns. The project proposal should be a maximum of 10 pages in length (12 point, double spaced) and be composed of an introduction (including a brief survey of related work), objectives of the project, a comprehensive survey of the project, and a safety appendix with standard operating procedures (SOPs) relating to their completed and proposed laboratory work (this appendix does not count toward the 10-page limit). The document is to be submitted to committee at least two weeks before the scheduled seminar and must be approved by the committee as a condition of receiving credit. Students must submit their proposal and present their seminar before completion of their third quarter as a graduate student. The second 2 credits of CHEM 589 are the final oral examination on the written project or cooperate study. Candidates must also pass a final oral examination on their project and coursework that is administered by the candidate's graduate thesis committee. Normal completion of the MS in Chemistry requires two academic years and an intervening summer of study.

Core Courses: Twelve credits of chemistry courses at the 500-level are required for the MS degree in chemistry (with thesis), and fifteen credits of 500-level chemistry coursework are required for the non-thesis chemistry MS degree option. Courses offered by the chemistry department include advanced biochemistry, biochemical toxicology, advanced analytical chemistry, organic reaction mechanisms, organic spectroscopy, advanced organic synthesis, medicinal chemistry, environmental chemistry, solid-state chemistry, analytical instrumentation, quantum and computational chemistry, and advanced physical chemistry.

Electives: Eleven credits of elective coursework at the 400 or 500 level are required for the MS degree in chemistry (with thesis), or fourteen credits of elective coursework at the 400 or 500-level are required for the non-thesis MS degree option. Elective courses from chemistry and other departments (biology, geology, mathematics, physics, science education, business, and psychology, among others) are selected with advising from the thesis committee. These courses are selected to provide expertise in the fields of the individual student's academic interests and research focus and complement professional goals.

Graduate Committee: Before the end of the candidate's second quarter in the program and after consultation with members of the chemistry graduate faculty, the student will select a thesis advisor, to act as chair of the candidate's graduate committee. The candidate, in consultation with the selected thesis advisor will assemble a three-member thesis graduate committee. Two members of the committee must be from the chemistry faculty.

Examination (MS with thesis): Each candidate must prepare a written thesis that documents the methods, analysis, and results of the research they carried out during their graduate study. In addition, each candidate must pass a final oral examination. The review covering the student's thesis and coursework consists of a seminar open to the public followed by queries from the thesis committee.

Examination (non-thesis MS): Each candidate must prepare a final written report that documents the research project or cooperative work they carried out during their graduate study. In addition, each candidate must pass a final oral examination on all phases of the student's program. The review covering the student's written project and coursework consists of a seminar open to the public followed by queries from the thesis committee. The written documentation for the project is less thorough than for the thesis but the student is still expected to produce a significant research document with proper referencing and is expected to defend their research and methodology.

Work for all MS in Chemistry options must be finished within seven years of the student's start date in the program otherwise all credits are considered null and void by the university and the student must start their course of study over again.

Chemistry, MS (non-thesis option)

Required Courses Credits: 16

- CHEM 503 - Introduction to Research **Credits:** (1)
- CHEM 505 - Current Topics in Chemistry **Credits:** (1)
- CHEM 589 - Graduate Student Seminar **Credits:** (2) (Must be taken for 4 credits)
- CHEM 590 - Cooperative Education **Credits:** (1-5)
- **OR** CHEM 595 - Graduate Research **Credits:** (1-10) (Must be taken for 10 credits)

Core Courses Credits: 15

Fifteen credits of 500-level chemistry coursework are required.

Electives Credits: 14

Electives to be selected by advisement.

Total Credits: 45

Chemistry, MS (with thesis)

Required Courses Credits: 22

- CHEM 503 - Introduction to Research **Credits:** (1)
- CHEM 505 - Current Topics in Chemistry **Credits:** (1)
- CHEM 589 - Graduate Student Seminar **Credits:** (2) Must be taken for 4 credits.
- CHEM 595 - Graduate Research **Credits:** (1-10) Must be taken for 10 credits.
- CHEM 700 - Master's Thesis, Project Study, and/or Examination **Credits:** (1-6) Must be taken for 6 credits.

Core Courses Credits: 12

Twelve credits of chemistry courses at the 500-level are required.

Electives Credits: 11

Electives to be selected by advisement.

Total Credits: 45

Computer Science Department

College of the Sciences
Ellensburg
Hebeler Hall, room 219

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

James Schwing, PhD

Professors

Razvan Andonie, PhD, graduate program director, neural networks, parallel and distributed computing, computational intelligence, data mining

Holly Johnson, PhD, social informatics, HCI, on-line information systems

Boris Kovalerchuk, PhD, artificial intelligence, simulation and optimization, computer architecture

James Schwing, PhD, parallel algorithms, user interface design, computer graphics, computer-aided design

Assistant Professors

John Anvik, PhD, software engineering, machine learning, computer supported collaborative work

Filip Jagodzinski, PhD, computational structural biology, web/server software engineering and application developer

Staff

Brandy Bradley, secretary senior

Zachary Geesaman, systems analyst

Computational Science, MS

Program Objectives and Description

Computational Science is the field of study concerned with constructing mathematical models and quantitative analysis techniques and using computers to analyze and solve scientific problems. In practical use, it is typically the application of computer simulation and other forms of computation to problems in various scientific disciplines. Computational Science has become critical to scientific leadership, economic competitiveness, and national security.

CWU will offer this master's program with the aim to prepare students for professional computational science careers or to pursue a doctoral degree. The computational core of the program will be materialized in by modular and flexible inter-departmental collaboration. Professional computational scientists possess a broad grounding in computing related areas, mathematics, and sophistication in their area of concentration. The program promotes the expansion and strengthening of the collaborative educational and research efforts across the College of the Sciences.

The program will be entirely delivered at the CWU Ellensburg campus and will be a combination of traditional courses, seminar, and research work amounting to a total of 45 credits. Regular attendance to research seminars offered in the various departments involved in the program will also be required. Students will complete 22 credits of core course work in computer science and mathematics and 5 credits of thesis/capstone project work. Additionally, students will complete at least 8 credits of elective coursework in their selected area(s) of expertise. A full-time student has to take at least 10 credits per quarter. A typical break down for a student in the program would be:

- 22 credits core courses
- 18 credit electives, including graduate research
- 5 credits master's thesis/project

Students will have to complete the core course work of the program:

- Advanced data structures and algorithms
- High-performance computing
- Advanced algorithms for scientific computing
- Applied numerical methods I
- Applied numerical methods II

Since research is a key part of student development in this program, the rest of the work in the master of computational science will focus on a (year-long) research project with an advisor in their selected area of expertise.

Alternatively, and with the approval of the Computational Science Program Committee, students will have the option to do research, or work on a project in partner of the program. Regular attendance to research seminars will also be required.

Students who are part of the program will be required to do a master's thesis or a project at the end of the program. The two alternatives (thesis or project) mean that students may choose between a research and a professional orientation.

The Thesis/Project Committee, having at least three members, will be chaired by a graduate faculty from the Computer Science Department. All actual professors from the Computer Science Department have the Graduate Faculty status: Dr. James Schwing, Dr. Boris Kovalerchuk, Dr. Ed Gellenbeck, and Dr. Razvan Andonie. Interdisciplinary membership in the graduate committee is strongly recommended. For this program, the graduate committee will be generally interdisciplinary.

Each core course will be offered one time per year. The elective courses will be generally offered every other year. Students will specialize in one of the following application areas:

- Biological and environmental sciences
- Chemistry
- Computer Science
- Geology
- Mathematics
- Physics

Admissions

To be considered, an applicants to this graduate program must have been awarded (or about to be awarded) a 4-year bachelor's degree, with a 3.25 or higher.

The target audience will consist primarily of computer science graduates (i.e., graduates with a major in computer science). We also target graduates with a minor in computer science and a major in one of the application domains (mathematics, biology, chemistry, physics, and geology). On a case by case basis, graduates from the application domains, without a minor in computer science, may be also accepted, if they have enough credits from computer related courses (computer programming, algorithms and data structures, and computer organization).

Required Courses

- CS 528 - Advanced Data Structures and Algorithms **Credits:** (4)
- CS 529 - Advanced Algorithms for Scientific Computing **Credits:** (4)

- CS 530 - High-performance Computing **Credits:** (4)
- CS 700 - Thesis/Project **Credits:** (1-5) (Must be taken for 5 credits.)
- MATH 565 - Applied Numerical Methods I **Credits:** (5)
- MATH 567 - Applied Numerical Methods II **Credits:** (5)

Elective Courses (to be selected by advisement)

Biology

- BIOL 501 - Research Methods and Techniques **Credits:** (4)
- BIOL 598 - Special Topics **Credits:** (1-6)

Chemistry

- CHEM 505 - Current Topics in Chemistry **Credits:** (1)
- CHEM 564 - Medicinal Organic Chemistry **Credits:** (3)
- CHEM 581 - Quantum and Computational Chemistry **Credits:** (3)
- CHEM 589 - Graduate Student Seminar **Credits:** (2)

Computer Science

- CS 540 - Algorithms for Biological Data Analysis **Credits:** (4)
- CS 545 - Data and Information Visualization **Credits:** (4)
- CS 556 - Data Mining **Credits:** (4)
- CS 557 - Computational Intelligence **Credits:** (4)
- CS 573 - Parallel Computing **Credits:** (4)
- CS 595 - Graduate Research **Credits:** (1-10)
- CS 599S - Research Seminar **Credits:** (1)

Geology

- GEOL 504 - Graduate Seminar Series **Credits:** (1)
- GEOL 530 - Remote Sensing **Credits:** (5)
- GEOL 545 - Hydrogeology **Credits:** (5)
- GEOL 553 - Seismology **Credits:** (5)

Mathematics

- MATH 599 - Seminar **Credits:** (1-5)

Physics

- PHYS 561 - Advanced Computational Physics
Credits: (4)
- PHYS 562 - Multiphysics Modeling Using COMSOL **Credits:** (4)

Total Credits: 45

Educational Foundations and Curriculum Department

College of Education and Professional Studies
Ellensburg
Black Hall, room 101

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

Gary Ballou, PhD

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

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, MA, curriculum and instruction

Molly Ross, EdD, field supervisor

Lecturers

Frank Foster, MEd, field supervisor

Judy Longstreth, MEd, field supervisor

Jerry St. George, MEd, field supervisor

Staff

Jan Case, program support supervisor

Debbie Strand, secretary senior

Department Information

The Master Teacher, MEd degree program is designed primarily for elementary and secondary school teachers and school service personnel. Since the program may also prepare the student for community college teaching and for advanced study, the student should seek advice from program advisors.

Admission Requirements

In addition to the university regulations concerning admission to graduate degree programs, students desiring admission to the Master Teacher, MEd Program must meet departmental requirements. Members of the department will review the student's application materials and, if deemed necessary, may meet with the student before a recommendation for admission can be made.

Elective Educational Foundations Courses

The candidate must choose at least six credits from the following: EDF 501, Educational Foundations; EDF 502, History of Education; EDF 503, Philosophy of Education; EDF 504, Advanced Educational Statistics; EDF 505, Educational Measurement for Teachers; EDF 506, Education Futurism; EDF 508, Comparative Education; EDF 567, Educational Change; PSY 552, Advanced Human Growth and Development; PSY 559, Advanced Educational Psychology. (Only one of PSY 552 or PSY 559 may be included to meet the foundations requirement). Related courses may be substituted with permission of the student's graduate advisor or committee chair, the chair of the department, and the dean of Graduate Studies and Research.

Elective Area of Emphasis Courses

Students should select one or more areas of emphasis in consultation with their graduate advisor or committee chair. Areas of emphasis must be approved by the department chair on the Course of Study form available from the Office of Graduate Studies. Students should obtain Course of Study approval early in their programs to assure that all courses taken will be accepted.

Master Teacher, MEd

Program Description

The Master Teacher is a program of advanced preparation for classroom teachers intending to become teacher scholars and to assume positions of leadership within their schools with respect to the development of curriculum, instructional strategies, and related classroom concerns.

The program is intended to allow current teachers to focus on areas of emphasis in the P-12 classroom settings.

Prerequisite: A minimum of one year of contracted teaching experience in a P-12 classroom setting is required for admission to the Master Teacher Program. One of the three required recommendations for admission to the Master Teacher Program must come from the applicant's current or most recent principal or designee.

Program: The student will complete at least 48 credits as outlined in an approved course of study filed with the Office of Graduate Studies and Research and Continuing Education. The development of a course of study most appropriate to the professional goals and purposes of each individual student must be completed and approved by a program advisor or committee chair upon the completion of 18 credits.

Required Courses

- EDBL, EDCS, EDEL, or EDF 700 - Thesis (or option) **Credits:** (6)
- Educational Foundations and Research electives **Credits:** (6)
(See elective Educational Foundations courses under general information)
- Area of emphasis electives **Credits:** (29)
(See elective area of emphasis courses under general information)
- EDF 507 - Studies and Problems in Intercultural Education **Credits:** (3)
- EDF 510 - Educational Research and Development **Credits:** (4)

Total Credits: 48

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

William Bender, PhD, construction management
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
Michael L. Whelan, PhD, construction management

Assistant Professors

Nathan Davis, MA, electronics engineering technology
Charles Pringle, MS, mechanical 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

Program Objectives and Description

The Department of Engineering Technologies, Safety, and Construction (ETSC) offers a master of science degree in engineering technology (MSET). The program is designed to prepare persons holding a bachelor of science degrees in the engineering technologies (ET), industrial technologies (IT), and similar or related degrees for career advancement. The MSET core curriculum is designed to teach students how to address technological challenges such as improving existing products, services, and work processes, and developing new ones. The context for instruction takes into account contemporary challenges in business and industry, such as innovating when technology is rapidly changing, adapting to the global economy, and protecting the environment. Students select elective courses in order to build upon their current technical capabilities or to develop knowledge and skills in a new area that complements their career objectives.

Admission Requirements

Incoming students are expected to meet all of the requirements of the graduate school, have a solid background in science and mathematics, and show evidence of scholarship. This requires that the candidate have a bachelor's degree from a recognized institution and have completed a course in pre-calculus (or its equivalent) and at least one college-level, laboratory-based science course. Any candidate who does not meet these requirements may be admitted to the program on a conditional basis, after which he or she must complete the requirements before being fully admitted to the program. If English is a secondary language, students must score 550 or more on the TOEFL examination. Transfer students will be considered using the same criteria, with consideration for equivalent graduate coursework completed elsewhere.

Engineering Technology, MS

General Requirements

- IET 501 - Industrial and Academic Research Methods **Credits:** (4)
- IET 521 - Product Design and Development **Credits:** (4)
- IET 523 - Emerging Technologies **Credits:** (4)
- IET 525 - Systems Analysis and Simulation **Credits:** (4)
- IET 555 - Engineering Project Management **Credits:** (4)

- IET 700 - Thesis or Option **Credits:** (6) (Must be taken for 5 credits)

General Requirements Total Credits: 25

Department-approved Technical Electives

The student must select 20 credits from the following list to complete a program total of 45 credits. The student may propose to take alternative elective course(s) that are not shown on the list of approved technical electives. If the student takes any elective course for which he or she has not met the prerequisites, then fulfilling those prerequisites will add credit hours to his or her course of study, beyond the 45 credits required for graduation. All elective courses, including 400-level IET courses, that the student wants to include in the course of study are subject to the approval of the advisor and the department chair.

- 400-level courses taught in the industrial and engineering technology department - **Credits:** (3-4)
- GEOG 443 - Energy Policy **Credits:** (5)
- ECON 462 - Economics of Energy Resources and Environment **Credits:** (5)
- IET 512 - Alternative Energy Systems **Credits:** (4)
- IET 522 - Programmable Logic Controller (PLC) Applications **Credits:** (4)
- IET 524 - Quality Control **Credits:** (4)
- IET 526 - Engineering Project Cost Analysis **Credits:** (4)
- IET 530 - Fundamentals of Lasers **Credits:** (4)
- IET 532 - Generation and Transmission of Electrical Power **Credits:** (4)
- IET 552 - LEED in Sustainable Construction **Credits:** (4)
- IET 560 - Finite Element Analysis **Credits:** (4)
- IET 577 - Robotics **Credits:** (4)
- IET 582 - Plastics and Composites **Credits:** (4)
- IET 583 - Ceramics and Composites **Credits:** (4)
- IET 592 - Field Studies **Credits:** (1-10) (Must be taken for 4 credits)
- IET 595 - Graduate Research **Credits:** (1-6)
- IET 596 - Individual Study **Credits:** (1-6) (Must be taken for 3 credits)
- IET 599 - Seminar **Credits:** (1-5) (Must be taken for 1 credit)

Elective Total Credits: 20

Total Credits: 45

English Department

College of Arts and Humanities
Ellensburg
Language and Literature Building, room 423

509-963-1546
Fax: 509-963-1561
www.cwu.edu/english

See 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

Joseph Powell, MFA, creative writing, modern poetry

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

Assistant Professor

Karen Gookin, MA, general education, technical writing

Emeritus Professors

Philip B. Garrison, MA, non-fiction, poetry writing, world, and Chicano literature

Mark W. Halperin, MFA, poetry writing, folk literature, modern poetry

Virginia Mack, PhD, general education, Irish literature

Gerald J. Stacy, PhD, English Renaissance literature

John L. Vifian, PhD 18th century literature, English novel

Senior Lecturers

Kent DaVault, MA

Stephanie Dringenberg, MA

Ruthi Erdman, MA

Patricia Garrison, MA

Lila Harper, PhD

Colin Hester, MFA

Karen Hull, MA

Marisa Humphrey, MA

Kevin Leaverton, MA

Robert Schnelle, MA

Lecturers

Melissa Brouwer, MA

Mindie Dieu, PhD

Shari Foster, MA

Eugene R. Hutchins, MA

Joseph J.P. Johnson, MA

Melissa Johnson, MA

Anne Joiner, MA (Des Moines)

Elizabeth Kelly, MA (online)

Matthew Martinson, MA

Amanda Ross, MA

Travis Smith, MA

Staff

Theresa Stevens, secretary supervisor

Jo Richards, office assistant III

Department Information

The English department offers two options for the master of arts degree: master of arts, English (literature) and master of arts, English (TESOL - teaching English to speakers of other languages).

English Literature, MA

Master of Arts English (Literature)

The MA in English (literature) offers a rigorous, individualized program of advanced study of literature in English. Students choose from an array of courses and select a thesis/project or exam option. Although allowed flexibility in their course of study, students are required to complete courses in British, American, and world literatures, as well as literary and critical theory. Students enter the program to further their understanding of literature, to strengthen their teaching qualifications, to

broaden their writing experiences, or to prepare for doctoral work.

Admission Requirements

In addition to the university regulations concerning admission to graduate degree programs, students applying to the MA in English (literature) Program must also submit a writing sample of 5-10 pages directly to the English department. The writing sample must include the student's name, birth date and student ID number for identification. The GRE general test is also required for applicants to the MA in English (literature) Program.

General Requirements of the Program

Students will complete a thesis/project or comprehensive examination. Students in each option take a minimum of 48 credits. At least 30 credits must be at the graduate level in English. Up to 15 credits may be taken in approved courses at the 400 level in English. Up to 10 credits may be taken in approved courses offered outside the English department.

Thesis/Project Option

Students who choose the thesis/project option may complete a research thesis or a creative writing project. Students completing a creative writing project must take two 400-level creative writing courses, at least one in the genre of their proposed creative writing project. To prepare for and complete their thesis/project, students must take English 588 and 6 credits of English 700 with the chair of their thesis/project committee. In all cases, students will create in conjunction with a three-member faculty thesis/project committee an analytical introduction and a reading list for their thesis/project that includes both texts central to their thesis/project and texts that contextualize their thesis/project within their chosen field of study. After completing their thesis/project, students must pass an oral exam administered by the committee over the thesis/project introduction and reading list.

Exam Option

Students who choose the exam option create, in conjunction with a three-member faculty exam committee, an individualized reading list of the material covered in that student's coursework, and must pass a comprehensive written examination developed by the committee over that material. To prepare for and complete this exam, they will take three credits of English 596, Individual Study, with the chair of their exam committee.

Required Courses

- ENG 512 - Introduction to English Graduate Study **Credits:** (5)
- ENG 515 - Advanced Studies in American Literature **Credits:** (5)

- ENG 517 - Advanced Studies in World Literature **Credits:** (5)
- ENG 518 - Advanced Literary and Critical Theory **Credits:** (5)
- ENG 519 - Advanced Studies in British Literature **Credits:** (5)

Complete one of the following two options:

Thesis /Project Option

- Approved Electives (Includes two 400-level creative writing courses for creative writing projects) **Credits:** (15)
- ENG 588 - Thesis/Project Colloquium **Credits:** (2)
- ENG 700 - Master's Thesis/Project **Credits:** (1-6) (Must be taken for 6 credits)

Exam Option

- Approved Electives **Credits:** (20)
- ENG 596 - Individual Study **Credits:** (1-6) (Must be taken for 3 credits)

Total Credits: 48

English: TESOL, MA

The MA in English (TESOL) is an intensive program that can be completed in four quarters. The program is designed to foster the awareness, understanding, and skills necessary for the effective teaching of English to speakers of other languages. Through study in language, pedagogy, and culture, it prepares educators to work with adult language learners in the United States and abroad. Graduates are qualified to work in colleges and universities, private institutes, and programs and schools in the United States and abroad that provide instruction in English.

Admission Requirements: Pre- or co-requisites to completion of the program include an upper-division linguistics course and intermediate to high proficiency in a second language. International students whose first language is not English automatically meet this proficiency prerequisite. Applicants can be admitted to the program without this background, but they will be required to gain it while enrolled in the program. Students who do not have the prerequisites or who have assistantships are strongly advised to complete the program over a two-year period due to the challenging workload.

The language proficiency requirement may be met in one of three ways:

1. Thirty quarter credits of college courses in a foreign language with a minimum 3.0 GPA in those courses
2. Intermediate to high score on the Diagnostic ACTFL Oral Proficiency Interview
3. Intermediate to high score on the Diagnostic ACTFL Writing Proficiency Test

Applicants whose native language is not English are required to submit a minimum TOEFL score of 570 paper-based (230 computer-based/88 Internet-based; those with a baccalaureate degree from an accredited U.S. university may opt for a satisfactory TOEFL or GRE score. If the applicant's native language is English, scores for the GRE general test are required.

All applicants for assistantships must submit a writing sample of 5-10 pages directly to the English department. The writing sample must include the student's name, birth date, and student ID number for identification.

General Requirements of the Program: The program consists of 45 credits, as outlined below, and offers both a thesis and an exam option.

Thesis or Exam Option: The thesis option requires candidates to write a thesis and pass a one-hour oral examination over the thesis. In order to choose the thesis option, students must have a GPA of 3.75 or higher in the program. If the exam option is chosen, students must pass a comprehensive written examination and take an additional approved elective. In order to prepare for the exam, students will register for two credits of ENG 596.

Required Courses

- Department-approved electives **Credits:** (4)
- ENG 531 - Principles and Practices of TESOL **Credits:** (5)
- ENG 532 - Phonetics and Phonology **Credits:** (5)
- ENG 533 - Second Language Acquisition **Credits:** (5)
- ENG 535 - Linguistics, Literature, and TESOL **Credits:** (5)
- ENG 537 - Pedagogical Grammar and Discourse **Credits:** (5)
- ENG 538 - Pedagogical Grammar and Discourse II **Credits:** (5)
- ENG 592 - Practicum **Credits:** (1-5) (Must be taken for 5 credits)

Complete one of the following options:

Thesis Option

- ENG 700 - Master's Thesis/Project **Credits:** (1-6) (Must be taken for 6 credits)

Exam Option

- Department-approved electives **Credits:** (4)
- ENG 596 - Individual Study **Credits:** (1-6) (Must be taken for 2 credits)

Total Credits: 45

Family and Consumer Sciences Department

College of Education and Professional Studies
Ellensburg
Michaelsen Hall, room 100

509-963-2766

Fax 509-963-2787

www.cwu.edu/family-consumer

See website for how these programs 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

Jan Bowers, PhD, career and technical education, family and consumer sciences education

Dorothy Chase, PhD recreation and tourism

Robert Perkins, EdD, business and marketing, leadership, recreation and tourism

Marla Wyatt, PhD, family and consumer sciences education

Associate Professors

Kenneth Cohen, PhD, recreation and tourism

Andrea Eklund, MA, apparel, textiles and merchandising

Barbara Masberg, PhD, recreation and tourism

Assistant Professors

Duane Dowd, PhD, CLFE, family studies

Sarah Feeney, PhD, family studies

John Hudelson, PhD, global wine studies

Lecturers

Vivian Baglien, PhD, family consumer sciences education

Karen Bergh, MEd, family consumer sciences education

Christopher Brandmeir, GMBA, recreation and tourism
David Douglas, MS, family studies
Jeff Hagler, MA, recreation and tourism
Jodi Hoctor, BS, recreation and tourism
Ryan Hopkins, MS, family and consumer sciences
Ashley Lefever, MS, family studies
Donna Longwell, recreation and tourism
Monica Miller, BA, recreation and tourism
Miranda Porterfield, MBA, global wine studies
Peggy Roberts, MA, family studies
Erin Scott, MS, recreation and tourism
Lynn Whelan, apparel, textiles and merchandising
Sara Wilson, BS, 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

Staff

Sheri Hubbard, program coordinator
Alex Lange, secretary senior

Program Coordinators

Dorothy Chase, PhD, recreation and tourism
Duane Dowd, PhD, family studies
Andrea Eklund, MA apparel, textiles and merchandising
Frank Pangrazi, MBA, global wine studi
Marla Wyatt, PhD, family and consumer sciences

Department Information

The graduate programs are designed to provide an opportunity for students to concentrate at the master's level in one or more of the subject areas related to family and consumer sciences and family and consumer sciences/career and technical education. The goal of the program is to prepare persons for further graduate study, for public school or college teaching, as specialists in service agencies, or as professionals in, or consultants to business, industry, and government.

In consultation with a faculty advisor, and with the approval of the department chair, students may develop a program of courses in one of two specializations. Each student will complete a set of core courses plus coursework specific for each specialization. The core courses include research methods, applied statistics, field experience and the thesis credits. Students can use a thesis, or test, or project to fulfill thesis credit requirements. The two specializations include family and consumer sciences/career and technical education, and family studies. All candidates shall complete an approved course of study filed with the Office of Graduate Studies and Research. The student's advisor and graduate

committee members can be selected from another department. Application to graduate study is made through the Office of Graduate Studies and Research. Interested students are encouraged to contact the department chair for information and guidance.

Master of Science Family and Consumer Sciences Program Coordinator

Kim Bartel, PhD
Michaelsen Hall, room 100

Purpose: The purpose of this program is to provide an opportunity for students to concentrate at the master's level in one or more of the subject areas related to family and consumer sciences. The goal of the program is to prepare persons for further graduate study, for public school or college teaching, as specialists in service agencies, or as professionals in, or consultants to business, industry, and government.

Program: In consultation with a faculty advisor, and with the approval of the department chair, students may develop a program of courses in one of two specializations. Each student will complete a set of core courses plus coursework specific for each specialization. The two specializations include family studies and family and consumer sciences/career and technical education. All candidates shall complete at least 45 credits as outlined in an approved course of study filed with the Office of Graduate Studies and Research. The student's advisor and graduate committee, comprised of at least three faculty, will assist in the development of the program. With approval by the department chair and the committee chair, faculty can be selected from another department.

It is expected that four to six thesis credits will be included in the student's program.

Family and Consumer Sciences, Career and Technical Education Specialization, MS

Master of Science Family and Consumer Sciences Program Coordinator

Jan Bowers, PhD
Michaelsen Hall, room 100

Purpose: The purpose of this program is to provide an opportunity for students to concentrate at the master's level in one or more of the subject areas related to family and consumer sciences. The goal of the program is to prepare persons for further graduate study, for public school or college teaching, as specialists in service agencies, or as professionals in, or consultants to business,

industry, and government.

Program: In consultation with a faculty advisor, and with the approval of the department chair, students may develop a program of courses in one of two specializations. Each student will complete a set of core courses plus coursework specific for each specialization. The two specializations include family studies and family and consumer sciences/career and technical education. All candidates shall complete at least 45 credits as outlined in an approved course of study filed with the Office of Graduate Studies and Research. The student's advisor and graduate committee, comprised of at least three faculty, will assist in the development of the program. With approval by the department chair and the committee chair, faculty can be selected from another department.

It is expected that four to six thesis credits will be included in the student's program.

Career and Technical Education Specialization

Graduate students enrolling in the FCS/CTE Specialization Program, as entry-level professionals, will complete courses that prepare them to demonstrate entry-level employment competencies. Each student will work with a faculty advisor to identify his or her entry competency level. Each student will also work with a faculty advisor to identify the exit competency level required for each of the six specialization courses. The number of credits available for some of the specializations courses varies from 1 to 5 credits per course. The number of credits a student needs to earn for each specialization course will be dependent upon his or her entry skill level. The credit requirement for finishing the graduate program will be 45 credits.

Required Core Credits: 24-26

- FCSG 501 - Research Methods **Credits:** (4)
- FCSG 502 - Statistics **Credits:** (4)
- FCSG 509 - Civic Engagement **Credits:** (3) (Must be taken for 12 credits)
- **OR** FCSG 590 - Cooperative Education **Credits:** (1-12) (Must be taken for 12 credits)
- FCSG 700 - Master's Thesis, Project Study, and/or Examination **Credits:** (1-6) (Must be repeated for 4-6 credits)

Required Specialization Courses

- Department-approved electives **Credits:** (7-15)
- CTE 551 - Principles of Career and Technical Education **Credits:** (4-5)
- FCSG 526 - Program Delivery Methods **Credits:** (1-5)

- FS 582 - Curriculum Development **Credits:** (1-5)
- FS 522 - Survey of Research **Credits:** (1-5)

Total Credits: 4

Family and Consumer Sciences, Family Studies Specialization, MS

Master of Science Family and Consumer Sciences Program Coordinator

Duane Dowd, PhD
Michaelsen Hall, room 100

Purpose: The purpose of this program is to provide an opportunity for students to concentrate at the master's level in one or more of the subject areas related to family and consumer sciences. The goal of the program is to prepare persons for further graduate study, for public school or college teaching, as specialists in service agencies, or as professionals in, or consultants to business, industry, and government.

Program: In consultation with a faculty advisor, and with the approval of the department chair, students may develop a program of courses in one of two specializations. Each student will complete a set of core courses plus coursework specific for each specialization. The two specializations include family studies and family and consumer sciences/career and technical education. All candidates shall complete at least 45 credits as outlined in an approved course of study filed with the Office of Graduate Studies and Research. The student's advisor and graduate committee, comprised of at least three faculty, will assist in the development of the program. With approval by the department chair and the committee chair, faculty can be selected from another department.

It is expected that four to six thesis credits will be included in the student's program.

Family Studies Specialization

The family studies specialization is an advanced interdisciplinary study of interpersonal and family relationships. The graduate program has a strong emphasis on community involvement, practical application and research. Graduates are prepared for advanced career opportunities in family service agencies, parent education programs, family counseling centers, other family life education settings or doctoral study in family relations.

Graduate students in the family studies specialization who enter the program without prior coursework needed for preparing them for the graduate degree will need to

take undergraduate courses as deficiencies or demonstrate sufficient knowledge in the area. Deficiency courses include FS 334, FS 433, and PSY 454.

Required Core Course

- FCSG 501 - Research Methods **Credits:** (4)
- FCSG 502 - Statistics **Credits:** (4)
- FCSG 509 - Civic Engagement **Credits:** (3) (Must be taken for 12 credits)
- **OR** FCSG 590 - Cooperative Education **Credits:** (1-12) (Must be taken for 12 credits)
- FCSG 700 - Master's Thesis, Project Study, and/or Examination **Credits:** (1-6) (Must be repeated for 6 credits)

Required Specialization Courses

- Department-approved electives **Credits:** (14)
- FS 532 - Family Interaction **Credits:** (4)
- FS 542 - Conflict Management **Credits:** (3)

Total Credits: 47

Geography Department

College of the Sciences
Ellensburg
Dean Hall, room 301

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

Robert Kuhlken, PhD, land-use planning, cultural ecology, historical geography, Oceania

Karl Lillquist, PhD, physical geography, geomorphology, soils, environmental change in arid and alpine watersheds

Associate Professor

John Bowen, PhD, economic geography, transportation geography, Asia

Assistant Professors

Elvin E. Delgado, PhD, political ecology, energy and capitalism, political economy and nature, critical resource geography, health geography

Jennifer Lipton, PhD, cultural ecology, remote sensing, climate change, Latin America

Mathew Novak, PhD, urban land-use planning, historical geography, GIS

Michael Pease, water resources, watershed planning and analysis, North America

Craig Revels, PhD, cultural-historical geography, landscape, Latin 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

Lecturers

Paul Banton, PhD, fluvial geomorphology, river landscapes, geotechniques, Western North America

Andrew Perkins, MS, political geography, world regional geography, Middle East, Russia

Emeritus Faculty

James Brooks, PhD

Dee Eberhart, MA

Kenneth Hammond, PhD

James Huckabay, PhD

Nancy Hultquist, PhD

George Macinko, PhD

John Ressler, PhD

Morris Uebelacker, PhD

Staff

David Cordner, instructional and classroom support technician III

Marilyn Mason, secretary senior

Department Information

Geography jointly coordinates the master of science degree program in resource management with the Department of Anthropology. For further information see resource management.

Geological Sciences Department

College of the Sciences
Ellensburg
Lind Hall, room 108B

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

Assistant Professors

Anne Egger, PhD, Earth science education and structural geology
Audrey Huerta, PhD, geodynamics, climate, and mountain building
Susan Kaspari, PhD, climate and environmental variability and glaciochemistry
Chris Mattinson, PhD, mineralogy and petrology
Breanyn MacInnes, PhD, sedimentary geology, coastal geomorphology
Walter Szeliga, PhD, geophysics and GPS geodesy

Faculty Research Associates

Jonathan Glen, PhD, geophysics and paleomagnetism
M. Meghan Miller, PhD, crustal deformation, GPS geodesy, active tectonics, and remote sensing
Charles M. Rubin, PhD, paleoseismology, earthquake hazards, and active tectonics
Carrie Whitehill, PhD, structural geology and 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

Geological Sciences, MS

Program Objectives and Description: The graduate program in the geological sciences is designed to prepare students for professional employment in geoscience careers in industry, consulting firms, local, state, or federal government, teaching at the community college or secondary level, and serves as a foundation for graduate studies beyond the MS level. It is also suitable training for careers in environmental law and natural resource and hazard planning. The department encourages an integrative, multi-disciplinary approach.

Admission Requirements: Incoming students are expected to meet the requirements of the graduate school, have a solid background in science and mathematics, and show evidence of superior scholarship. All students entering the MS program are expected to have a background equivalent to that required for the bachelor of science degree in geology at CWU and to have completed a geological field camp for college credit. Applicants must provide Graduate Record Examination (GRE) scores for the general test. Graduates in chemistry, physics, engineering, biology, or other technical disciplines are also encouraged to apply. Deficiencies in the student's undergraduate training as determined by the Department of Geological Sciences at the time of matriculation must be removed without graduate credit during the first year of graduate study. If English is a secondary language, students must score 550 or above on the TOEFL examination.

Application Deadlines and Supporting Materials:

Applications and all supporting materials are due by February 1 for fall quarter entrance. Applications will include a statement of your background and purpose,

official transcripts, general GRE scores, and three letters of recommendation.

Program Requirements: The department offers an MS degree that requires a minimum of 60 credits of graduate study. Fifty-four credits are earned from coursework and research (35 credits at the 500 level or above) and six credits are allowed for thesis (GEOL 700). All graduate students must register for GEOL 501, Current Topics in Geology, and GEOL 502, Regional Geology of the Pacific Northwest, (both during the fall quarter of their first year), and GEOL 503, Introductory Graduate Research Methods (during the winter quarter of their first year). GEOL 504, Graduate Seminar Series, is required during the first six quarters of a student's graduate program. Candidates must pass a final oral examination on their thesis project and supporting coursework, given by a thesis committee consisting of the thesis advisor and two other faculty. Normal completion of the master of science requires two academic years and an intervening summer of field study. Students may be encouraged to begin field work prior to matriculation.

Areas and Electives in Specialization: Course requirements are tailored to the individual student's academic background, professional goals, and research interests through advising from the graduate faculty and thesis committee chair. The greatest departmental strengths are in active and regional tectonics, seismology, geodesy, geomorphology and quaternary geology, paleohydrology, environmental geo-chemistry, mineralogy, petrology, and volcanology. The department is a participating member of the Southern California Earthquake Center, a National Science Foundation sponsored (NSF) science and technology center. The department houses the data analysis center for the Pacific Northwest Geodetic Array (PANGA), a network of continuously operating GPS receivers distributed throughout the Pacific Northwest, the U.S., and Canada. In addition, the department has strong ties with the Jet Propulsion Laboratory (JPL), administered by Caltech for National Aeronautics and Space Administration (NASA); the opportunity to participate in JPL programs is a unique feature of the Geology Program at Central. The department is a participating member of the Western North America Interferometric Synthetic Aperture Radar Consortium (WinSAR) and Incorporated Research Institutions for Seismology (IRIS).

Central Washington University lies on the Columbia River basalt plateau, adjacent to the crystalline core and majestic volcanoes of the Cascade Mountains. Seismicity and active volcanism of the Cascadia subduction zone, highly deformed rocks of northern Washington and British Columbia, and a water- and natural-resource-based economy in central Washington provide ideal

opportunities to study a wide variety of geologic problems.

Equipment and Computer Facilities: The geological sciences department has excellent research computer facilities including Linux computation workstations and file storage and department mail, web and ftp servers. A mix of Macs and PCs are used for image processing, basic data analysis, and generating papers and presentations. Software packages available for data processing on these platforms include GIPSY, SAC, MatLab, ArcGIS, GAMIT, LAPACK, GSL, compilers, and other development tools.

The Geodesy Laboratory houses the data processing center for the Plate Boundary Observatory and PANGA. The laboratory analyzes continuous data from the permanent GPS array in the western United States. Processing is done on a dedicated 60-node Linux cluster. Additional geodesy equipment includes a number of Trimble SSI and 4700 receivers and digital surveying equipment (Leica Total Stations and Trimble kinematic GPS).

The department has Nikon and Leica petrographic microscopes, research polarizing reflected and transmitting light microscopes, with CCD-video camera displays.

With support from CWU, the national Science Foundation, and the M. I. Murdock Charitable Trust, the department has acquired sample preparation facilities, a geochemistry laboratory with an ICP-MS and stable-isotope mass spectrometer, and an automated Philips PW 3400 Powder X-Ray Diffractometer. Laboratories include a stable isotope laboratory, equipped with a general purpose extraction line for analysis of waters, carbonates, and soils, and a modern geochemistry laboratory, equipped for isotopic, major-element, and trace-element analysis of Earth materials.

Graduate Committee: The student must have a three-member graduate committee, selected in consultation with the advisor; two members must be from the geological sciences department.

Examination: Candidates must pass a final examination on their thesis and coursework.

Required Courses

- GEOL 501 - Current Topics in Geology **Credits:** (3)
- GEOL 502 - Regional Field Geology of the Pacific Northwest **Credits:** (2)
- GEOL 503 - Introductory Graduate Research Methods **Credits:** (3)

- GEOL 504 - Graduate Seminar Series **Credits:** (1) (Must be taken for 6 credits)
- GEOL 595 - Graduate Research **Credits:** (1-10) (Must be taken for 9-15 credits)
- GEOL 700 - Master's Thesis, Project Study, and/or Examination **Credits:** (1-6) (Must be taken for 6 credits)

Electives and Seminars (to be selected by advisement)
Credits: 25-31

Total Credits: 60

History Department

College of Arts and Humanities
Ellensburg
Language and Literature Bldg., room 100

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
Marji Morgan, PhD, 19th century British

Associate Professor

Stephen Moore, PhD, Pacific Northwest, foreign relations, social studies education

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

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

History, MA

Master of Arts History

Master of arts students may choose from among three different options: thesis, project, or written examination. Please note that the thesis option, but not the project and written exam options, requires students to fulfill the department's foreign language requirement.

Thesis: This option is appropriate for those who wish to pursue a PhD, either immediately after receiving the MA or at some point in the future. A thesis is a lengthy monographic work (usually 50 to 150 pages long) that addresses a topic of importance to historians in an original way.

Project: Occasionally, when student background or experience allows, and when faculty availability and expertise exists, students may complete a project in lieu of the traditional thesis. A project may take the form of a narrative history, a documentary film, or website, or some other effort approved by the committee.

Written examination: This option consists of an eight-hour written exam given at the end of one's graduate career. It is designed for students who do not plan to pursue a PhD in history. It is especially useful for secondary school teachers who want to attain the MA in a timely manner.

Required Courses

- HIST 511 - Historiography **Credits:** (5)
- HIST 700 - Master's Thesis, Project Study, and/or Examination **Credits:** (1-6) (Must be taken for 6 credits)

Students must take 15 credits of the following:

- HIST 512 - History Graduate Readings Seminar **Credits:** (5)
 - HIST 515 - History Graduate Research Seminar **Credits:** (5)
- These courses may be repeated.

Department-approved electives from 500 level courses in History Credits: 10

Department-approved electives from 400-500 level courses in History Credits: 9

or other approved fields (courses must pertain to student's thesis).

Total Credits: 45

Graduate Fields of Study

Whether pursuing the thesis, a project, or the exam option, students must choose a primary field of study from a list of fields approved by the faculty. Currently, the Department of History offers the following primary fields. Fields other than those listed need prior approval from the student's advisor.

Colonial/Revolutionary America

19th century America

20th century America

American Foreign Relations

American West

American Environmental History

American Women's History

Pacific Northwest History

American Social History

American Cultural History

Native American History

Colonial Latin America

Modern Latin America

Imperialism

Pre-imperial Russia

Imperial Russia

Soviet Union

Modern Britain and the Empire

Modern Ireland

Modern France

Modern Germany

Comparative Gender and Colonialism

Ming/Qing China

20th century China

Modern Japan

Modern Southeast Asia

Environmental History

Thesis Requirements and Timeline

Before starting research on a thesis, you must choose an advisor and submit to her/him a short research prospectus. The prospectus is a proposal of about 8-10 pages, including the following:

- The topic and scope of your thesis or project
- A tentative thesis statement
- The primary sources you intend to use

- Historiographical review, including a statement of your work's place within it
- Preliminary chapter outline.

Once your advisor approves your prospectus, she or he will assist you in assembling a thesis committee composed of three historians or, in rare cases, two historians and one academic specialist from outside the department (as approved by the advisor). The prospectus must be submitted on or before the third week of the fourth quarter or before the completion of 30 credits, whichever comes last, and must be defended before the assembled committee before the end of the fourth full quarter of graduate study. By the end of the sixth full quarter, the student must submit at least one completed chapter of the thesis to the thesis director/advisor for approval. Students who do not meet the above deadlines for submission/approval of a prospectus and chapter may not be permitted to continue to pursue the thesis option. After the thesis is complete, the student will defend his/her findings before his/her committee. The final draft of the thesis (the draft to be defended) must be given to both secondary advisors at least three weeks in advance of the defense date.

Project Requirement and Timeline

As with the thesis, students who choose the project option must enlist an advisor and submit to her/him a short research prospectus (see thesis requirements, above, for prospectus guidelines). The prospectus must be submitted on or before the third week of the fourth quarter or before the completion of 30 credits, whichever comes last, and must be defended before the end of the fourth full quarter. Once your advisor approves your prospectus, she/he will assist you in assembling a thesis committee composed of three historians or, in rare cases, two historians and one academic specialist from outside the department (as approved by the advisor). The prospectus must be submitted on or before the third week of the fourth quarter or before the completion of 30 credits, whichever comes last, and must be defended before the assembled committee before the end of the fourth full quarter of graduate study. By the end of the sixth full quarter, the student must submit a significant part of the project to her/his director/advisor for approval. Students who do not meet the above deadlines may not be permitted to further pursue the project option. After the project is completed, the student will defend his/her work before his/her committee.

Exam Requirements and Timeline

Students who choose the exam option must select an advisor by the beginning of fourth quarter or after completion of 30 credits, whichever comes last. In advance of the exam, the exam director/advisor will work with the student to choose a committee and to delineate a major

field (see list of fields above). In consultation with the advisor, the student will then develop a major field bibliography consisting of at least 30 books that must be read in preparation for the exam. The student must also choose a second advisor who will help the student develop a minor field bibliography of at least 15 books. The exam will consist of three (3) written questions in the major field and two written questions (2) in the minor field. After the exam is completed, the student must defend her/his answers before the committee.

Foreign Language Requirement

Those who choose the thesis option must meet the department's foreign language requirement. The requirement can be met in two ways: (1) by attaining a grade of B in the final course of a two-year sequence of undergraduate-level foreign language instruction (the sixth quarter or fourth semester) either during the student's undergraduate or graduate career; (2) by passing the department's foreign language exam. The department's foreign language exam requires students to translate (usually a paraphrase rather than a word-for-word translation) two short passages, one from a primary source and one from secondary literature. Students taking the language exam may use dictionaries. Faculty members with the appropriate language skills will grade the exam on a pass/fail basis. If you plan to enter a PhD program in the future, we strongly urge you to gain proficiency in at least one foreign language during your MA career.

Individual Studies Master Program

School of Graduate Studies and Research
Ellensburg
Barge Hall, room 305
509-963-3101

www.cwu.edu/masters/cwu-graduate-programs

See website for how this program may be used for educational and career purposes.

Program Director

Kevin Archer, Interim Dean, School of Graduate Studies and Research

Individual Studies, MA, MEd, MS, MFA

Purpose: The purpose of the Individual Studies Master (ISM) Program is to afford highly qualified and motivated applicants the opportunity to create sound master's degree programs that do not already exist at CWU. These

programs may be interdisciplinary in nature or focus on unique subject areas, but a student may only propose such a program when the curricula of regular graduate degree programs cannot be adjusted via Individual Studies 596 courses to meet the individuals' career objectives and/or needs. The approval of such programs is dependent upon:

- The evidenced qualifications of the applicant and evidence the applicant has the ability to complete the proposed ISM
- The institution's ability to provide a sufficient number of currently available relevant graduate level courses
- A sufficient number of faculty qualified and committed to work with the student
- Adequate scholarly and/or creative resources.

CWU will offer ISM programs only in fields where appropriate expertise and other resources exist as determined by the dean of School of Graduate Studies and Research and the Academic Standards Committee (ASC) of the Graduate Council.

Each ISM program must be as academically sound as traditional master's degrees programs housed in regular academic departments. Thus, it must demonstrate the quality, breadth, and depth normally associated with master's degrees and must be as intellectually rigorous. The capstone project of the ISM degree may be a traditional thesis or project so long as the capstone project is allowed by the department that houses the chair of the ISM candidate's committee. Projects are broadly defined and can range from works of art or artistic expression to computer and engineering projects.

ISM programs may be created under the master of arts, master of education, master of fine arts, and master of science degree titles.

ISM Committee Chair Duties: The ISM committee chair must be involved in the application process, helping the student complete all requirements, including but not limited to filling in the Course of Study form, discussing the quality of the ISM, researching the necessary courses, and establishing an achievable time-plan. The committee chair must ensure that he or she has full workload considerations from the department chair and college dean for the time it normally takes a student to complete a graduate degree. In addition to committing to the time and work necessitated by the ISM, the committee chair must ensure the student's timely progress through the program, keeping quarterly contact with the student even if the student is not taking courses with the chair during this time. The ISM committee chair must inform the chair of the ASC of the Graduate Council and the dean of the School of Graduate Studies and Research of any problems that arise in a timely manner, so that solutions may be

sought.

The ISM committee chair must provide a letter to the student that functions as a form of contract between the ISM student and the faculty member, ensuring each party knows in advance the study and time obligations to which they are committing; the letter must include a sentence stating that it functions as a form of contract between faculty members and the student. This letter must name the other two faculty members who have agreed to work with the student as committee members and detail the committee chair's

- Duties within the ISM (teaching, mentoring, facilitating, etc.)
- Anticipated time commitment to the student and his or hers studies
- Evidence of expertise in the field of study being proposed in the ISM via teaching and/or published scholarship.

Once a year, the ISM committee chair must accompany the student to a meeting with the chair of the ASC of the Graduate Council to report on progress in the degree. If the ISM committee chair is also the chair of the ASC, the annual meeting will include the dean of the School of Graduate Studies and Research.

For a traditional thesis ISM or a project ISM that contains a heavy writing component:

The ISM committee chair must ensure that the student's Course of Study includes a Preparation for Thesis course:

- This course generally must occur by the end of year 1.
- The ISM committee chair may use an established course within his/her department or create one for the purposes of this particular student, but not both.
- If this course is created as a 596 course, it will not count towards the 6 units of 596 credit permitted within the ISM Course of Study.
- During the course, the student will write a proposal that defines the scope of the thesis and identifies the research requirements. The proposal will be forwarded to the other members of the ISM committee and the chair of the ASC of the Graduate Council after completion of the course. If the ISM committee chair is also the chair of the ASC of the Graduate Council, the proposal will be forwarded to the chair of the Graduate Council.
- During the Preparation for the Thesis course, the ISM committee chair will mentor the student in writing the proposal, performing the research, assisting in developing a timeline, and assisting

in any other issues necessary for a timely completion of the thesis.

For an ISM project evolving creative expression (creative expression is broadly defined and can include art exhibitions, dance, computer or engineering projects, etc.):

The ISM committee chair must make sure the student's Course of Study includes a course designed to aid the student in organizing the project into a meaningful work of creative expression:

- This course generally must occur by the end of year 1.
- The ISM committee chair may use an established course within his/her department or create one for the purpose of this particular student, but not both.
- If this course is created as a 596 course, it will not count towards the 6 units of 596 credit.
- During the course, the student will write a proposal that defines the requirements for successfully completing the creative expression project. The proposal will be forwarded to the chair of the ASC at the end of the course.
- During the course, the ISM committee chair will mentor the student in writing the proposal, performing the research, assisting in developing a timeline, and assisting in any other issues necessary for a timely completion of the project.

Application Requirements, Materials, and Procedures:

The applicant must submit all the required application items listed by the School of Graduate Studies and Research catalog in addition to all of the items required by the department or program that houses the ISM committee chair. In cases where the department or programs that house the ISM committee chair have more or higher standards for admission, the student must submit or meet those standards. In cases where the department or programs that house the ISM committee chair have fewer or lower standards, the student must submit or meet the School of Graduate Studies and Research requirements.

The applicant's undergraduate transcript must show evidence of coursework in each of the fields from which the student proposes to draw for the ISM. The transcript grades for these courses must be a B or above. *In cases where applicants have significant work experience in the subject area of their proposed ISM, the work experience may be used in place of the course work.* In such cases, the student must be prepared to submit evidence of a strong work history (i.e. letters of recommendation from supervisors, examples of work done, etc.) It is up to the student and ISM committee chair to present a convincing rationale for the substitution of work experience for academic course work.

As part of their application, the ISM student applicant must:

- Complete and submit a formal application, in accordance with the instructions in the School of Graduate Studies and Research application packet, including any required application fees.
 - Have the minimum GPA necessary for admission to graduate school as outlined in the graduate catalog for the last 90 quarter or 60 semester credit hours elected.
 - The general GRE must be taken if the home department of the ISM committee chair requires the exam for admission to the home department graduate program. The dean of the School of Graduate Studies and Research and/or the ASC of the Graduate Council reserves the right to request GRE scores from an ISM applicant.
 - For international applicants from non-English speaking countries, the TOEFL or IELTS test must be taken. The applicant must achieve the minimum score for the respective test outlined in the graduate catalog. If the home department of the ISM committee chair requires TOEFL or IELTS scores higher than what is required by the School of Graduate Studies and Research, then the applicant must meet those higher standards.
 - For a traditional thesis or an ISM project that will be writing intensive, the applicant must include a minimum 5-page writing sample in the field/one of the fields being proposed for the ISM. The proposal should be double-spaced with 12-point font. For an ISM project proposal, evidence needs to be submitted to the ASC of the Graduate Council that the student has the ability to complete the ISM (e.g., if a student wants to produce a film for an ISM project, then submission of a short film the student has done would meet this requirement).
 - Work with the ISM committee chair (see below) to complete and submit a Course of Study form (obtained from the School of Graduate Studies and Research website) that lists every course the student intends to take to complete the ISM:
 - at least 30 units must be 500 level and above and a strong argument must be made for including the courses chosen in the course of study.
 - these must be established courses within actual and current programs at CWU. No courses at the 300 level or below may count towards the ISM.
 - only 6 units of course work may be Individual Studies or Special Topics courses (e.g., 596s). Any such course must provide outcomes and assessment, and be vetted by the ASC if the Graduate Council.
- one (1) of the courses must be a course that prepares the student to write a thesis or to define the parameters of their project (see above).
 - the Course of Study must include six credits of 700 for thesis work or four 700 credits for the project option.
 - the Course of Study must add up to a minimum of 45 credits.
 - only 15 units of graduate-level course work may be transferred to an ISM course of study. Reasons for transferring this course work must be justified.
- Work with the ISM committee chair to write and submit a letter of application or Statement of Intent that:
 - provides a rationale for the proposed ISM.
 - identifies similar or relevant programs within graduate programs of American universities, and discusses in detail the one which the CWU student and the ISM committee chair (see below) will use a template for the Course of Study.
 - explains the aptness of the degree to the student's objectives after graduation.
 - justifies the role of each course being proposed to the ISM template as a whole.
 - provides evidence of some expertise in each of the fields of study being proposed for the ISM. *Relevant undergraduate coursework or relevant work experience would satisfy this criteria.*
 - provides evidence of a culminating experience (e.g., thesis, research project, exam, capstone course, etc.) in the undergraduate career that demonstrates the ability to organize, research, and express orally and/or in writing, complex and developed ideas. Relevant work experience may be substituted for the culminating undergraduate experience.
- Submit short commitment letters obtained from the non-chair ISM committee members from their department chairs stating support for the workload effort being expended by the committee members.
- Submit a letter from the ISM committee that will function as a contract between the student and ISM committee chair (see ISM committee chair duties section).
- Work with the ISM committee chair to devise and submit a Statement of Learner Outcomes. Learner outcomes are critical to the success of CWU degree programs. As a result, each ISM candidate is expected to prepare an acceptable goals statement in which anticipated learner outcomes are specified. These will be measured

at the completion of the program as a partial means of determining whether each student has met degree requirements.

Other Application Procedures: Only a student may propose an ISM. Faculty members may not propose an ISM but must be included in the application activities as detailed above. Each approved ISM program can only be proposed once. An ISM is considered to be a truly individual project proposed by a student and thus, by definition, each ISM may be offered only once. The decision to approve an ISM resides with both the ASC of Graduate Council and the dean of School of Graduate Studies and Research. Both the ASC of Graduate Council and the dean of the School of Graduate Studies and Research must approve the ISM proposal before it can move forward. These bodies may request more information from the applicant and/or ISM committee chair, or invite an outsider's opinion in making their determinations.

Program Procedures: All decisions, changes, requests, appeals, etc. must be performed in writing, with a copy going to the School of Graduate Studies and Research to ensure that the student's file is complete and up-to-date. The student must meet with his or her committee chair at least once per quarter, if not more. Once a year the student and the ISM committee chair must meet with the chair of the ASC of the Graduate Council or the dean of the School of the Graduate Studies and Research to report on progress. If, at any other time, either the student or the ISM committee chair feels the program is not advancing as designed or anticipated, one or both must contact the chair of the ASC of the Graduate Council or dean of the School of Graduate Studies and Research for support in identifying the issues and establishing strategies for the solving them.

Note: A student may implement two (2) changes to an approved ISM Course of Study, justified in writing. Should the student require more changes to the approved ISM Course of Study, he or she may petition the ASC of the Graduate Council to implement further changes. All petitions must be in writing, and the ASC of the Graduate Council must approve or reject the request in writing. All written communication will be included in the student's file with the School of Graduate Studies and Research.

Departmental Credit for ISM Degree: The department that houses the ISM committee chair will be acknowledged by the School of Graduate Studies and Research as graduating the candidate so long as the ISM candidate successfully completes the degree.

Additional Application Information: Each applicant is encouraged to apply using the self-managed application

process. This will insure efficient and rapid processing of the application. If he or she is unable to use the self-managed application system, he or she may file the application materials separately. The application file must be complete before the graduate school can act upon it. The applicant must follow all instructions included in the application packet and mentioned above. Materials submitted in support of an application cannot be returned nor will they be for other purposes.

Examinations and Assessment: An oral final examination is required on work completed in partial fulfillment of the ISM degree requirements. The examination standards must be aligned with that of the department that houses the ISM committee chair. Some graduate committees may also require a written examination as well. The examination process is intended to assure that the student has met the objectives of her or his goal statement and that the learner outcomes have thus been achieved. If the student performs satisfactorily on the examination, the student's ISM committee will write a summary statement of the student's accomplishments and competencies for inclusion in the student's permanent file.

Application Deadlines: The deadlines for submitting all application materials are as follows:

February 1 for fall quarter
April 1 for summer quarter
October 1 for winter quarter
January 1 for spring quarter

Applicants must meet these deadlines or risk jeopardizing their admission for the quarter requested.

Information Technology and Administrative Management Program

Information Technology and Administrative Management, MS

Program Overview

In today's complex global environment, skilled professionals who possess both information technology and administrative management expertise are in high demand. The information technology and administrative management (ITAM) master's of science (MS) degree provides a one-year professional program degree for post baccalaureate students to develop essential skills to enhance organization

competitiveness. The MS-ITAM offers courses blending high-demand technical skills with high-demand soft skills. A cutting-edge, relevant curriculum prepares individuals the opportunity to learn critical skills for their ongoing professional success. The MS-ITAM graduate program has a common core curriculum (26 credits) with two specialization areas (16 credits): 1) Administrative Management (ADMG) and 2) Information Technology (IT). The program is three quarters plus summer quarter (46 credits).

The ADMG specialization prepares students for critical decisions in leading organizational change, innovation, managing customer relationships, and integrating social informatics. The IT specialization prepares students for critical decisions in sustainable IT, strategic management, cybersecurity and risk, and enterprise analytics. Both specializations build on the common core course work. The common core course work includes managerial communications, leadership and supervision, project management, research and statistical analysis of data, financial analysis in IT and administrative management, and administrative policy. These courses bridge the gap between information technology and administrative management while offering new perspectives on the impact of technological innovation on international operations and competitiveness of an enterprise.

The MS-ITAM Master's Program is ideal for those interested in one of four areas of professional growth: career starters, career climbers, career changers, or career crossers. Career starters are recent graduates seeking a professional degree before entering workforce. The career climbers include professionals seeking graduate degrees for advancing their industry specific careers. Career changers will find the MS-ITAM degree an important part of their strategy to move into new fields with the career crossers seeking cross-training to advance in current fields. For those professionals interested in continuing their education to the doctoral level at another institution, the MS-ITAM graduate degree also offers the thesis elective.

Program Description

The MS-ITAM Master's Program is coordinated by a program coordinator from the ITAM department who is responsible for working with graduate students and their direct advisors in planning for courses of study. The program is delivered at the CWU Ellensburg campus or 100% online dependent upon university regulations. Applicants must meet the requirements of acceptance to School of Graduate Studies and Sponsored Research.

Core Requirements

- ADMG 501 - ITAM Boot Camp **Credits: (2)**
- ADMG 525 - Global Managerial Communications **Credits: (4)**
- ADMG 531 - Financial Analysis in IT and Administrative Management **Credits: (4)**
- ADMG 545 - Research and Statistical Analysis of Data **Credits: (4)**
- ADMG 571 - Global Administrative Policy **Credits: (4)**
- ADMG 573 - Global Leadership and Supervision **Credits: (4)**
- ADMG 574 - Global Project Management **Credits: (4)**

Total Core Credits: 26

ADMG Specialization

- ADMG 631 - Organizational Development **Credits: (4)**
- ADMG 641 - Innovation and Entrepreneurial Growth **Credits: (4)**
- ADMG 654 - Applied Customer Relationship Management (CRM) **Credits: (4)**
- ADMG 681 - Social Informatics **Credits: (4)**

ADMG Specialization Total Credits: 16

IT Specialization

- IT 632 - Sustainable IT **Credits: (4)**
- IT 642 - Strategic Management for IT **Credits: (4)**
- IT 657 - Strategic IT Security **Credits: (4)**
- IT 682 - Enterprise Analytics **Credits: (4)**

IT Specialization Total Credits: 16

Options to reach 46 credits:

- ADMG 689 - Capstone Written Project **Credits: (4)**
- **OR** IT 689 - Capstone Written Project **Credits: (4)**
- **OR**
- ADMG 700 - Master's Thesis and/or Project Study **Credits: (1-6)**
- **OR** IT 700 - Master's Thesis and/or Project Study **Credits: (1-6)**

Total MS-ITAM Credits: 46

Language, Literacy, and Special Education Department

College of Education and Professional Studies
Ellensburg
Black Hall, room 205

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

Shu-Fei Tsai, PhD, special education

Sandra Wentworth, PhD, special education

Senior Lecturer

Judy Backlund, MA, literacy

Staff

Nancy Schnebly

The Department of Language, Literacy, and Special Education prepares socially responsible practitioner scholars to work and learn within diverse contexts; fostering language, literacy, and learning for all.

General Information

The master of education degree programs are designed primarily for elementary and secondary school teachers and school service personnel. Since the program may also prepare the student for community college teaching and for advanced study, the student should seek advice from

the program advisors. For advice regarding specializations, contact the department.

Admission Requirements

In addition to general requirements for admission to master's programs, students desiring admission to programs in education must meet departmental requirements. Members of the appropriate program will review the student's application materials from the Office of Admissions and, if deemed necessary, may meet with the student before a recommendation for admission can be made.

Required Educational Foundations and Research Courses

EDF 510 is required of all students earning the MEd degree. The candidate further must choose at least six credits from the following: EDF 501, Educational Foundations, EDF 502, History of Education, EDF 503, Philosophy of Education, EDF 504, Advanced Educational Statistics, EDF 505, Educational Measurement for Teachers, EDF 506, Education Futurism, EDF 507, Studies and Problems in Intercultural Education, EDF 508, Comparative Education, EDF 567, Educational Change, PSY 552, Advanced Human Growth and Development, PSY 559, Advanced Educational Psychology (only one of PSY 552 or PSY 559 may be included to meet the foundations requirement), SOC 525, Society and Education, as approved by the student's graduate advisor or committee chair. Related courses may be substituted with permission of the student's graduate advisor or committee chair, the chair of the appropriate department, and the dean of Graduate Studies and Research.

Literacy, MEd

Program Description:

The Master of Education: Literacy Program is designed to allow students to pursue graduate-level study in the various levels of literacy. The following college-level courses should be successfully completed prior to enrollment in the program and may not be counted as part of the required credits in the literacy program:

- Basic reading methods course
- Basic language arts course
- Basic children's literature course

Program Admission Requirements:

Submission of a copy of valid teaching certificate with application materials.

Recommended Program Admission Requirements:

Minimum of one year of contracted teaching.

Program:

The students will complete the prescribed program course of study for 46 credits. The prescribed course of study must be completed and approved by a program advisor or committee chair upon completion of 15 credits. Those wishing to obtain a Washington State Reading Endorsement must enroll in the CWU Endorsement-Only Program and pass the WEST-E (Reading) (or its current equivalent). At that time, the program designee may recommend the candidate for the Washington State Reading Endorsement. The program is delivered on-line, with core courses offered in conjunction with the Master of Education: Special Education.

Required Courses

- EDLT 520 - Literacy Curriculum: Design and Delivery **Credits:** (5)
- EDLT 521 - Program Organization: Literacy Coaching and Leadership **Credits:** (5)
- EDLT 523 - Issues and Trends in Literacy Research **Credits:** (4)
- EDLT 526 - Assessing Literacy **Credits:** (3)
- EDLT 528 - Personalizing Literacy Instruction **Credits:** (3)
- EDLT 534 - Learning Theories: Research and Applications **Credits:** (4)
- EDLT 535 - Teaching Diverse Learners **Credits:** (5)
- EDLT 536 - Understanding Research Methods **Credits:** (3)
- EDLT 537 - Designing and Writing Research **Credits:** (3)
- EDLT 592A - Practicum: Literacy Curriculum-Design and Delivery **Credits:** (1)
- EDLT 592B - Practicum: Program Organization **Credits:** (1)
- EDLT 592C - Practicum: Teaching Diverse Learners **Credits:** (1)
- EDLT 592D - Practicum: Assessing and Personalizing Literacy Growth and Development **Credits:** (2)
- EDLT 700 - Master's Thesis, Project Study **Credits:** (1-6)

Total Credits: 46

Special Education, MEd

Program Description:

The master of education with specialization in special education is designed to allow students to pursue graduate-level study in the various areas of special education. Certified teachers (P-12) or related service personnel who wish to add to their repertoire of strategies for diverse learners in their settings would benefit from this program.

Program Admission Requirements:

Submission of a copy of a valid teaching certificate with application materials.

High-speed internet access and webcam are necessary requirements for online learning.

Minimum of one year of contracted teaching or permission of special education faculty.

Undergraduate GPA of 3.0.

Potential graduate students will need to identify their current knowledge, skills, and philosophy related to working with students with disabilities in their admission letter.

Program:

Students will complete the prescribed program course of study for 45 credits. The prescribed course of study must be completed and approved by a program advisor or committee chair upon completion of 15 credits. The program is delivered online, with the core courses offered in conjunction with the master of education: literacy.

Required Courses

- EDSE 520 - Behavioral Intervention for Students with Disabilities **Credits:** (5)
- EDSE 522 - Collaboration/Consultation **Credits:** (5)
- EDSE 524 - Curriculum and Assessment for Students with Disabilities **Credits:** (5)
- EDSE 525 - Instruction and Assessment for Students with Disabilities **Credits:** (5)
- EDSE 534 - Learning Theories: Research and Applications **Credits:** (4)
- EDSE 535 - Teaching Diverse Learners **Credits:** (5)
- EDSE 536 - Understanding Research Methods **Credits:** (3)
- EDSE 537 - Designing and Writing Research **Credits:** (3)

- EDSE 592C - Practicum: Teaching Diverse Learners **Credits:** (1)
- EDSE 684 - Internship in Professional Affiliated Disciplines **Credits:** (2-12) (Must be taken for 3 credits.)
- EDSE 700 - Master's Thesis and/or Project Study **Credits:** (1-6) (Must be taken for 6 credits.)

Total Credits: 45

Post-Baccalaureate University Certificate: Teaching and Linguistic Diversity

Students entering the public school setting speaking little or no English are the fastest-growing segment of the school population. Most mainstream teachers have received little or no special training in preparing them for these students. This program will provide the opportunity for practicing teachers to receive this needed training. This training will take place through the development and implementation of four courses. Upon completion of the program, students will be able to explain how programs have come to exist as they are found today, document the theories upon which sound educational practices are based, develop and implement quality instruction, organize and use appropriate assessment procedures, and use paraprofessional and community members as quality assets in the classroom. While the program itself does not constitute a state of Washington endorsement, all courses may be applied to the completion of endorsement requirements at Central.

Required Courses

- EDBL 440 - Reading English as a Second Language **Credits:** (3)
- EDBL 514 - Introduction to Linguistic Diversity in Education **Credits:** (3)
- EDBL 530 - Sheltering in Mainstream I: Methods **Credits:** (3)
- EDBL 531 - Sheltering in Mainstream II: Assessment and Resources **Credits:** (3)

Total Credits: 12

Law and Justice Department

College of the Sciences
Ellensburg
Farrell Hall, room 309

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 (Lynnwood)
J. Michael Olivero, PhD (Yakima)
Mary Ellen Reimund, LLM (Des Moines)
Teresa Francis, LLM (Pierce)

Professors

Rodrigo Murataya, PhD, MPA, criminal investigation, police-community relations, police personnel administration
J. Michael Olivero, PhD, MSW, corrections, criminology
Charles Reasons, PhD, LLB, criminology, criminal justice, law, comparative justice

Associate Professors

Teresa Francis, JD, LLM, criminal law, correctional law
Krystal Noga-Styron, JD, criminal law, crime and the media
Mary Ellen Reimund, JD, LLM, criminal law, alternative dispute resolution, restorative justice

Assistant Professors

Danielle Neal, PhD, criminological theory, restorative justice, research methods
Cody Stoddard, PhD, policing, courts, criminological theory, quantitative methods

Lecturers

Cathy Busha, JD, family law, legal research, legal writing, paralegal
Saul Chacon, MA, corrections
Robert Wes Clogston, MS, law enforcement, comparative criminal justice, police personnel administration
Robert Moore, MA, corrections, correctional counseling
Tim Morris, PhD, law enforcement
Stacy Wahl, MA, corrections, restorative justice

Staff

Michael Hanscom, secretary senior

Program Description

The MS degree in law and justice is designed to serve two distinct groups (1) those in law and justice field with professional experience and (2) those without professional experience who aspire to a law and justice career. The program offers two options, both of which are 60 credits. Of these 60 credits, 28 credits are in the core courses (7 mandatory courses) and another 28 are from seminar electives. Option A is geared towards the working professional; it entails taking 56 credits worth of courses plus a four credit capstone course where the final culminating experience is a written exam with an oral defense. This option is aimed at those who are looking for a career in criminal justice. Option B also includes 56 credits of courses but has a thesis or research project as the culminating experience. This option is primarily for those interested in continuing on and doing doctoral work.

Admission

Applicants for admission to the Master of Law and Justice Program must:

1. Apply to the School of Graduate Studies at CWU;
2. Have a bachelor's degree in the social sciences from a recognized four-year college or university in the U.S. or the equivalent from an institution abroad, or a bachelor's degree and professional experience;
3. At least a 3.0 GPA in all coursework attempted during the last 90-quarter (60 semesters) hours of study;
4. Submit three professional letters of recommendation; and
5. Submit personal statement of objectives.

Law and Justice, MS

Program Description

Option A includes a comprehensive examination as the culminating experience and option B includes a thesis or research project as the culminating experience. Both options are 60 credits to complete. Option A is primarily designed for those interested in research or pursuing further graduate level work.

Core Requirements

- LAJ 511 - Theories of Crime, Deviance, and Justice **Credits:** (4)
- LAJ 516 - Organizational Leadership **Credits:** (4)

- LAJ 520 - Constitutional Issues in Criminal Justice **Credits:** (4)
- LAJ 524 - Policy Analysis **Credits:** (4)
- LAJ 535 - Research Methods **Credits:** (4)
- LAJ 536 - Statistics and Data Analysis **Credits:** (4)
- LAJ 540 - Law and Social Control **Credits:** (4)

Total Core Credits: 28

Seminar Electives (select 7 of the courses below):

- LAJ 541 - Race, Class, Gender, and Justice **Credits:** (4)
- LAJ 542 - Criminal Justice History **Credits:** (4)
- LAJ 543 - Theory and Evidence on Crime Prevention **Credits:** (4)
- LAJ 544 - Theory and Evidence in Policing **Credits:** (4)
- LAJ 545 - Ethical Studies **Credits:** (4)
- LAJ 546 - Theory and Evidence in Corrections **Credits:** (4)
- LAJ 547 - Theory and Evidence in Courts and Law **Credits:** (4)
- LAJ 548 - Decision Making in Law and Justice **Credits:** (4)
- LAJ 549 - Juvenile Justice **Credits:** (4)
- LAJ 550 - Advanced Research Methodology **Credits:** (4)
- LAJ 551 - Legal Liability for Professionals **Credits:** (4)
- LAJ 552 - Criminal Justice Controversies **Credits:** (4)
- Other Courses: (4 credit maximum)
- LAJ 590 - Cooperative Education **Credits:** (1-8) (may be repeated up to 4 credits)
- LAJ 596 - Individual Study **Credits:** (1-6) (may be repeated up to 4 credits)
- LAJ 598 - Special Topics **Credits:** (1-5)

Seminar Elective Credits: 28

Competency Demonstration (select one of the options below):

- LAJ 689 - Master's Capstone **Credits:** (4) (Option A)
- LAJ 700 - Master's Thesis, Project, Study, or Portfolio **Credits:** (1-6) (Option B)

Competency Demonstration Credits: 4

Total Credits: 60

Mathematics Department

College of the Sciences
Ellensburg
Bouillon Hall, room 108

509-963-2103
Fax: 509-963-3226
www.cwu.edu/math

See website for how mathematics may be used for educational and career purposes.

Faculty and Staff

Chair

Timothy Englund, PhD

Professors

Stuart F. Boersma, PhD, differential geometry, general relativity
Timothy Englund, PhD, group theory, representation theory, statistics
Stephen P. Glasby, PhD, computational algebra, representation theory
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
Yvonne Chueh, PhD, actuarial science, statistics
W. Dan Curtis, PhD, applied mathematics
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

Janet Shiver, PhD, mathematics education

Senior Lecturers

Douglas Olson, MS, mathematics
Richard Trudgeon, MA, administration and curriculum
Dale Width, MA, history

Lecturers

Molly Andaya, MAT, education
Tim Brown, MAT, education

George Kreppein, MAT, education
Danielle Jacobson, MAT, mathematics education
Fred McDonald, MT, finance, accounting
Jim Miller, MAT, mathematics education
Thad O'Dell, MAT, education
Stephen Stein, PhD, educational administration
Bruce Woodcock, MA, education

Staff

Brenda Bland, secretary

Master of Arts for Teachers: Mathematics

Program Coordinator

Mike Lundin
Bouillon Hall, room 108D

The master of arts for Mathematics Teaching Program has been structured mainly for middle school and high school mathematics teachers. It also may prepare a student for community college teaching and for advanced study in mathematics education. Sequencing of the required coursework is minimal and makes it possible in most cases to complete all the requirements for the degree in three consecutive summer sessions.

Admission Requirements: In addition to general regulations for admission to master's programs, the department prefers that a student has earned a baccalaureate degree with a major in mathematics or equivalent from an accredited college or university. A student with a baccalaureate degree with a major other than mathematics may be admitted to the graduate program upon the recommendation and permission of the chair of the mathematics department. Any deficiencies for regular admission must be removed during the first year of graduate study.

Applicants should have one year of teaching experience certified by an appropriate school official.

Program: The student shall complete at least 46 credits as outlined in an approved course of study filed with the Office of Graduate Studies and Research.

Project, Thesis

The choice among a written report, field study, or other project, or a formal research problem in mathematics or mathematics education which results in a thesis based upon the student's goals, in close consultation with the student's graduate committee.

Required Courses

- MATH 505 - Proof Writing **Credits:** (1)
- MATH 506 - Technology for Teaching Mathematics **Credits:** (1)
- MATH 510 - Games of Chance **Credits:** (3)
- MATH 522 - Modern Programs in Mathematics **Credits:** (2)
- MATH 523 - Math Methods for Jr. High School **Credits:** (2)
- MATH 524 - Math Methods for High School **Credits:** (2)
- MATH 526 - Research Design in Mathematics Education **Credits:** (4)
- MATH 527 - Advanced Statistical Analysis **Credits:** (4)
- MATH 550 - Transformational Geometry **Credits:** (3)
- MATH 562 - Modern Algebra for Teachers **Credits:** (3)
- MATH 566 - Matrices and Their Applications **Credits:** (3)
- MATH 570 - Calculus for Secondary Teachers **Credits:** (3)
- MATH 572 - Elementary Real Analysis **Credits:** (3)
- MATH 700 - Master's Thesis, Project Study, and/or Examination **Credits:** (1-6)
Credits: (3-6)

Department-approved electives Credits: (6-9)

Total Credits: 46

Music Department

College of Arts and Humanities
Ellensburg
Music Building, room 144

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

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

Gayla Blaisdell, PhD, voice, opera

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
Sidney Nesselroad, DMA, voice
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
Collin Wilson, MM, saxophone

Staff

Marcie Brown, program assistant
Sara Caroll, advisor/recruiter
Star Heger, fiscal specialist
Allen Larsen, hall manager, audio technician, web manager
Samantha Strevy, office supervisor
Harry Whitaker, piano technician

Master of Music

The master of music curriculum is designed to provide opportunity for depth of study in an area of specialization, to increase professional competence in teaching and performance, and to prepare for continued, self-directed study or advanced graduate study.

Program: All candidates must complete at least 45 credits as delineated in an approved course of study filed with the Office of Graduate Studies and Research. The major fields are:

1. Composition
2. Conducting
3. Performance
4. Performance-pedagogy
5. Music education

At least one-third of the total credit requirements must be in the major field, including six credits of thesis, one-third in other music courses, including three credits of MUS 521 (Methods of Musical Research), three credits of music history, three credits of music theory, and three ensemble credits; and one-third may be elective courses in supportive areas from any discipline. At least 25 credits applied toward the degree must be at the 500 level or above. No more than 20 credits applied toward the degree may be at the 400 (senior undergraduate) level. No 300 level credits may be applied toward the degree. Students

are expected to plan their program with a graduate advisor and committee.

Admission Requirements: Admission into the institution does not assure admission into the music program. In addition to general university regulations for admission to the master's program through the Graduate School, the following requirements apply to the master of music degree:

1. Candidates must have a bachelor's degree from an accredited college with a major in music or its equivalent.
2. Acceptance into a specific major field will require an evaluation of a candidate's ability conducted by a committee of three faculty members, two of whom will be from the particular major field. Normally one of these two will serve as the candidate's graduate advisor, and the committee as a whole may serve as the candidate's graduate committee.
3. In addition, non-performance majors must also demonstrate a level of musicianship equal to what would be considered appropriate for 300-level study. Students may demonstrate this level of musicianship in several ways, appropriate to the desired degree program or deemed appropriate by the evaluating committee after consultation with the student. Examples include, but are not limited to, a performance audition in an applied area or conducting (live or taped), a videotape or audiotape of a performance directed by the applicant, or a videotape of a music lesson or class taught by the applicant.
4. For admission requirements to each field, see section one in each field entry under specific requirements for major fields.

After meeting minimum criteria for admission into a specific master's degree for each major, candidates must take diagnostic examinations in music history and music theory at the beginning of their first quarter of graduate study. Deficiencies in any of the above will be delineated to the student by the faculty along with recommendations for remediation. These recommendations may take the form of, but are not limited to, coursework, selected readings, and applied study. Satisfaction of remedial coursework must be passed with a grade equivalent to a B or higher. No master of music degree will be awarded until these appraisals have been passed. The music department recommends that the candidate attempt to satisfy these entrance appraisals at the earliest opportunity.

General Requirements for all graduate music degrees

- Courses in major field, including MUS 700, Thesis - **Credits:** (15-21)
- Other studies in music including below: **Credits:** (12-15)
- MUS 521 - Methods of Musical Research **Credits:** (3)
- 3 credits of music history
- 3 credits of music theory (Composition majors may substitute a non-theory course in this category)
- 3 credits in ensemble courses (course substitution for ensemble requirements for summer MM Education degree program)
- Elective courses in supportive areas - **Credits:** (6-15)

Total Credits: 45

Specific Requirements for Major Fields:

A. Composition

1. Admission

Admission to this program will be based upon an evaluation of appropriate compositions submitted by the student.

2. Courses in the major field

A minimum of 9 credits of composition classes, in addition to the 6 credits of thesis study, selected from:

- MUS 440 - Analytic Techniques II **Credits:** (3)
- MUS 522 - Advanced Orchestration **Credits:** (3)
- MUS 523 - Advanced Composition **Credits:** (3) (may be repeated)
- MUS 547 - Electronic Music Composition **Credits:** (3)
- MUS 613 - Graduate Seminar in Music: Music Theory/Composition **Credits:** (1-3) (may be repeated)

3. Other studies

Other studies in music should include:

- MUS 521 - Methods of Musical Research **Credits:** (3)
- 3 credits of music history courses (selected from Music History Graduate Course listing below)
- 3 credits in ensemble courses (selected from Ensemble Graduate Course listing below)

4. Thesis

The thesis project (MUS 700) will be an original composition of a level appropriate as a final project and a covering paper. Normally this paper will be based on the thesis composition.

- MUS 700 - Master's Thesis, Project Study, and/or Examination **Credits:** (1-6)

B. Conducting

1. Admission

Admission to this program will require faculty evaluation of evidence of an appropriate level of musicianship, satisfied in one of the following ways:

- A performance or conducting audition
- A videotape of a performance directed by the applicant
- Other evidence deemed appropriate in consultation with the evaluating committee.

This program requires a one-year residency prior to graduation. Candidates will work under the direct supervision of one of the three conductors of the major performance ensembles (Orchestra, Wind Ensemble, and Choir) during each quarter in residence. Students will be encouraged to study in all three areas whenever possible.

2. Courses in the major field

A minimum of 9 credits of conducting classes, in addition to the 6 credits of thesis study, selected from:

- MUS 541 - Advanced Conducting **Credits:** (3) (may be repeated)
- MUS 615 - Graduate Seminar in Music: Conducting **Credits:** (1-3) (may be repeated)

3. Other studies

Other studies in music should include:

- MUS 521 - Methods of Musical Research **Credits:** (3)
- 3 credits in music theory courses (selected from Music Theory Graduate Course listing below)
- 3 credits of music history courses (selected from Music History Graduate Course listing below)
- 3 credits in ensemble courses (selected from Ensemble Graduate Course listing below)

4. Thesis

As a thesis project (MUS 700) the student will conduct a public performance and submit a covering paper. Normally this paper will be based on the works conducted.

- MUS 700 - Master's Thesis, Project Study, and/or Examination **Credits:** (1-6)

C. Performance

1. Admission

Admission to this program will be based upon an evaluation of an audition equivalent in scope to at least one-half of a full baccalaureate recital.

It is expected that vocal performance majors must be able to:

- Demonstrate competency in French, German or Italian equal to the successful completion of one year of university level foreign language. If a candidate is lacking this requirement upon entry, the student must take a year of French or German as a remedial course.
- Demonstrate the ability to translate musical texts, transcribe French, German, and Italian text into International Phonetic Alphabet with proper pronunciation. If a candidate is lacking in this area, the student will be advised to take all or part of the CWU Diction sequence (MUS 536, MUS 537, MUS 538).

2. Courses in the major field

A minimum of 12 credits of major applied instruction, in addition to the 6 credits of thesis study.

- MUS 664 - Major Applied Area (Individual Instruction) **Credits:** (2 or 4) (may be repeated)

3. Other studies

Other studies in music should include:

- MUS 521 - Methods of Musical Research **Credits:** (3)
- 3 credits in music theory courses (selected from Music Theory Graduate Course listing below)
- 3 credits of music history courses (selected from Music History Graduate Course listing below)
- 3 credits in ensemble courses (selected from Ensemble Graduate Course listing below)

4. Thesis

As a thesis project (MUS 700) the student will present a full public recital and submit a covering paper. Normally this paper will be based on the works presented on the recital.

- MUS 700 - Master's Thesis, Project Study, and/or Examination **Credits:** (1-6)

D. Performance-Pedagogy

1. Admission

Admission to this program will be based upon an evaluation of an audition equivalent in scope to at least one-half of a full baccalaureate recital, and evaluation of a paper written for an undergraduate class in the field of music instruction.

It is expected that vocal performance majors must be able to:

- Demonstrate competency in French, German or Italian equal to the successful completion of one year of university level foreign language. If a candidate is lacking this requirement upon entry, the student must take a year of French or German as a remedial course.
- Demonstrate the ability to translate musical texts, transcribe French, German, and Italian text into International Phonetic Alphabet with proper pronunciation. If a candidate is lacking in this area, the student will be advised to take all or part of the CWU Diction sequence (MUS 536, MUS 537, MUS 538).

2. Courses in the major field

A minimum of 12 credits of major applied instruction, in addition to the 6 credits of thesis study.

- MUS 664 - Major Applied Area (Individual Instruction) **Credits:** (2 or 4) (may be repeated)
- MUS 425 Studio Pedagogy **Credits:** (3)

3. Other studies

Other studies in music should include:

- MUS 521 - Methods of Musical Research **Credits:** (3)
- 3 credits in music theory courses (selected from Music Theory Graduate Course listing below)
- 3 credits of music history courses (selected from Music History Graduate Course listing below)

- 3 credits in ensemble courses (selected from Ensemble Graduate Course listing below)

4. Thesis

As a thesis project (MUS 700) the student will present either:

- A demonstration project with covering paper, and one-half of a public recital.
OR
- A demonstration project, one-half of a public recital and a covering paper based on the works presented on the recital.
OR
- A research paper and one-half of a public recital.

Demonstration projects include lecture-recitals or other public presentations of information.

Research projects are generally self-contained written studies on larger topics.

- MUS 700 - Master's Thesis, Project Study, and/or Examination **Credits:** (1-6)

E. Music Education

1. Admission

Admission to this program will be based upon:

- Evaluation of an undergraduate paper in the field of music education.
- The completion of a least one year of successful public school music instruction (under a special request made by the entering student, this requirement may be waived by the music education committee).
- Evidence of an appropriate level of musicianship, satisfied in one of the following ways:
 - 1) A performance audition
 - 2) A videotape or audiotape of a performance directed by the applicant
 - 3) A videotape of a music lesson or class taught by the applicant
 - 4) Other evidence deemed appropriate in consultation with the evaluating committee.

2. Courses in the major field

A minimum of 9 credits in courses that enable students to understand and evaluate research in music education, in addition to the 6 credits of thesis study, selected from:

- MUS 425 - Studio Pedagogy **Credits:** (3)
- MUS 424 - Jazz Music Education **Credits:** (3)

- MUS 560 - Instructional Development in Music Education **Credits:** (3)
- MUS 611 - Graduate Seminar in Music: Music Education **Credits:** (1-3) (may be repeated)

3. Other studies

Other studies in music should include:

- MUS 521 - Methods of Musical Research **Credits:** (3)
- 3 credits in music theory courses (selected from Music Theory Graduate Course listing below)
- 3 credits of music history courses (selected from Music History Graduate Course listing below)
- 3 credits in ensemble courses (selected from Ensemble Graduate Course listing below)

4. Thesis

As a thesis project (MUS 700), the student will present either:

- A research thesis.
OR
- A demonstration, analytical or creative project and a covering paper based on the project.
- MUS 700 - Master's Thesis, Project Study, and/or Examination **Credits:** (1-6)

Final Examination

All students must pass a comprehensive final examination, oral, or written and oral, based on their coursework and the thesis. Before the Final Examination can be scheduled, students must have:

- Satisfied any deficiencies revealed by the diagnostic exams.
- Completed and submitted the written portion of the thesis/thesis project.

According to University policy, an application for the final examination, approved by the student's graduate committee, must be filed in the Graduate Office at least three weeks in advance of the examination. This application has several specific parts to it, so early acquisition and completion of this form is strongly recommended. Consult the Graduate Office for any and all appropriate deadline dates.

For more details about Graduate Studies in Music, see the Department of Music's Handbook for Graduate Studies available on-line at the department Website: www.cwu.edu/music.

Graduate Cognate in Music

Similar to an undergraduate minor, a graduate cognate in music lends more coherence to the cluster of elective courses students take beyond those required for the degree and offers more meaningful recognition for this cluster of courses.

Admission

Students who have been accepted into a graduate major in music may apply for admission to a graduate cognate in music after they arrive on campus. Admission to a cognate requires the following, in order:

- Acceptance for admission to CWU graduate program
- Acceptance for admission to a major graduate program in music (by audition/interview)
- Acceptance for admission to the graduate cognate by separate audition/interview. This interview/admission will normally be conducted during the first quarter of enrollment or later. It is not part of the primary admission process so as to avoid confusion of initial advising and enrollment. Acceptance for admission is also dependent on space available in the area, to be determined by faculty in that area.

Guidelines

- Students are allowed one graduate cognate in music.
- Students accepted into a cognate will have an assigned advisor, but will not need to form a graduate committee for the cognate final project or recital. This advisor will be responsible for evaluating the culminating recital or project and will also be a member of the student's graduate committee.
- Courses counted for the cognate must also be indicated on the course of study form, separate from general, specific and elective curricular requirements.
- Material and coursework covered in the cognate would be eligible for inclusion in the final examination, as approved by student's major graduate committee chair.

Content

Students must complete a total of 13 credits to complete a cognate: minimum of 12 credits of courses approved by the cognate advisor in consultation with the major

advisor, plus 1 credit of MUS 600, Graduate Cognate Project in the quarter the required culminating work is presented, above the 45 credits required for the master's degree (totaling a minimum of 58 for the degree with major and cognate).

Subject Areas

Composition
Conducting
Jazz Pedagogy
Music Education
Music History
Music Theory
Performance
Performance-Pedagogy

Individual Subject Area Requirements:

Composition

Students receive guided study in their own musical composition, culminating in the presentation of a musical composition or project in the field of composition.

- MUS 523 - Advanced Composition **Credits:** (3) (must be taken for 6 credits)
- MUS 600 - Graduate Cognate Project **Credits:** (1)
- 6 credits of approved Composition/Theory classes. See Music Theory Graduate course listing below for options.

Conducting

Students are provided opportunities to hone their conducting skills, culminating in a project or public performance demonstrating progress in the student's conducting experience.

- MUS 600 - Graduate Cognate Project **Credits:** (1)
- 9 credits of approved conducting classes, including at least three credits of MUS 541. Normally, courses are chosen from below:
- MUS 541 - Advanced Conducting **Credits:** (3)
- MUS 615 - Graduate Seminar in Music: Conducting **Credits:** (1-3)
- 3 credits of orchestration or arranging courses (see Music Theory Graduate course listing below for options).

Jazz Pedagogy

Students are provided opportunities to study jazz pedagogy through the combined elements of informed

jazz performance practice and demonstrated teaching/coaching of students, culminating in an appropriate pedagogical project or written document.

Required Courses

- MUS 424 - Jazz Music Education **Credits:** (3)
- MUS 485 - Choral Arranging **Credits:** (3) OR MUS 486 - Jazz Band Arranging **Credits:** (3)
- MUS 574 - Jazz Styles and History **Credits:** (3)
- MUS 600 - Graduate Cognate Project **Credits:** (1)
- A minimum of 3 ensemble credits from the following in any combination (may be repeated for credit):
- MUS 418 - Jazz Combos **Credits:** (1)
- MUS 510 - Vocal Jazz Choir **Credits:** (1)
- MUS 532 - Big Band **Credits:** (1)

Music Education

Students are provided opportunities to study and conduct research in the field of music education in greater depth, culminating in an appropriate written document or project.

- MUS 600 - Graduate Cognate Project **Credits:** (1)
- 12 credits of approved classes. Normally, courses would be chosen from:
- MUS 560 - Instructional Development in Music Education **Credits:** (3)
- MUS 611 - Graduate Seminar in Music: Music Education **Credits:** (1-3) (may be repeated)

Music History

Students are provided opportunities to study and conduct research in the field of music history in greater depth, culminating in an appropriate written document or project.

- MUS 600 - Graduate Cognate Project **Credits:** (1)
- 12 credits of approved Music History classes. See Music History Graduate course listing below for options.

Music Theory

Students are provided opportunities to study and conduct research in the field of music theory in greater depth, culminating in an appropriate written document or project.

- MUS 600 - Graduate Cognate Project **Credits:** (1)
- 12 credits of approved Music Theory classes (Note: These credits are in addition to 3 credits of

Music Theory required in all master's degrees.) See Music Theory Graduate course listing below for options.

Performance

Students receive opportunities through applied study and performance experience to improve their performance skills on a primary instrument or voice, culminating in a public performance.

- MUS 564 - Major Applied Area (Individual Instruction) **Credits:** (2 or 4) (may be repeated, minimum of 8 credits required)
- MUS 426 - Studio Literature **Credits:** (3);
- and vocalist take: MUS 558 - Survey of Solo Vocal Literature **Credits:** (3)
- 1 ensemble credit (Note: this credit is in addition to 3 credits of ensembles required in all master's degrees)
- MUS 600 - Graduate Cognate Project **Credits:** (1)

Performance-Pedagogy

Students receive opportunities to improve performance skills with additional emphasis on the pedagogy of the primary instrument or voice, culminating in an appropriate performance, project, or combination in lecture/demonstration.

- MUS 564 - Major Applied Area (Individual Instruction) **Credits:** (2 or 4) (may be repeated, minimum of 8 credits required)
- MUS 425 - Studio Pedagogy **Credits:** (3)
- 1 ensemble credit (Note: this credit is in addition to 3 credits of ensembles required in all master's degrees)
- MUS 600 - Graduate Cognate Project **Credits:** (1)

Listing of Graduate Courses in Music History, Music Theory, and Ensembles

Music History Graduate Courses

- MUS 558 - Survey of Solo Vocal Literature **Credits:** (3)
- MUS 571 - History of Orchestra Music **Credits:** (3)
- MUS 572 - Music in the 20th Century **Credits:** (3)
- MUS 573 - History of Opera **Credits:** (3)
- MUS 574 - Jazz Styles and History **Credits:** (3)
- MUS 575 - History of Chamber Music **Credits:** (3)
- MUS 576 - History of Choral Music **Credits:** (3)
- MUS 579 - Aesthetics of Music **Credits:** (3)

- MUS 610 - Graduate Seminar in Music: Composer **Credits:** (1-3)
- MUS 612 - Graduate Seminar in Music: Music History/Literature **Credits:** (1-3)

Music Theory Graduate Courses

- MUS 440 - Analytical **Credits:** (3) (eligible for graduate credit)
- MUS 485 - Choral Arranging **Credits:** (3)
- MUS 486 - Jazz Band Arranging **Credits:** (3) (eligible for graduate credit)
- MUS 520 - Methods of Teaching Theory **Credits:** (3)
- MUS 522 - Advanced Orchestration **Credits:** (3)
- MUS 523 - Advanced Composition **Credits:** (3)
- MUS 547 - Electronic Music Composition **Credits:** (3)
- MUS 610 - Graduate Seminar in Music: Composer **Credits:** (1-3)
- MUS 613 - Graduate Seminar in Music: Music Theory/Composition **Credits:** (1-3)

Ensemble Graduate Courses

- MUS 510 - Vocal Jazz Choir **Credits:** (1)
- MUS 513 - Flute Choir **Credits:** (1)
- MUS 514 - Brass Choir **Credits:** (1)
- MUS 515 - Chamber Orchestra **Credits:** (1)
- MUS 517 - Chamber Music Ensemble **Credits:** (1)
- MUS 529 - Percussion Ensemble **Credits:** (1)
- MUS 532 - Big Band **Credits:** (1)
- MUS 535 - Laboratory Choir **Credits:** (1)
- MUS 561 - Opera Workshop **Credits:** (1-2)
- MUS 562 - Opera Production **Credits:** (1-3)
- MUS 566 - Wind Ensemble **Credits:** (1-2)
- MUS 567 - University Choir **Credits:** (1-2)
- MUS 568 - Chamber Choir **Credits:** (2)
- MUS 577 - Orchestra **Credits:** (1-2)
- MUS 587 - Marching and Concert Band **Credits:** (1-2)
- MUS 588 - Symphonic Band **Credits:** (2)
- MUS 595 - Graduate Research **Credits:** (2)

Nutrition, Exercise, and Health Sciences Department

College of Education and Professional Studies
Ellensburg
Dorothy Purser Hall., room 101

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.

Faculty and Staff Chair

Ethan Bergman, PhD, RDN, CS, FADA

Graduate Program Director

Leonardo J. D'Acquisto, EdD

Professors

Leonardo J. D'Acquisto, EdD, sport physiology, kinesiology, human anatomy

David L. Gee, PhD, nutrition & metabolism, nutrition and chronic diseases, sports nutrition

Susan Hawk, PhD, RD, dietetics, clinical nutrition

Vincent M. Nethery, PhD, clinical physiology, sport physiology, environmental physiology, human anatomy

Associate Professors

Timothy R. Burnham, PhD, clinical physiology, sport physiology, human anatomy

Linda Cashman, MS, RD, dietetics

Keith A. Monosky, PhD, MPM, EMT-P, emergency medical services, emergency services management, health policy

Assistant Professors

Karen Roemer, PhD, biomechanics, clinical mechanics, kinematics and kinetics

Tracee Watkins, MBA, CHE, food service management

Dan Williams, PhD, clinical physiology

Lecturers

Susan Blair, MS, AT-C, athletic training-sports medicine, exercise physiology, human anatomy

Stephanie Campbell, MS, CPT

Robert Carlson, BA, EMT-P, emergency medical services

Rich Elliott, MBA, EMT, emergency medical services

Cole Gravel, BS, NREMT-P, emergency medical services

Liesl Jones, first-aid faculty

Dan Limmer, NREMT-P, emergency medical services
Dana Ogan, MS, RD, CD
James Pierce, EMT-P, emergency medical services
Amber Simon, MBA, emergency medical services
Nicole Stendell-Hollis, PhD, MS, RD
Danielle Szabo, ND, human anatomy, human physiology, nutrition
Lenny Ugaitafa, BS, NREMT-P, emergency medical services

Staff

Bryan Contreras, MS, instructional classroom support technician- clinical physiology and exercise science
Lucinda Engel, instructional classroom support technician- food science
Estelle Mathews, program support supervisor II
Vickie Ostrow, Program Coordinator, EMS-Paramedicine

Department Information

The graduate programs in Nutrition, Exercise, and Health Sciences are designed to provide knowledge and expertise for students intending to pursue higher-level graduate study in doctoral or professional programs, seeking a terminal degree for entry-level positions in a variety of private and public settings, as well as for positions at community colleges and other tertiary levels. Human functioning is the overriding theme of all curricula offerings. The master of science degrees offered by NEHS require completion of a minimum of 45 credits as outlined in an approved course of study filed with the Office of Graduate Studies and Research. The course of study is structured in consultation with the student's academic advisor and is approved by the department graduate program director. The specifics on the course of study depend on the degree program, and include both required and department-approved elective courses.

Admission

Applicants must first meet the general requirements for graduate study as determined by the Office of Graduate Studies and Research, and then the specific requirements of their selected program within the Department of Nutrition, Exercise, and Health Sciences (see individual programs). Conditional or probationary admission may be granted in certain circumstances.

Exercise Science, MS

The master of science degree in Exercise Science prepares students for further study at the doctoral or professional level, careers in higher education, clinical settings, and sport sciences. Prospective candidates holding a degree in a relevant major, including exercise science, biology, chemistry, nutrition, or health sciences, are encouraged to apply. Courses encompassing anatomy, physiology,

exercise physiology, kinesiology, mechanics, biology, chemistry, statistics, and nutrition are strongly recommended at the undergraduate level. The Graduate Record Examination (GRE) and a scientific writing example, per department requirements, are required.

Required Courses

- EXSC 551 - Advanced Physiology of Exercise I: Metabolism and Skeletal Muscle **Credits:** (4)
- EXSC 552 - Advanced Physiology of Exercise II: Pulmonary Cardiovascular Systems **Credits:** (4)
- EXSC 553 - Laboratory Techniques in Stress Physiology **Credits:** (5)
- EXSC 557 - Research Methods and Design in Exercise and Nutritional Science **Credits:** (4)
- EXSC 560 - Inferential Statistics in Exercise and Nutritional Sciences **Credits:** (4)
- EXSC 564 - Gross Human Anatomy: Cadaver Dissection **Credits:** (1)
- EXSC 700 - Master's Thesis, Project Study, and/or Examination **Credits:** (1-6) (Must be taken for 6 credits)

Electives

A minimum 12 credits from following courses:

- EXSC 555 - Environmental Stress and Human Performance **Credits:** (3)
- EXSC 556 - Ergogenic Aids and Human Performance **Credits:** (3)
- EXSC 559 - Applied Kinesiology **Credits:** (3)
- EXSC 562 - Clinical Exercise Physiology **Credits:** (3)
- EXSC 595 - Graduate Research **Credits:** (1-6) (Other electives by advisement)

Total Credits: 45

Nutrition, MS

The master of science degree in nutrition provides opportunities for students to concentrate at the master's level in the study of nutrition. The goal of the program is to prepare students to enter the workforce as specialists in nutrition or to prepare them to continue their graduate education at the doctoral level. The program offers small classes, the opportunity to work closely with faculty, an excellent learning environment, and an opportunity to conduct original research. Graduate students in nutrition have had their master's thesis consistently presented at national conferences including those of the American

Dietetic Association and the American College of Sports Medicine.

Admission into the MS in nutrition is selective. Applicants are expected to have an undergraduate degree in nutrition or related fields. However, students with undergraduate degrees in biology and health science areas are encouraged to apply but can expect to take a number of undergraduate courses as part of their course load. All applicants to the MS in nutrition are required to take the Graduate Record Examination (GRE).

Required Courses

- EXSC 557 - Research Methods and Design in Exercise and Nutritional Science **Credits:** (4)
- EXSC 560 - Inferential Statistics in Exercise and Nutritional Sciences **Credits:** (4)
- NUTR 543 - Advanced Nutritional Biochemistry **Credits:** (3)
- NUTR 545 - Advanced Studies in Developmental Nutrition **Credits:** (4)
- NUTR 547 - Nutrition Update **Credits:** (3)
- NUTR 700 - Master's Thesis **Credits:** (1-6) (or option)

Department-approved electives: Credits 21

Total Credits: 45

Physical Education, School, and Public Health Department

College of Education and Professional Studies
Ellensburg
Purser Hall, room 101

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

Kenneth Briggs, EdD

Professors

Kenneth Briggs, EdD, health education, pedagogy
Stephen C. Jefferies, PhD, physical education, pedagogy

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
P. Stefan Ward, PhD, physical education, pedagogy
Therese Young, MA, dance, physical education

Assistant Professors

Kimberly McBride, PhD, MPH, public health education
Mark Perez, PhD, school health, pedagogy
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

Master of Science

Health and Physical Education

The student shall complete at least 45 credits as outlined in an approved course of study filed with the office of Graduate Studies and Research. The course of study is structured in consultation with the student's academic advisor and is approved by the department director of graduate studies. Conditional or probationary admission may be granted to applicants not meeting all of the admission criteria.

Health and Physical Education, MS

The master of science in health and physical education offers an on-line program focused on the types of knowledge and skills that will enhance one's effectiveness as a teacher of physical and health education. Students who are already teacher certified can add a health and fitness endorsement through advisement. In addition to general university requirements for admission to the graduate school, full admission to the graduate program in health and physical education requires an undergraduate degree with a major in the student's desired area of study.

Required Courses

- HPE 510 - Issues in Health and Physical Education **Credits:** (3)
- HPE 557 - Research Methods and Design in Health and Physical Education **Credits:** (4)
- HPE 560 - Statistical Applications in Health and Physical Education **Credits:** (4)
- HPE 700 - Master's Thesis, Project Study, and/or Examination **Credits:** (1-6)

Department-approved electives - Credits: 2

Total Credits: 45

Health and Physical Education MS, Athletic Administration Specialization

The athletic administration specialization is focused on the development of skills and knowledge related to the administration of athletics especially in public school settings. It is intended for individuals who coach or are interested in exploring possibilities for becoming school athletic directors. The program expands on topics included in the instructional curriculum of the National Interscholastic Athletic Administrators Association (NIAAA). Opportunities exist to gain additional NIAAA certification as part of this program.

Individuals wishing to specialize in athletic administration should contact the Department of Physical Education, School, and Public Health for program availability.

Required Courses

- HPE 510 - Issues in Health and Physical Education **Credits:** (3)
- HPE 546 - Advanced Administration of Athletics **Credits:** (3)
- HPE 547 - Healthy Living for Athletes, Coaches, and Administrators **Credits:** (3)
- HPE 557 - Research Methods and Design in Health and Physical Education **Credits:** (4)
- HPE 560 - Statistical Applications in Health and Physical Education **Credits:** (4)
- HPE 570 - Legal Liability and Risk Management **Credits:** (3)
- HPE 581 - Technological Applications in Health and Physical Education **Credits:** (3)
- HPE 583 - Leadership and Decision Making in Interscholastic Sports **Credits:** (3)

- HPE 584 - Mentoring of Coaches and Athletes **Credits:** (3)
- HPE 585 - Event, Facilities, and Scheduling Management of Sport **Credits:** (3)
- HPE 586 - Athletic Budgeting, Finance, and Fundraising **Credits:** (3)
- HPE 587 - Governing Organizations in Sports and Athletics **Credits:** (2)
- HPE 700 - Master's Thesis, Project Study, and/or Examination **Credits:** (1-6) (Must be taken for six credits)
- PE 590 - Cooperative Education **Credits:** (1-6)

Total Credits: 46

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

John Alsoszatai-Petheo, PhD, biological anthropology
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

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

R. Steven Wagner, PhD, biology, conservation population genetics, herpetology, molecular evolution

Assistant Professor

Ralf Greenwald, PhD, psychology, general cognition, human neurophysiology, working memory, attention, language, psychology of computer gaming

Staff

Penelope Anderson, secretary senior, anthropology

Primate Behavior, MS

Program

This program is interdisciplinary and emphasizes the approaches and contributions to primatology made by biologists, anthropologists, psychologists, and philosophers. It includes a basic core of 21 credits in primatology, with 18 elective credits selected in consultation with the student’s advisor.

Students must complete at least 45 credits as outlined in an approved course of study filed with the Office of Graduate Studies and Research. The course of study is selected by advisement before completing 20 credits. Two quarters in residence are required.

Admission Requirements

In addition to general regulations for admission to master’s programs, applicants for admission must have the following qualifications:

1. An undergraduate degree in anthropology, psychology, or biology. Before admission, program faculty will evaluate the academic course work and experience of all applicants for admission, and will recommend remedial course work if, in their judgment, there are deficiencies in pre-baccalaureate work which need to be overcome before entrance into the program.
2. Students must submit GRE scores for the general test.
3. International students for whom English is a second language must provide TOEFEL scores to demonstrate English proficiency.
4. Students must arrange for a graduate faculty advisor in the program to serve as their major advisor.

Admission to the program and continuation in it may be conditional on the applicant’s satisfactory completion of remedial courses. Such courses will not count toward the

program credit requirement, but in some cases they may be taken after admission to the program.

Special Programs

The PBE library room 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 Dean Hall, room 232 A, 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.

Graduate Committee

The student will have at least a three-member graduate committee selected in consultation with the thesis committee chair.

Program Fees or Financial Obligations

Lab fees are attached to the following courses conducted at the Chimpanzee and Human Communication Institute: PRIM 595C, PRIM 700, and PRIM 516.

Required Core Courses

- PRIM 501 - Introduction to Primatology **Credits:** (4)
- PRIM 503 - Current Issues in Primatology **Credits:** (4)
- PRIM 504 - Primate Culture and Cognition **Credits:** (4)
- PRIM 505 - History of Primate Interconnections **Credits:** (4)
- PRIM 513 - Research Methods in Primatology **Credits:** (5)

Total Core Credits: 21

Additional Courses

Electives (to be selected by advisement) **Credits:** (18)

- PRIM 700 - Master's Thesis, Project Study, and/or Examination **Credits:** (1-6) (Must be taken for at least 6 credits.)

Total Additional Courses Credits: 24

Total Credits: 45

Psychology Department

College of the Sciences
Ellensburg
Psychology Bldg., room 421

509-963-2381
Fax: 509-963-2307
www.cwu.edu/psychology

See website for how these programs may be used for educational and career purposes.

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

Robyn Brammer, PhD, multicultural issues, psychology of gender, counseling supervision, LGBT issues, adolescent interventions, psychology of religion

W. Owen Dugmore, PhD, counseling, psychology of adjustment

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

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, MS, 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

Ralf Greenwald, PhD, cognitive brain dynamics, event-related potentials, critical thinking, psychology of video gaming, general cognitive psychology

Suzanne Little, PhD, school psychology, psychological assessment, response to intervention, children with disabilities, giftedness, autism

Sadie Lovett, PhD, applied behavior analysis, derived stimulus relations, verbal behavior, instructional design, rehabilitation

Liane Pereira, MS, youth mental health, human development, social determinants of health, educational psychology

Senior Lecturers

Mary Radeke, PhD, child language development, neuropsychology, experimental psychology
Mark Soelling, PhD, counseling psychology, psychology and the law, psychopharmacology

Lecturer

Elizabeth Haviland, PhD, counseling psychology, counseling supervision, multicultural counseling

Staff

Debbie Thomas, secretary supervisor
Loretta Ney, secretary lead
Chris Buchanan, engineering technician III

Department Information

The Department of Psychology offers courses of study leading to the master of science degree in experimental psychology, applied behavior analysis, and mental health counseling and to the education specialist degree in school psychology. For students already holding the master's degree, a certification-only program is offered in school psychology.

Admission Requirements

Admission to these programs is based on evaluation of the student's prior scholastic record: verbal, quantitative, and writing scores on the Graduate Record Examination (GRE), recommendations by instructors and/or employers, a statement of professional objectives, and, where appropriate, the applicant's potential to succeed in required practica and internships. If prerequisite background courses or their equivalents have not already been completed, they must be taken as soon as possible. Courses will not be accepted as meeting program prerequisites if taken on a credit/no-credit basis.

Each student is required to file a course of study form with the Office of Graduate Studies and Research by the end of their first quarter. The course of study is structured in consultation with the student's academic advisor and is approved by the department chair. The student is expected to complete at least 30 credits after full admission to the program. Students who wish to use faculty time or departmental resources for completion of thesis work must register for at least one (1) credit of PSY 595 or PSY 700 during each quarter in which they require assistance and resources. Students must be registered for two (2) credits of PSY 595 or PSY 700 during the quarter in which the final thesis defense is held.

Background Check and Liability Insurance: Students admitted to the Mental Health Counseling, or School Psychology programs will be required to have on file a completed, current background and fingerprint check.

Also, in order to enroll in clinical training courses (practicum or internship), a student must arrange to purchase individual professional liability insurance. More information regarding procedures, costs, and types of insurance coverage available may be obtained from the department chair or program director.

Practica and Internships: Satisfactory completion of all required practica and internships is mandatory for retention in all degree and certification programs. Grades assigned in these courses are S or U.

Final Examination: Candidates for the master's and education specialist degree must pass an oral final examination on work offered for the degree. This examination will include a presentation and defense of the thesis and may include a review of courses completed in the student's area of specialization.

Education Specialist and/or Certification in School Psychology

The mission, purpose, and governance structure of the School Psychology program is based in the scientist-practitioner model. This approach asserts that:

1. The practice and theory of counseling and the provision of school psychological services must be interconnected
2. Applied skill must be melded with existing scientific knowledge
3. While school psychologists are primarily trained as practitioners, scientific principles, methods, and approaches should be utilized when working with clients
4. Knowledge evolves through the interaction of experimentation, practice, and study

This framework for the professional preparation of school psychologists is divided into three facets:

Facet 1: Coursework

Facet 2: Practica

Facet 3: Internship and thesis

The three facets are interrelated. Students begin without significant academic knowledge. As they begin academic work, their initial assumptions are challenged, guiding them to new understandings of practice and knowledge of counseling and psychology. Their maturity through academics and practica culminate with the final facet where they begin their independent work both in practice (internship) and science (thesis). Students are highly encouraged to meld their academic work with their applied work at each level, and their theses are encouraged to connect to the work they pursue in their internship.

Applied Behavior Analysis, MS

Program Director

Sadie Lovett, PhD

Psychology Bldg., room 424

The degree program in applied behavior analysis (ABA) reflects a commitment to train highly skilled applied behavior analysts. The ABA program will provide students with specialized training in the field of behavior analysis and learning, as well as supervised clinical hours that meet the requirements for board certification. The program is designed to prepare graduates with the knowledge and skills necessary for later doctoral study or for professional work with individuals and organizations in clinical or research settings including areas such as education, developmental disabilities, medical adherence, mental health, traumatic brain injury, business industry. This program provides the educational course requirements and over 500 of the required supervised hours to become a Board-certified Behavior Analyst (BCBA). Additional supervised hours of practice and a national board examination are required. Collaborative thesis developed in conjunction with an advisor is also required.

Prerequisites: PSY 300 and 301 and 362 and 363 (or approved equivalents).

MS in Applied Behavior Analysis Core Courses

Foundations and Basic Methods Credits: 14

- EDSE 521 - Functional Behavioral and Instructional Assessment **Credits:** (3)
- PSY 551 - Behavior Analysis **Credits:** (4)
- PSY 553 - Single-subject Design **Credits:** (3)
- PSY 587 - Ethics in Experimental Psychology and Applied Behavior Analysis **Credits:** (4)

Interventions and Research Credits: 10

- PSY 554 - Behavioral Interventions **Credits:** (4)
- PSY 562 - Advanced Principles of Learning **Credits:** (3)
- PSY 651 - Advanced Applied Behavior Analysis **Credits:** (3)

Other Required Courses Credits: 21

- PSY 590 - Internship **Credits:** (1-10) (Must be taken for 12 credits)

- PSY 595 - Graduate Research **Credits:** (1-10) (Must be taken for 3 credits)
- PSY 700 - Graduate Thesis, Project Study, and/or Examination **Credits:** (1-6) (Must be taken for 6 credits)

Subtotal Core Credits: 45

Electives Credits: 3

To be selected by advisement.

Total Credits: 48

Experimental Psychology, MS

Program Director

Kara Gabriel, PhD

Psychology Bldg., room 483

The Experimental Psychology Graduate Program reflects our commitment to providing students with a generalized background in experimental psychology at the graduate level. Students are expected to complete a set of required core courses and a set of electives that allow the students to concentrate in areas of study adequately represented among the faculty. These areas include cognitive psychology, physiological psychology, social psychology, health psychology, and animal behavior. It is possible to develop curricular tracks in other areas of psychology and/or interdisciplinary programs; however, to be certain that the curriculum can be developed to meet the student's needs, it should be planned in consultation with a faculty advisor prior to enrollment in the program.

The educational requirements of the Animal Behavior Society's Associate Applied Animal Behaviorist Certificate can be met by completing the Experimental Psychology Graduate Program with an appropriate selection of core and elective courses.

Applicants for admission should indicate their interest area(s) and potential faculty advisors in their personal statement of goals. Upon enrolling, students will meet with their faculty advisors to discuss academic objectives and to establish a research plan. Collaborative research that is developed in conjunction with a faculty advisor and that may lead to the student's thesis is encouraged.

Prerequisites: PSY 300 and 362 and 363 (or approved equivalents). Prerequisite courses may be taken concurrently with certain program courses.

MS in Experimental Psychology Core Courses

Methods and Statistics Courses

Choose at least three of the five courses listed below:

- PSY 544 - Tests and Measurements **Credits:** (4)
- PSY 550 - Research in Natural Environments **Credits:** (5)
- PSY 553 - Single-subject Design **Credits:** (3)
- PSY 555 - Design and Statistical Analysis for Applied Research **Credits:** (4)
- PSY 558 - Advanced Statistics **Credits:** (5)

Subtotal Methods and Statistics Credits: 11-14

Required Core Courses

- PSY 505 - Professional Development in Experimental Psychology **Credits:** (1) (Must be taken for 3 credits)
- PSY 510 - Instructional Strategies in the Behavioral Sciences **Credits:** (2)
- PSY 580 - Current Issues in Psychology **Credits:** (3)
- PSY 586 - Ethics in Research **Credits:** (3)
- PSY 595 - Graduate Research **Credits:** (1-10) (Must be taken for 3 credits)
- PSY 700 - Graduate Thesis, Project Study, and/or Examination **Credits:** (1-6) (Must be taken for 6 credits)

Subtotal Core Credits: 20

Electives

Electives in areas of concentration (selected in consultation with advisor). Must be approved by program director.

Electives Credits: 11-14

Research

Students must present their research either at CWU's annual on-campus Symposium On University Research and Creative Expression (SOURCE) or at another conference or public forum. This requirement must be completed at least two weeks before the end of the quarter in which the student is graduating.

Total Credits: 45

Mental Health Counseling, MS

Program Director

Robyn Brammer, PhD
Psychology Building, room 427

The MS program in mental health counseling trains mental health professionals for careers in a variety of settings. The orientation of the program is eclectic, with particular emphasis on those active counseling skills which are appropriate to short-term counseling. In addition, the program's scientist-practitioner emphasis may be useful to those students interested in pursuing doctoral study. The MS program in mental health counseling is accredited by the Council for Accreditation of Counseling and Related Programs (CACREP). The student shall complete a comprehensive exam and an approved course of study filed with graduate studies and research. The course of study normally consists of the courses below.

Prerequisites: PSY 362 and 363 (or approved equivalent). Prerequisite courses may be taken concurrently with certain program courses. In addition, the following undergraduate courses are strongly recommended: personality or abnormal; social or developmental; learning; physiological, and a course in history and systems of psychology. Students not having these courses should expect to do additional work when prior course knowledge is needed. Please note the background check and liability insurance requirements described in the general departmental information section.

Required Courses

- PSY 502 - Professional Orientation: Mental Health Counseling **Credits:** (2)
- PSY 544 - Tests and Measurements **Credits:** (4)
- PSY 552 - Human Growth and Development, Advanced **Credits:** (3)
- PSY 555 - Design and Statistical Analysis for Applied Research **Credits:** (4)
- PSY 560 - Theories and Practice of Counseling **Credits:** (4)
PSY 560 and 593A are taken concurrently. Successful completion of PSY 560 and 593A is required for final admission to the Mental Health Counseling Program.
- PSY 561 - Group Counseling **Credits:** (3)
- PSY 567 - Counseling and Assessment: Children and Adolescents **Credits:** (5)
- PSY 568 - Counseling and Assessment Strategies for Adults **Credits:** (5)

- PSY 571 - Counseling for Relationships and Families **Credits:** (4)
- PSY 573 - Career Development and Counseling **Credits:** (4)
- PSY 574 - Multicultural Counseling **Credits:** (3)
- PSY 584 - Behavior Disorders and Psychopathology **Credits:** (4)
- PSY 589 - Professional and Ethical Issues **Credits:** (4)
- PSY 593A - Practicum in Counseling I: Interviewing **Credits:** (4)
Successful completion of PSY 560 and 593A is required for final admission to the Mental Health Counseling Program.
- PSY 593B - Practicum in Counseling II: Assessment **Credits:** (4)
- PSY 593C - Practicum in Counseling III: Advanced **Credits:** (4)
- PSY 681A - Mental Health Internship I: Group **Credits:** (3)
- PSY 681B - Mental Health Counseling Internship II: Advanced **Credits:** (1-12)
Students who take the MS degree and also seek school counseling certification must complete the remaining classes for the school counseling degree, including 12 hours of PSY 682B in a school setting. Students who take the master of science (MS) degree and also seek school psychology certification must complete an internship in mental health (PSY 681B) and in school psychology (PSY 683). Other courses required for certification in school counseling or school psychology will be determined through individual assessment.
- PSY 700 - Graduate Thesis, Project Study, and/or Examination **Credits:** (1-6) (PSY 700 must be taken for 6 credits)

Department-approved electives - Credits: 8

Total Credits: 90

School Psychology, EdS

Program Director

Heath Marrs, EdD

Psychology Bldg., room 436

The State Board of Education's standards for certification of school psychologists require that the candidate complete an approved master's degree program in psychology that has been developed in concert with school and professional organizations. (Note: candidates who have already received a master's degree in a related

field are not required to earn a second master's, but must complete all requirements or their equivalent.) Successful completion of the certification program at Central leads to eligibility for the residency certificate as an educational staff associate (ESA) school psychologist and national certification through the National Association of School Psychologists. The certification program also requires satisfactory completion of the PRAXIS II examination in school psychology. The EdS degree and certification program in school psychology is fully approved by the National Association of School Psychologists (NASP).

Prerequisites: PSY 362, PSY 363, (or approved equivalents) may be taken concurrently with certain program courses.

Master's Degree Requirements

The education specialist degree in school psychology is granted to the candidate upon completion of 99 quarter hours of coursework including thesis. The following courses (or approved equivalents) are required:

Required Courses

- EDF 507 - Studies and Problems in Intercultural Education **Credits:** (3)
- PSY 501 - Professional Seminar in School Psychology **Credits:** (3)
- PSY 525 - Psychology of Reading **Credits:** (3)
- **OR** EDLT 525 - Psychology of Reading **Credits:** (3)
- PSY 551 - Behavior Analysis **Credits:** (4)
- PSY 552 - Human Growth and Development, Advanced **Credits:** (3)
- PSY 553 - Single-subject Design **Credits:** (3)
- PSY 554 - Behavioral Interventions **Credits:** (4)
- PSY 555 - Design and Statistical Analysis for Applied Research **Credits:** (4) (in lieu of EDF 510)
- PSY 556 - Academic Assessment **Credits:** (5)
- PSY 559 - Advanced Educational Psychology **Credits:** (4)
- PSY 560 - Theories and Practice of Counseling **Credits:** (4)
- PSY 561 - Group Counseling **Credits:** (3)
- PSY 564 - Intellectual Assessment **Credits:** (5)
- PSY 566 - Behavioral and Social-Emotional Assessment **Credits:** (5)
- PSY 575 - School-Based Interventions **Credits:** (4)
- PSY 577 - Interviewing Skills for School Psychologists **Credits:** (4)
- PSY 578 - Applied Physiological Psychology **Credits:** (4)
- PSY 583 - Consultation **Credits:** (3)

- PSY 584 - Behavior Disorders and Psychopathology **Credits:** (4)
- PSY 592A - Practicum in School Psychology **Credits:** (3)
- PSY 592B - Practicum in School Psychology **Credits:** (3)
- PSY 683 - School Psychology Internship **Credits:** (5-15) (one public school year, minimum 1,200 clock hours)
- PSY 700 - Graduate Thesis, Project Study, and/or Examination **Credits:** (1-6) (Must be taken for 6 credits)

Total Credits: 99

Resource Management Program

College of the Sciences
Ellensburg
Fax: 509-963-1047

www.cwu.edu/resource-management
See website for how this program may be used for educational and career purposes

Faculty

Program Coordinators

Natural Resources

Anthony Gabriel, PhD
Department of Geography
Lind Hall, room 320
509-963-1166
gabriela@cwu.edu

Cultural Resources

Steven Hackenberger, PhD
Department of Anthropology
Dean Hall, room 349
509-963-3224
hackenbe@cwu.edu

Professors

Tracy J. Andrews, PhD, anthropology, cultural anthropology, political ecology, Native America, environmental and medical anthropology
Kevin Archer, PhD, geography, culture and globalization, social production of nature
Kathleen Barlow, PhD, cultural anthropology, museum studies, culture and politics of natural resource extraction, ethnographic methods
Daniel D. Beck, PhD, biological sciences, ecology, behavior, and physiology of reptiles in the Pacific NW,

southwestern USA, and western Mexico
Lisa Ely, PhD, geological sciences, fluvial geomorphology, quaternary geology, paleohydrology
Kristina A. Ernest, PhD, biological sciences, community ecology, plant-herbivore interactions, ecology of small animals
Anthony Gabriel, PhD, geography, resource analysis, physical geography, shoreline inventory and assessment, aquatic systems
Carey Gazis, PhD, geological sciences, geochemistry of fluid-rock interaction in the Earth's crust
Steven Hackenberger, PhD, anthropology, archaeology, paleoecology, cultural resource management, Columbia Plateau
Daniel Herman, PhD, history, 19th century American West, American Indian history, American cultural history
Robert Hickey, PhD, geography, GIS remote sensing, environment, geology, erosion modeling, Australia
Paul W. James, PhD, biological sciences, fish ecology, stream ecology
Robert Kuhlken, PhD, geography, cultural geography, urban and regional planning, environmental literature
Karl Lillquist, PhD, geography, geomorphology, soils, environmental change in arid lands and mountains, airphoto analysis, field methods
Patrick Lubinski, PhD, anthropology, archaeology, cultural resource management, zooarchaeology
Patrick McCutcheon, PhD, anthropology, archaeology, geoarchaeology, cultural resource management
Lene Pedersen, PhD, cultural anthropology, ecological, political, and visual anthropology, natural resources, local governance, Southeast Asia, Circumpolar North, East Africa
Lori Sheeran, PhD, anthropology, biological anthropology, primate ecology, China
Rex Wirth, PhD, political science, resource policy in developing nations

Associate Professors

Mark Auslander, PhD, anthropology, sociocultural anthropology, museum anthropology, art and aesthetics, meaning in the material world, symbolic mediation, ritual and performance theory, historical anthropology, race and class, engaged anthropology, slavery studies, contemporary African and Diasporic art
John Bowen, PhD, geography, transportation, economic development, quantitative methods, Southeast Asia
Kenneth A. Cohen, PhD, recreation and tourism, sustainable tourism, recourse-based recreation, community development, community capacity building and strategic planning
Tom R. Cottrell, PhD, biological sciences, plant ecology in areas of fire disturbance, rare plant habitats
Joseph Lorenz, PhD, molecular anthropology, primates, human mtDNA and aDNA studies

R. Steven Wagner, PhD, biological sciences, amphibian decline, genetics, herpetology, conservation biology, road ecology, primate behavior
Charles Wassell, PhD, economics, mathematical modeling of economic issues with policy implications

Assistant Professors

Hope Amason, PhD, tourism studies, urban anthropology, political economy, museum anthropology, sociocultural anthropology

Elvin Delgado, PhD, geography, energy and capitalism, political economy and nature, critical resource geography and political ecology

Jennifer Lipton, PhD, geography, cultural and political ecology, landscape ecology, climate change, geospatial techniques

Matt Novak, PhD, geography, urban and regional planning, built environment, heritage preservations, GIS

Michael Pease, PhD, geography, water resource management, environmental law, resource allocation

Craig Revels, PhD, geography, cultural and historical geography, cultural ecology

Tony Sipic, PhD, economics, environmental economics, political economy, industrial organization

Megan Walsh, PhD, geography, biogeography, paleoecology, climate change, fire history

Faculty from other departments participate in the program as graduate committee members.

Resource Management, MS

Program: The program is interdisciplinary, emphasizing understanding of problems encountered in the management of both natural and cultural resources. It includes a basic core of 27 credits in resource management, courses in areas of interest and a specialty track in either natural resource areas (management of land, water, biotic, atmospheric, and energy resources) or cultural resources management (ethnographic and archaeological sites and materials, historic properties, and archives). An internship is recommended. Students must complete at least 60 credits as outlined in an approved course of study filed with the Office of Graduate Studies and Research. The course of study is selected by advisement before completing 25 credits.

Admission to the program and continuation in it may be conditional on the applicant's satisfactory completion of remedial courses. Such courses will not count toward the program credit requirement but in some cases they may be taken after admission to the program.

Application Deadline and Materials: students must

comply with all deadlines and procedures for "applying to CWU" in the graduate admissions section of this catalog.

Required Core Courses

- ECON 462 - Economics of Energy, Resources and Environment **Credits:** (5)
- REM 501 - Introduction to Resource Management **Credits:** (4)
- REM 502 - Policy and Law in Resource Management **Credits:** (5)
- REM 505 - Introduction to Graduate Research **Credits:** (3)
- REM 506 - Resource Management Colloquium **Credits:** (1) (Must be taken for 2 credits)
- REM 522 - Resource Analysis **Credits:** (5)
- REM 562 - Issues and Conflicts in Resource Management **Credits:** (3)

Subtotal Credits: 27

Additional Courses

- Electives (to be selected by advisement): Natural Resource or Cultural Resource Management **Credits:** 27
- REM 700 - Master's Thesis, Project Study, and/or Examination **Credits:** (1-6) (Must be taken for 6 credits)

Total Credits: 60

Additional Information

Graduate Committee: The student will have at least a three-member graduate committee, to be selected in consultation with the program coordinator and the dean of Graduate Studies and Research.

Final Examination: Each candidate must pass a final oral examination on all phases of his or her program including the thesis and related coursework.

Thesis: Each candidate must successfully complete a thesis that involves original research undertaken within a literature context.

Science Education Department

College of the Sciences
Ellensburg
Science Building, room 107

509-963-2929
Fax: 509-963-1222
www.cwu.edu/science-education

See website for how this program may be used for educational and career purposes.

Faculty Chair

Martha J. Kurtz, 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

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
Vanessa Hunt, PhD, science education

Staff

Darlene Reinbold, secretary senior

Department Information

The master of education, Science Education Program is on reserve and may be offered subject to program needs. Applications for the program are not being accepted at the present time. However, our faculty work closely with other programs on campus that do offer master's degrees. It is possible to earn a master's degree in another program (i.e., Master Teacher) with a focus on science education.

Theatre Arts Department

College of Arts and Humanities
Ellensburg
McConnell Hall, room 102

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
Marc Haniuk, MFA, resident scenic designer

Assistant Professors

Jay Ball, PhD, graduate coordinator theatre studies
David Brown, MM, musical director, music theory
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
Anneliese Childress, choreographer
M. Catherine McMillen, BA, costume shop manager, wigs and makeup
Jessica Pribble, MFA, costume design and technology
Jason Tucholke, MFA, sound design and technology

Staff

Gwen Bruce, fiscal technician II
Mary Makins, secretary senior

Department Information

Students must choose one of two specializations: theatre production or theatre studies.

Theatre Studies

The theatre studies specialization is specifically designed for students with career goals in dramaturgy, teaching in higher education, or pursuing a PhD in theatre history, research, literature, or criticism. The program is designed to build the research and analytical skills needed for an academic career in theatre. This Resident Program focuses on the dramaturgical aspects of production, as well as individual scholarly interests related to theatre arts. With opportunities to both teach and undertake research projects in theatre, this program offers the perfect blend of pedagogy and theory needed to prepare students for careers as theatre scholars.

A limited number of teaching or research assistantships are available to qualified candidates for the academic year. Out-of-state tuition waivers are also available to qualified candidates.

Theatre Production

The theatre production specialization is specifically designed for the working middle and secondary school teacher who produces plays and would like to obtain an advanced degree through hands-on courses in a program offered entirely during the summer months, within the context of the Summer Institute for Theatre Arts.

This program is specifically designed around the students work schedule with courses offered annually from mid-June to mid-July and a culminating project at the home school. Since it was established in 1996, teachers representing 27 states and 12 nations have attended this unique limited-residency graduate program. Students join more than 60 other students each summer learning new skills to take back to the classroom and networking with other theatre artists and educators.

Most graduate courses supporting the theatre production specialization are offered over three summer sessions through the Summer Institute for Theatre Arts. Many are intensive workshops and meet from three to 10 hours per day. Most candidates can complete approximately 16-20 credits per summer. Qualified students in the institute may enroll in the master's degree courses if room permits, and master's candidates enroll in selected courses from the institute listings.

Housing for summer institute participants is available in nearby university accommodations.

Admission Requirements

Theatre Studies Specialization

Incoming candidates are expected to meet both the

requirements for admission to the graduate programs at Central and the following requirements:

- A writing sample, preferably in the discipline, of at least five pages.
- Permission of the faculty, which may include prerequisite or background courses.

The GRE is required for admission to this specialization and a foreign language is required as a graduation requirement.

Theatre Production Specialization

Incoming candidates are expected to meet both the requirements for admission to the graduate programs at Central and the following program requirements:

- Two years of teaching experience or two years of professional theatre experience earned in preparation for teaching
- Permission of the faculty, which may include prerequisite or background courses
- If the candidate does not hold a bachelor's degree in theatre and basic course work in theatre history, prerequisite or background courses may often be taken in the Summer Institute for Theatre Arts. An assessment entry exam is required and is taken shortly after classes begin.

Neither the GRE nor a foreign language is required for the theatre production specialization.

Graduate Assistantships

A limited number of teaching or research assistantships are available to qualified candidates for the academic year. Assistantships are appointed by the dean of Graduate Studies and Research upon recommendation of the department chair.

Assistantship applications must be completed by February 16 in order to insure full consideration; applicants should submit all materials required by the Office of Graduate Studies and Research. Contact them at (509) 963-3101 to request application materials or visit www.cwu.edu/masters.

Theatre Arts MA, Theatre Production Specialization

Theatre Production

The theatre production specialization is specifically designed for the working middle and secondary school teacher who produces plays and would like to obtain an advanced degree through hands-on courses in a program offered entirely during the summer months, within the context of the Summer Institute for Theatre Arts.

This program is specifically designed around the students

work schedule with courses offered annually from late-June to late-July and a culminating project at the home school. Since it was established in 1996, teachers representing 27 states and 12 nations have attended this unique limited-residency graduate program. Students join more than 45 other students each summer learning new skills to take back to the classroom and networking with other theatre artists and educators.

Most graduate courses supporting the theatre production specialization are offered over three summer sessions through the Summer Institute for Theatre Arts. Many are intensive workshops and meet from three to five hours per day. Most candidates can complete approximately 17 credits per summer. Qualified students in the institute may enroll in the master's degree courses if room permits, and master's candidates enroll in selected courses from the institute listings.

Housing for summer institute participants is available in nearby university accommodations.

Admission Requirements

Theatre Production Specialization

Incoming candidates are expected to meet both the requirements for admission to the graduate programs at Central and the following program requirements:

- Two years of teaching experience or two years of professional theatre experience earned in preparation for teaching
- Permission of the faculty, which may include prerequisite or background courses
- If the candidate does not hold a bachelor's degree in theatre - including one academic year in theatre history and/or history prerequisite or background courses may often be taken in the Summer Institute for Theatre Arts. An assessment entry exam is required and is taken shortly after classes begin.

Neither the GRE nor a foreign language is required for the theatre production specialization.

Graduate Assistantships

A limited number of teaching or research assistantships are available to qualified candidates for the academic year. Assistantships are appointed by the dean of Graduate Studies and Research upon recommendation of the department chair. No assistantship covers summer programs.

Assistantship applications must be completed by February 16 in order to insure full consideration; applicants should submit all materials required by the Office of Graduate Studies and Research. Contact them at (509) 963-3101 to

request application materials or visit www.cwu.edu/masters.

Theatre Arts MA Core

Required Core

- TH 501 - Introduction to Graduate Studies
Credits: (1)
- TH 510 - Theatre Literature, Theory and Criticism I
Credits: (4)
- TH 511 - Theatre Literature, Theory and Criticism II
Credits: (4)
- TH 700 - Master's Thesis Project
Credits: (1-6)
(Must be taken for 3 credits.)

Total Required Core Credits: 12

Theatre Production Specialization

The theatre production specialization is designed to prepare English and drama teachers to teach and produce theatre in the secondary and middle schools. Courses are designed specifically for the secondary-school setting and include study in stage technology, teaching acting skills, acquiring basic learning in dramatic literature and history, supervised practice in directing plays and musicals, compiling classroom activities, and creating a curriculum for drama program development.

The program is offered almost entirely in the summer months within the context of the Summer Institute for Theatre Arts. Some graduate study is available during the regular school year. It should be noted that students may find it necessary to register for thesis credits during the academic year. Residency requirement for this program is fulfilled over three summers.

Program Requirements

A minimum of 49 credits is required for the theatre production specialization. Creative project (thesis) credits may be included in the minimum. A pre-thesis capstone course is required to move on to the final creative project (thesis). The capstone course may be attempted only two times. The creative project (thesis) required is a full production of a play or musical at an approved outside venue - usually the candidate's high school, or an approved process drama project both with written documentation, director's book, and video submitted to the department. The candidate's graduate committee which consists of three faculty members selected by the candidate, will select a member, usually the chair, who will view the production in performance at the candidate's local venue. An oral examination and defense of the

creative project (thesis) is required.

A maximum of 15 graduate credits earned within the previous four years at CWU may be applied to the program. The department and the university reserve the right to determine the acceptability of other transfer credit from any institution; a maximum of 9 credits can be accepted from other institutions. Prerequisites required for admission to the program may not be applied to the total required credit for graduation.

Theatre Endorsement in Washington State

Meeting the state standards, under department advisement, is required to fulfill the theatre endorsement in Washington State. To earn the Washington State endorsement in Theatre the candidate must successfully complete all the standards set forth by the state and successfully pass the WEST-E examination. The Praxis test may be required to complete certification in other states.

Required Courses

- TH 502 - Introduction to the Creative Project **Credits:** (1)
- TH 536 - Advanced Stage Movement **Credits:** (3)
- TH 540 - Contemporary Directing **Credits:** (3)
- TH 541 - Graduate Directing II **Credits:** (3)
- TH 542 - Musical Theatre Directing **Credits:** (4)
- TH 565 - Costuming Methods **Credits:** (3)
- TH 566 - Mask and Makeup Methods **Credits:** (3)
- TH 568 - Lighting Methods **Credits:** (3)
- TH 571 - Design Methodology **Credits:** (3)
- TH 583 - Scenic and Property Methods **Credits:** (3)
- TH 600 - Capstone Practicum **Credits:** (1) Must be passed in order to move on to final creative project (thesis).

Total Required Courses Credits: 37

Total Credits: 49

Theatre Arts MA, Theatre Studies Specialization

Theatre Studies

The theatre studies specialization is specifically designed for students with career goals in dramaturgy, teaching in higher education, or pursuing a PhD in theatre history, research, literature, or criticism. The program is designed to build the research and analytical skills needed for an academic career in theatre. This Resident Program focuses on the dramaturgical aspects of production, as well as

individual scholarly interests related to theatre arts. With opportunities to both teach and undertake research projects in theatre, this program offers the perfect blend of pedagogy and theory needed to prepare students for careers as theatre scholars. A limited number of teaching or research assistantships are available to qualified candidates for the academic year. Out-of-state tuition waivers are also available to qualified candidates.

Admission Requirements

Theatre Studies Specialization

Incoming candidates are expected to meet both the requirements for admission to the graduate programs at Central and the following requirements:

- A writing sample, preferably in the discipline, of at least five pages.
- Permission of the faculty, which may include prerequisite or background courses.

The GRE is required for admission to this specialization and a foreign language is required as a graduation requirement.

Graduate Assistantships

A limited number of teaching or research assistantships are available to qualified candidates for the academic year. Assistantships are appointed by the dean of Graduate Studies and Research upon recommendation of the department chair. No assistantship covers summer programs.

Assistantship applications must be completed by February 16 in order to insure full consideration; applicants should submit all materials required by the Office of Graduate Studies and Research. Contact them at (509) 963-3101 to request application materials or visit www.cwu.edu/masters.

Theatre Arts MA Core

Required Core

- TH 501 - Introduction to Graduate Studies **Credits:** (1)
- TH 510 - Theatre Literature, Theory and Criticism I **Credits:** (4)
- TH 511 - Theatre Literature, Theory and Criticism II **Credits:** (4)
- TH 700 - Master's Thesis Project **Credits:** (1-6) (Must be taken for 3 credits.)

Total Required Core Credits: 12

Theatre Studies Specialization

The theatre studies specialization is designed to build the research and analytical skills students will need for academic careers in theatre.

Through opportunities for hands-on dramaturgical experience, teaching, and theatre research, this program offers the perfect blend of theory and practice needed to prepare students for entry into PhD programs, begin teaching careers, and/or professional theatre dramaturgical positions for which they are well qualified.

The program is offered entirely during the academic year requiring a minimum two academic year residency or equivalent.

Program Requirements

A minimum of 45 credits is required for the theatre studies specialization. Thesis credits are included in the minimum. An oral examination and defense of the thesis is required.

Required Courses

Component 1: Research and History

- TH 505 - Research Methods **Credits:** (2)
- TH 525 - Theatre History Ancients-Renaissance **Credits:** (3)
- TH 526 - Theatre History Renaissance-Modernism **Credits:** (3)
- TH 527 - Theatre History Modernism-Contemporary **Credits:** (3)
- TH 700 - Master's Thesis Project **Credits:** (1-6) (In addition to the 3 credits in the core for a total of 6 credits.)

Component 2: Dramatic Literature

Select a minimum of 10 credits from the following:

- TH 512 - Studies in Gender Issues **Credits:** (5)
- TH 513 - Studies in World Drama **Credits:** (5)
- TH 514 - Studies in Asian Drama **Credits:** (5)
- TH 515 - Studies in Ethnic Drama **Credits:** (5)
- TH 516 - Studies in Classical Drama **Credits:** (5)
- TH 517 - Studies in Medieval Drama **Credits:** (5)
- TH 518 - Studies in Early Modern Drama **Credits:** (5)
- TH 519 - Studies in Drama and the State **Credits:** (5)
- TH 598 - Special Topics **Credits:** (1-6)
- TH 599 - Seminar **Credits:** (1-5)

Component 3: Focal Area

Select a minimum of 9 credits of the following:

- TH 540 - Contemporary Directing **Credits:** (3)
- TH 541 - Graduate Directing II **Credits:** (3)
- TH 587 - Theatre Pedagogy **Credits:** (4)
- TH 588 - Dramaturgy **Credits:** (3)
- TH 589 - International Applied Studies **Credits:** (1-6)
- TH 593 - Dramaturgical Practicum **Credits:** (1-3)
- TH 599 - Seminar **Credits:** (1-5)

Component 4: Foreign Language

In order to place students in the best position possible for entry into nationally recognized PhD programs, a minimum of two years of at least one foreign language at the undergraduate level with a minimum grade of B or higher in all terms is required. This may be completed prior to admission or while enrolled in the Theatre Studies Program.

Total Required Courses Credits: 33

Total Credits: 45

Course Descriptions

ACCT 505. 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. Prerequisite: admission to the Master of Professional Accountancy Program.

ACCT 530. 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. Prerequisite: admission to the Master of Professional Accountancy Program.

ACCT 546. 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. Prerequisite: admission to the Master of Professional Accountancy Program.

ACCT 550. Advanced Accounting

(5). Accounting theory and practice for business, combinations and consolidated financial statements, foreign currency transactions and translations, partnerships, and advanced special topics. ACCT 450 and ACCT 550 are layered courses; students may not receive credit for both. Prerequisite: admission to the

Master of Professional Accountancy Program.

ACCT 561. 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. Prerequisite: admission to the Master of Professional Accountancy Program.

ACCT 565. Current Issues in Information Technologies

(5). Current issues in information technologies and their relevance for accounting professionals. Prerequisite: admission to the Master of Professional Accountancy Program.

ACCT 575. 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. Prerequisite: admission to the Master of Professional Accountancy Program.

ACCT 583. Seminar Auditing

(5). Use of case analysis and other techniques to develop auditing analysis and decision-making skills. Study of AICPA Professional Standards. Prerequisite: admission to the Master of Professional Accountancy Program. By permission.

ACCT 584. 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. Prerequisite: admission to the Master of Professional Accountancy Program.

ACCT 590. Cooperative Education

(1-5). An individualized, contracted field experience with business, industry, government, or social service agencies. The contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prerequisite: admission to the Master of Professional Accountancy Program. By permission. May be repeated up to 5 credits. Grade will either be S or U.

ACCT 596. Individual Study

(1-6). Prerequisite: admission to Master of Professional Accountancy Program. May be repeated for credit. Grade will either be S or U.

ACCT 598. Special Topics

(1-6). May be repeated for credit.

ACCT 700. Master's Thesis, Project Study, and/or Examination

(1). Designed to credit and record supervised study for the master's thesis, non-thesis project, studio project, public recital, and/or examination. Prerequisite: admission to the Master of Professional Accountancy Program. May be repeated for credit. Grade will either be S or U.

ADMG 501. ITAM Boot Camp

(2). Designed to prepare graduate students to the Information Technology and Administrative Management graduate program. The class covers resources, programs, research and case study formats, faculty bios, and study strategies for online, hybrid, and traditional formats.

ADMG 525. Global Managerial

Communications (4). This course introduces students to the importance and need for clear, succinct, and relevant business

communications. Students will learn to write and deliver effective messages and will learn to research, purpose, and present business reports. Additionally, students will be introduced to the importance of communications in the digital age. Co- or prerequisite: ADMG 501.

ADMG 531. Financial Analysis in IT and Administrative Management (4). Addresses the financial analysis functions necessary for an administrative or IT manager to make intelligent financial decisions and communicate effectively with financial professions. Includes understanding financial statements, accounting concepts, ratio analysis, capital budgeting, and working capital. Co- or prerequisite: ADMG 501.

ADMG 545. Research and Statistical Analysis of Data (4). Introduces research design and the use of statistical software to collect and analyze data to improve organizational decisions. The focus is on applying statistical tools to find answers to practical IT and administrative management questions. Co- or prerequisite: ADMG 501

ADMG 571. Global Administrative Policy (4). Looks at global issues in administrative management including advanced administrative management techniques, external and internal forces changing organizations and operations, administrative policy making, cross-cultural communication, IT management, social responsibility and ethics. Co- or prerequisite: ADMG 501.

ADMG 572. Leadership and Supervision (3). Develop leadership techniques and behavior traits to improve productivity of supervisors and leaders in the workplace, while enhancing interpersonal skills for career success. Prerequisite: graduate standing.

ADMG 573. Global Leadership and Supervision (4). Presents an

overview of effective international leadership concepts and techniques in three areas; Self Development, Team Development, and Supervisory Development. Students will be introduced to concepts and techniques as they relate to understanding leadership and supervision. Co- or prerequisite: ADMG 501.

ADMG 574. Global Project Management (4). Examines project management in a variety of global organizational settings. This course covers the history, current practice, and future directions of Project Management in this increasingly project-oriented global world. Co- or prerequisite: ADMG 501.

ADMG 590. Cooperative Education (1-8). An individualized contracted field experience with IT and ADMG organizations, industry, government, or social service agencies. The contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prerequisite: by permission of instructor May be repeated up to 8 credits. Grade will either be S or U.

ADMG 592. Practicum (1-6). Supervised field experience, must also add additional elective graduate class. Prerequisite: by permission of instructor.

ADMG 596. Individual Study (1-6).

ADMG 598. Special Topics (1-6).

ADMG 631. Organizational Development (4). An in-depth study of organizational dynamics, as applied to organization-wide interventions, designed to improve organization functioning and to implement change in the organization. Includes developing and improving organizations through assessment and diagnosis of culture and processes. Co- or prerequisite: ADMG 501.

ADMG 641. Innovation and Entrepreneurial Growth (4). Examines various approaches to developing IT innovation-based

organizations to self-sufficiency and growth. Addresses the specifics of new IT products and services development and fostering innovation and technology to increase performance. Co- or prerequisite: ADMG 501.

ADMG 654. Applied Customer Relationship Management (CRM) (4). This course examines customer relationship management (CRM) and the customer-driven practices that enable and organization to attract, satisfy, and retain customers profitably. Co- or prerequisite: ADMG 501.

ADMG 681. Social Informatics (4). Focuses on the critical analysis of social, cultural, philosophical, ethical, legal, public policy and economic issues relating to information technologies. Students examine the roles of information technology in social and organizational change. Co- or prerequisite: ADMG 501.

ADMG 689. Capstone Written Project (4). Serves as a means to distill the recurring themes and issues presented throughout the graduate program and creates a product that will contribute to the solution of real-world problems and concerns in the area of Administrative Management. Co- or prerequisites: ADMG 501 and ADMG 525.

ADMG 700. Master's Thesis and/or Project Study (1-6). Designed to credit and record supervised study for the Master's thesis, non-thesis project, studio project, public recital and/or examination. Prerequisite: permission of instructor and thesis committee.

ANTH 500. Professional Development (1-5). Development topics and issues for in-service and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. May be repeated for credit.

- ANTH 521. Cultural Resources Management** (3). Philosophy, history, and legislation relating to archaeology and historic preservation; design and implementation of cultural resources management programs.
- ANTH 527. 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. Graduate credit requires an additional research paper to be specified in syllabus.
- ANTH 596. Individual Study** (1-6). May be repeated for credit.
- ART 500. Professional Development** (1-5). Development topics and issues for in-service and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. May be repeated for credit.
- ART 525. Advanced Studies in Photography** (2-5). Prerequisite: ART 425. May be repeated for credit.
- ART 541. Advanced Studies in Wood** (2-5). Prerequisite: ART 441. May be repeated for credit.
- ART 546. Advanced Studies in Jewelry and Metalsmithing** (2-5). Independent, advanced exploration of jewelry or metalwork. Emphasis on conceptual strength, growth, and technical mastery. Prerequisite: ART 446. May be repeated for credit.
- ART 550. Advanced Studies in Drawing** (2-5). Prerequisite: ART 450. May be repeated for credit.
- ART 556. History of Eastern Art** (4). A survey of the architecture, sculpture, painting, and the crafts of India, Indonesia, China, and Japan. ART 556 and 456 are equivalent courses; students may not receive credit for both.
- ART 560. Advanced Studies in Painting** (2-5). Prerequisite: ART 460. May be repeated for credit.
- ART 565. Advanced Studies in Ceramics** (2-5). Prerequisite: ART 465. May be repeated for credit.
- ART 580. Advanced Studies in Sculpture** (2-5). Prerequisite: ART 480. May be repeated for credit.
- ART 589. Art Concepts and Criticism** (3). Study of the attitudes and values in relation to recent changes in art forms and contents. Analysis and practice in critical judgment.
- ART 596. Individual Study** (1-6). May be repeated for credit.
- ART 598. Special Topics** (1-6). May be repeated for credit.
- ART 599. Seminar** (1-5). May be repeated for credit.
- ART 700. Master's Thesis, Project Study, and/or Examination** (1-12). Designed to credit and record supervised study for the master's thesis, non-thesis project, studio project, public recital, and/or examination. Prerequisite: permission of chair of student's graduate faculty supervisory committee. May be repeated for credit not to exceed 6 credits for MA degree and 12 credits for MFA degree. Grade will either be S or U.
- BIOL 500. Professional Development** (1-5). Development topics and issues for in-service and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. May be repeated for credit.
- BIOL 501. Research Methods and Techniques** (4). An introduction to methods, techniques, and procedures commonly used in biological research. Experimental design of research projects will be emphasized.
- BIOL 502. Research Proposal Presentations** (2). Students will work to develop their thesis proposal, present their proposal orally, and submit a formal written proposal. Prerequisite: BIOL 501.
- BIOL 505. Current Topics in Biology** (2). Discussion of specific topics in biology from readings in journals, books, and other materials. Prerequisite: graduate standing. May be repeated up to 10 credits.
- BIOL 521. Cellular Sciences I** (4). The first quarter of a three-quarter series covering the biochemistry, nutrition, molecular biology, immunology, and genetics of cells as they relate to both normal body function and pathological processes. Prerequisite: acceptance into the biomedical sciences specialization.
- BIOL 522. Cellular Sciences II** (4). The second quarter of a three-quarter series covering the biochemistry, nutrition, molecular biology, immunology, and genetics of cells as they relate to both normal body function and pathological processes. Prerequisite: acceptance into the biomedical sciences specialization.
- BIOL 523. Cellular Sciences III** (4). The third quarter of a three-quarter series covering the biochemistry, nutrition, molecular biology, immunology, and genetics of cells as they relate to both normal body function and pathological processes. Prerequisite: acceptance into the biomedical sciences specialization.
- BIOL 553. Medical Physiology I** (4). The first quarter of a three-quarter series covering normal human physiology and neurophysiology with special emphasis on integration, control, and pathophysiology. Prerequisite: acceptance into the biomedical sciences specialization.
- BIOL 554. Medical Physiology II** (4). The second quarter of a three-quarter series covering normal human physiology and

neurophysiology with special emphasis on integration, control, and pathophysiology. Prerequisite: acceptance into the biomedical sciences specialization.

BIOL 555. Medical Physiology III

(4). The third quarter of a three-quarter series covering normal human physiology and neurophysiology with special emphasis on integration, control, and pathophysiology. Prerequisite: acceptance into the biomedical sciences specialization.

BIOL 556. Gross and Developmental Anatomy I

(4). The first quarter of a three-quarter series covering the macroscopic structure of the human body using a regional approach. Relationships between gross anatomy, development, and pathological conditions are emphasized. Prerequisite: acceptance into the biomedical sciences specialization.

BIOL 557. Gross and Developmental Anatomy II

(4). The second quarter of a three-quarter series covering the macroscopic structure of the human body using a regional approach. Relationships between gross anatomy, development, and pathological conditions are emphasized. Prerequisite: acceptance into the biomedical sciences specialization.

BIOL 558. Gross and Developmental Anatomy III

(6). The third quarter of a three-quarter series covering the macroscopic structure of the human body using a regional approach. Relationships between gross anatomy, development, and pathological conditions are emphasized. Prerequisite: acceptance into the biomedical sciences specialization.

BIOL 565. Advanced Animal Behavior

(5). Advanced knowledge in the study of animal behavior. Three hours lecture, two hours laboratory, one hour independent study per week. BIOL 465, BIOL 565 and PSY 565 are cross-listed

courses; students may not receive credit for more than one.

BIOL 566. Conservation Biology

(5). An introduction to the theory and practice of conservation biology, with emphasis on case studies. Two hours lecture, one hour discussion, and four hours lab or field study per week. Weekend field trips may be required. BIOL 466 and BIOL 566 are equivalent courses; students may not receive credit for both.

Prerequisite: BIOL 360 and graduate standing.

BIOL 590. Cooperative Education

(1-5). An individualized, contracted field experience with business, industry, government, or social service agencies. The 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 592. Biological Field Studies

(1-15). Individual or group off-campus experience in the field study of biological phenomena. May be repeated for up to 15 credits. Grade will either be S or U.

BIOL 595. Graduate Research

(1-10). Organization or conduct of an approved laboratory and/or field research problem. By permission. Maximum of 10 credits may be included on course of study for the master's degree.

BIOL 596. Individual Study

(1-6). May be repeated for credit.

BIOL 598. Special Topics

(1-6). May be repeated for credit.

BIOL 599. Seminar

(1-5). Discussion of specific topics from readings in biological journals, books, and other materials. May be repeated up to 5 credits.

BIOL 602. Research Presentations

(2). Student will discuss and develop effective oral presentation skills, prepare their research results for presentation, and give an oral presentation suitable for regional or national scientific meetings. Prerequisite: BIOL 502.

BIOL 700. Master's Thesis, Project Study, and/or Examination

(1-6). Designed to credit and record supervised study for the master's thesis, non-thesis project, public presentation, and/or examination. Prerequisite: permission of chair of student's graduate faculty supervisory committee. May be repeated up to 6 credits. Grade will either be S or U.

BUS 541. 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: admission to the Masters of Professional Accountancy Program.

CHEM 500. Professional Development

(1-5). Development topics and issues for in service and continuing education of professionals. Not applicable to degrees that are not institutional requirements for endorsements or teaching certificates offered through the university. May be repeated for credit.

CHEM 503. Introduction to Research

(1). An overview of the original research work being done in the Department of Chemistry. Class meetings are comprised of presentations by different faculty members. Grade will either be S or U.

CHEM 505. Current Topics in Chemistry

(1). May be repeated for credit when subject matter differs up to 5 credits.

CHEM 511. Advanced Biochemistry

(3). A course in advanced biochemical concepts with a special focus on the multiple levels of gene expression regulation and structure-function relationships of protein and nucleic acids. Prerequisites: CHEM 431 or permission of the instructor.

CHEM 512. Biochemical Toxicology (3). An introduction to the principles of toxicology followed by a survey of the biochemical mechanisms involved in cytotoxicity, including reactive intermediates and their interaction with macromolecules.

CHEM 542. Teaching Chemistry at Community Colleges (3). This course is designed to give students a working knowledge of teaching chemistry at the community college.

CHEM 550. Advanced Analytical Chemistry (3). A 3-credit lecture course that covers advanced topics in analytical chemistry including electrochemistry, separations, spectroscopy, mass spectroscopy, speciation, and advanced statistical techniques applied to analytical chemistry. Prerequisite: CHEM 383.

CHEM 551. Atmospheric Chemistry (3). The chemistry of the stratosphere and troposphere; chemistry of the atmospheric aqueous; the meteorology of air pollution; cloud microphysics; mathematical chemical/transport modeling. Prerequisite: CHEM 382.

CHEM 561. Organic Reaction Mechanisms (3). Advanced treatment of basic mechanistic principles of modern organic chemistry. Topics may include frontier molecular orbital theory, kinetics, conformational analysis, aromaticity, the chemistry of reactive intermediates, photochemistry, and substitutions. Prerequisites: CHEM 363 or the equivalent, or permission of the instructor.

CHEM 562. Organic Spectroscopy (3). Theory, instrumentation and application of spectroscopic techniques in organic chemistry. Focus is primarily on interpretation of data in order to fully characterize molecular structure.

CHEM 563. Advanced Organic Synthesis (3). Fundamentals of modern synthetic organic chemistry. Major emphasis is on

more advanced synthetic transformations and strategies. Prerequisite: CHEM 363 or the equivalent, or permission of the instructor.

CHEM 564. Medicinal Organic Chemistry (3). An overview of the drug design and discovery process. A multi-component study of drugs and other biologically potent compounds in terms of chemical synthesis, chemical properties, biochemical evaluation, and substrate-enzyme interaction. Prerequisites: CHEM 363 and CHEM 431 or equivalent or permission of the instructor.

CHEM 571. Topics in Solid State Chemistry (3). A survey of the structures and properties of inorganic solids: crystallography, X-ray diffraction, phase equilibria, electronic structure and luminescence. Prerequisites: CHEM 350 and CHEM 382.

CHEM 580. Advanced Physical Chemistry (3). A 3-credit lecture course including experimental and theoretical thermodynamics, advanced chemical kinetics, molecular dynamics, transition state theories, atomic and molecular spectra, nanotechnologies. Prerequisite: CHEM 383.

CHEM 581. Quantum and Computational Chemistry (3). A 3-credit lecture course including quantum mechanical descriptions of translation, rotation, and vibration of microscopic particles, electronic structures of atoms and molecules, Hartree-Fock (HF) and post-HF theories and their applications in the computation of physical and chemical properties of studied matters. Prerequisite: CHEM 383.

CHEM 589. Graduate Student Seminar (2). A one hour professional seminar encompassing a contemporary topic is provided to the department and campus community. May be repeated for credit.

CHEM 590. Cooperative Education (1-5). May be repeated for credit. Grade will either be S or U.

CHEM 592. Laboratory Experience in Teaching Chemistry (2). Practical experience in teaching chemistry laboratories. An introduction to teaching, teaching philosophies, safety, and hazardous waste management. By permission. May be repeated for credit but only 2 credits may be applied to the chemistry MS degree. Grade will either be S or U.

CHEM 595. Graduate Research (1-10). By permission. May be repeated for credit.

CHEM 596. Individual Study (1-5). By permission. May be repeated for credit.

CHEM 598. Special Topics (1-6). May be repeated for credit.

CHEM 599. Graduate Seminar (1). May be repeated for credit.

CHEM 700. Master's Thesis, Project Study, and/or Examination (1-6). Designed to credit and record supervised study for the master's thesis, non-thesis project, studio project, public recital, and/or examination. By permission. May be repeated up to 6 credits. Grade will either be S or U.

COM 501. Advanced Communication Theory (4). Course examines historical and current approaches to communication theory emphasizing contributions of communication studies scholars. Course covers theories of language, systems theory, rules theory, and critical theory.

COM 556. Convergent Gaming Research (4). This course is a comprehensive look at the use of games in research and methods of researching the games industry. Students will supervise undergraduate research teams, develop unique research agendas, and test research methods in virtual worlds.

COM 565. Advanced Theory and Application in Organizational Comm (5). An in-depth study of the

communication theories and concepts that affect processes relevant to organizational life. Emphasis placed on structuration, organizational entry and exit, computer-mediated communication and models of organizational adaptation and growth.

COM 569. 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 569 are layered courses; students may not receive credit for both.

COM 590. 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 up to 8 credits. Grade will either be S or U.

COM 598. Special Topics (1-5). May be repeated for credit.

COM 599. Seminar (1-5). May be repeated for credit.

CS 528. Advanced Data Structures and Algorithms (4). This course is a detailed introduction to advanced algorithms and data structures used in the computational science MS program. Prerequisites: CS 301 and MATH 330.

CS 529. Advanced Algorithms for Scientific Computing (4). The course presents specialized algorithms and data structures for scientific computing and it a continuation of CS 528. Prerequisite: CS 528.

CS 530. High-performance Computing (4). This course will provide foundations and concepts on high-performance computing. It

provides an overview of computer hardware, software, and numerical methods that are useful on scientific workstations, massively parallel architectures, and supercomputers. Prerequisite: CS 528.

CS 540. Algorithms for Biological Data Analysis (4). The course introduces the algorithms used in bioinformatics. Prerequisite: CS 529.

CS 545. Data and Information Visualization (4). Data visualization includes the visualization pipeline, basic and advanced data representations, fundamental and advanced visualization algorithms, visualization on the web, applications and software tools. CS 545 and CS 445 are layered courses; students may not receive credit for both. Prerequisite: CS 302.

CS 556. 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. Prerequisite: CS 529.

CS 557. 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. Prerequisite: CS 528.

CS 573. Parallel Computing (4). Major parallel architectures and languages. Parallel programming methodologies and applications. CS 473 and CS 573 are equivalent courses; students may not receive credit for both. Prerequisite: CS 528.

CS 595. Graduate Research (1-10). Graduate research activity resulting in a paper (technical report, conference paper, journal paper). By permission. May be repeated up to 10 credits.

CS 596. Individual Study (1-6). By permission. May be repeated up to 10 credits.

CS 599S. Research Seminar (1). A one-hour professional seminar encompassing a contemporary topic is provided by the student to the department and campus community.

CS 700. Thesis/Project (1-5). Preparation of the Thesis/Capstone Project. Prerequisite: permission of the chair of the student's graduate faculty supervisory committee. May be repeated up to 5 credits. Grade will be S or U.

CTE 500. Professional Development (1-5). Development topics and issues for in-service and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. May be repeated for credit.

CTE 501. Research Methods (4). An examination of methods of conducting research on human behavior with an emphasis on application. FCSG 501 and CTE 501 are cross-listed courses; students may not receive credit for both.

CTE 502. Statistics (4). Introduction to the quantitative statistics in social sciences. Topics include conducting analysis using computer software (SPSS), evaluating the results of statistical analysis, and drawing appropriate conclusions. CTE 502 and FCSG 502 are equivalent courses; students may not receive credit for both.

CTE 522. Survey of Research (1-5). The historical, philosophical, and legislative basis of program development and profession growth. CTE 522, FCSG 522, and FS 522 and are cross-listed courses; students may not receive credit for both. May be repeated for credit.

CTE 526. Program Delivery Methods (1-5). Course addresses theories of learning and human development in selecting program delivery

strategies and resources. Includes models for management, assessment, evaluation, and public relations. CTE 526 and FCSG 526 are cross-listed courses; students may not receive credit for both. May be repeated for credit.

CTE 551. Principles of Career and Technical Education (4-5). This course addresses the planning and implementation of CTE programs including work and career, leadership development, advisory committees, program promotion, and professional responsibilities.

CTE 580. Administration (1-5). The study of the administration and directorship of the laws, trends, issues and agency or program standards. CTE 580 and FCSG 580 are cross-listed courses; students may not receive credit for both. May be repeated for credit.

CTE 581. Program Resource Management (1-5). Grant writing and the study of the local, state, and federal financing (both revenue and expenditure). CTE 581 and FCSG 581 are cross-listed courses; students may not receive credit for both. May be repeated for credit.

CTE 582. Curriculum Development (1-5). Use program standards to determine and develop program scope and content. CTE 582, FS 582, and FCSG 582 are cross-listed courses, students may not receive credit for both. May be repeated for credit.

CTE 583. Partnerships and Advisory Committees (1-5). Examination of how education systems create and use industry partnerships and advisory committees to enhance education programs. CTE 583 and FCSG 583 are cross-listed courses; students may not receive credit for both. May be repeated for credit.

CTE 584. Supervision and Evaluation (1-5). The development of constructive guidance, observation, and assessment skills. CTE 584 and FCSG 584 are cross-listed courses; students may not

receive credit for both. May be repeated for credit.

CTE 590. 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. May be repeated for credit. Grade will either be S or U.

CTE 592. Practicum (2-16). Supervised field experience in specialization content area. CTE 592 and FCSG 592 are cross-listed courses; students may not receive credit for both. Prerequisite: graduate standing. May be repeated for credit. Grade will either be S or U.

ECON 552. Managerial Economics and Business Strategy (5). Application of microeconomic theories to managerial decisions and planning under various market structures. Prerequisite: admission to the Master of Professional Accountancy plan prior to enrolling in this course.

ECTL 500. Professional Development (1-5). Development topics and issues for in-service and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. May be repeated for credit.

ECTL 613. Take One! Portfolio Entry Process (2). Development of the portfolio of accomplished teaching practice by National Board Certified Teacher candidates. Compilation of student work samples and videotapes; development of analytic commentaries. Prerequisite: participant in Take One! from the National Board for Professional Teaching Standards. Grade will either be S or U.

EDAD 509. Civic Engagement (3). Student will use program of study

content knowledge to improve a community situation. UNIV 509, FCSG 509, EDAD 509, and EDSC 509 are cross-listed courses. May be repeated up to 12 credits. Grade will either be S or U.

EDAD 570. Administrator Pro-Cert Seminar (2-6). The course provides the candidate an opportunity to engage in the process to meet the benchmarks, using self-evaluation, utilizing the Profile of Leadership Effectiveness (POLE) 360 and other data to determine administrator's positive impact on student learning. May be repeated under different subtopics. By permission. May be repeated up to 6 credits. Grade will either be S or U.

EDAD 575. Administration and Supervision of IDEA (3). A focus on administrative process of designing, developing, preparing for implementation and evaluating the procedural and substantive safeguards related to administering and supervising disability programs.

EDAD 577. Diversity Leadership (3). Prepare school administrators in leadership skills in the area of diversity management across all sectors of education and society. By permission.

EDAD 578. Readings in School Leadership (1-5). Engage in reading, analyzing, reflecting, and critiquing contemporary books giving special attention to implications of the readings for educational administrators. By permission. May be repeated up to 5 credits.

EDAD 579. School Personnel (4). An examination of the functions of a Human Resource Office in an educational setting. Students will learn about recruitment, selection, placement of highly qualified teachers, administrators, and classified personnel; other essential personnel and human resources functions. Prerequisite: graduate standing.

EDAD 580. Educational

Administration (4). An examination of administrative theory, principles, concepts, and processes, and the administration of educational programs and services. Prerequisite: one year of teaching experience.

EDAD 581. Public School Finance

(4). An examination of writing educational grants and contracts. Students will build budgets and become familiar with various types and use of state funds. For those students enrolled in either the MED in administration or the administrator certification program. Prerequisite: one year of teaching experience.

EDAD 582. School Curriculum (4).

Examination of school curriculum for the improvement of instructional and student learning. Prerequisites: EDAD 580 or permission of instructor.

EDAD 583. School and Community

(4). An in-depth examination of the relationship between the school and community for the improvement of instruction and student learning. Prerequisite: one year of teaching experience.

EDAD 584. School Supervision (4).

An examination of problems and issues in supervision. Emphasizes evolving concepts of supervision, strategies, and practices of promoting instructional change.

EDAD 586. The Principalship (4).

The administration of elementary, middle, junior high, and high schools. Covers common elements and those peculiar to specific levels. Prerequisite: one year of teaching experience.

EDAD 589. School Law (4). An

introduction to U.S. constitutional, legislative, and regulative school law, with particular attention to the state of Washington. Covers the legal issues of governance, church/state relations, tort liability, personnel and student rights, rights of handicapped students, property and funding, minorities. Also

covers basic legal research skills.

Prerequisites: EDAD 580 or permission of instructor.

EDAD 591. Workshop (1-6). No more than two workshops for a combined maximum of 8 credits can be applied toward a master's program.

EDAD 596. Individual Study (1-6).

May be repeated for credit.

EDAD 597. Graduate Research (1-

10). Individual student research under the direction of a faculty member. Maximum of 10 credits may be included on course of study for the master's degree.

EDAD 598. Special Topics (1-6). May be repeated for credit.

EDAD 599. Seminar (1-5). May be

repeated for credit. Grade will either be S or U.

EDAD 692. Pre-autumn Internship

(3). Emphasis on the principal's responsibilities prior to and during the opening of the school year. Permission to register only after approval of program director.

Combines with EDAD 693 for 16 total credits in administrative internship. Prerequisites: EDAD 580, EDAD 586, and a minimum of three years of successful teaching experience. Grade will either be S or U.

EDAD 693. Intern School

Administration (3-9). Meets the laboratory and internship requirements outlined by the State Board of Education for candidates for principal's credentials. Permission to register only after approval of program director.

Credits earned in an administrative internship may not exceed a total of 12. Combines with EDAD 692 for 12 total credits in administrative internship. Prerequisites: EDAD 580, EDAD 586, and a minimum of three years of successful teaching experience. May be repeated up to 12 credits. Grade will either be S or U.

EDAD 694. Internship in Improvement of Instruction and Curriculum Development (3-9).

Meets the laboratory and internship requirements outlined by the State Board of Education for candidates for a program administrator's credential in supervision instruction and curriculum development specializations. Permission of department chair. May be repeated up to 12 credits. Grade will either be S or U.

EDAD 700. Thesis/Project

Study/Exam (1-3). Designed to credit and record supervised study for the master's thesis, non-thesis project, studio project, public recital, and/or examination. Prerequisites: EDF 510 and must be admitted to the master's in Administration, Initial Principal's, Program Administrator, or Master Teacher Programs. May be repeated up to 3 credits. Grade will either be S or U.

EDBL 514. Introduction to Linguistic

Diversity in Education (3). This course provides mainstream classroom teachers the needed background theory to better the educational experience of linguistically diverse students.

EDBL 518. Linguistics for Educators

(3). Identification and study of problems related to educational linguistics and second-language instruction. Prerequisites: EDBL 433 or English as a second language methods course, or equivalent, and classroom experience.

EDBL 530. Sheltering in Mainstream

I: Methods (3). This course provides mainstream classroom teachers the needed background information and methodology to better the educational experience of ESL students through the use of sheltered instruction.

EDBL 531. Sheltering in Mainstream

II: Assessment and Resources (3). This course provides mainstream classroom teachers the needed background information and methodology to better the educational experience of ESL students by using classroom-based assessment and other resources.

- EDBL 590. Cooperative Education** (1-8). An individualized, contracted field experience with business, industry, government, or social service agencies. The 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.
- EDBL 591. Workshop** (1-6). No more than two workshops for a combined maximum of 8 credits can be applied toward a master's program. May be repeated for credit.
- EDBL 596. Individual Study** (1-6). By permission. May be repeated for credit.
- EDBL 597. Graduate Research** (1-10). Individual student research under the direction of a faculty member. Maximum of 10 credits may be included on course of study for the master's degree.
- EDBL 598. Special Topics** (1-6). May be repeated for credit.
- EDBL 599. Seminar** (1-5). May be repeated for credit.
- EDBL 700. Master's Thesis, Project Study, and/or Examination** (1-6). Designed to credit and record supervised study for the master's thesis, non-thesis project, studio project, public recital, and/or examination. Prerequisite: EDF 510. May be repeated up to 6 credits. Grade will either be S or U.
- EDCS 509. Civic Engagement** (3). Student will use program of study content knowledge to improve a community situation. UNIV 509, FCSG 509, EDAD 509, and EDCS 509 are cross-listed courses. May be repeated up to 12 credits. Grade will either be S or U.
- EDCS 513. Creative Teaching** (3). Includes opportunity for creative expression as well as sharing creative teaching ideas, aids, and methods. The purpose of the course is to help teachers become more imaginative and creative in planning, conducting and evaluating classroom instruction. Emphasis on classroom management and organization. Prerequisite: teaching experience.
- EDCS 539. Educational Games** (3). This course will emphasize the purpose and benefits of educational games and provide each student with experience in planning, developing, and presenting as well as playing games of their own creation for use as an instructional tool. Participants will be responsible for any expense involved in the construction of their games. Prerequisite: graduate standing or one year of teaching experience.
- EDCS 545. Classroom Teaching Problems** (3). Open to experienced teachers. Prerequisite: teaching experience
- EDCS 546. Advanced Laboratory Experience** (2-5). Consult chair of department of curriculum and supervision for permission to register for this course. May be repeated for credit.
- EDCS 565. Program of Curriculum Improvement** (3).
- EDCS 571. Continuous Progress School** (3). The relationship of the instructional program to levels of learning based on individual capacities and maturity.
- EDCS 590. Cooperative Education** (1-8). An individualized, contracted field experience with business, industry, government, or social service agencies. The 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.
- EDCS 591. Workshop** (1-6). No more than two workshops for a combined maximum of 8 credits can be applied toward a master's program.
- EDCS 596. Individual Study** (1-6). By permission. May be repeated for credit.
- EDCS 597. Graduate Research** (1-10). Individual student research under the direction of a faculty member. Maximum of 10 credits may be included on course of study for the master's degree.
- EDCS 598. Special Topics** (1-6). May be repeated for credit.
- EDCS 599. Seminar** (1-5). May be repeated for credit.
- EDCS 700. Master's Thesis, Project Study, and/or Examination** (1-6). Designed to credit and record supervised study for the master's thesis, non-thesis project, studio project, public recital, and/or examination. Prerequisite: EDF 510. May be repeated up to 6 credits. Grade will either be S or U.
- EDEL 590. Cooperative Education** (1-8). An individualized, contracted field experience with business, industry, government, or social service agencies. The 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.
- EDEL 591. Workshop** (1-6). No more than two workshops for a combined maximum of 8 credits can be applied toward a master's program. May be repeated for credit.
- EDEL 596. Individual Study** (1-6). By permission. May be repeated for credit.
- EDEL 597. Graduate Research** (1-10). Individual student research under the direction of a faculty member. Maximum of 10 credits may be included on course of study for the master's degree.
- EDEL 598. Special Topics** (1-6). May be repeated for credit.
- EDEL 599. Seminar** (1-5). May be repeated for credit.
- EDEL 700. Master's Thesis, Project Study, and/or Examination** (1-6). Designed to credit and record supervised study for the master's thesis, non-thesis project, studio project, public recital, and/or

examination. Prerequisite: EDF 510. By permission. May be repeated up to 6 credits. Grade will either be S or U.

EDF 500. Professional Development (1-5). Development topics and issues for in-service and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. May be repeated for credit.

EDF 501. Educational Foundations (3). Provides a background in selected areas of sociological, historical, and philosophical foundations of education. Also covers current and emerging problems of education.

EDF 502. History of Education (3). Background: historical development in America.

EDF 503. Philosophy of Education (3). Various philosophic positions which lead to an understanding of the educational enterprise. EDF 503 and PHIL 503 are cross-listed courses; students may not receive credit for both.

EDF 505. Educational Measurement for Teachers (3). Designed primarily for graduate students. Emphasis is on formal and informal measurement. Test theory, formative and summative evaluation; criterion and norm referenced measurements, and construction and use of classroom tests are emphasized.

EDF 506. Education Futurism (3). A study of the literature on alternative futures in American society and their possible impacts upon education. The methods of creative forecasting or future research. The desirability of deciding between alternative futures in education and the methodology of helping to bring about the more desirable future. Futurism in elementary and secondary schools.

EDF 507. Studies and Problems in Intercultural Education (3).

Research and analysis of models in intercultural and interpersonal school relations. Awareness of the student-teacher relation in creating school climate in multicultural settings. Analysis of the principles used to interpret these interactions, and practice in brief interventions involving staff, teachers, and students.

EDF 508. Comparative Education (3). A comparative look at national systems of education.

EDF 510. Educational Research and Development (4). A study of the types, methodology, and uses in practice of educational research and development skills pertinent to the design and execution of research thesis and education developmental projects.

EDF 511. Planning for Learning (3). Principles of planning, instruction, curriculum development, and pedagogy used in teaching primary, middle, and secondary level students. By permission.

EDF 520. Teaching the Classics (3). Techniques for teaching the great works of literature, philosophy, and history of classical Greece and Rome.

EDF 567. Educational Change (3). Education change; barriers, characteristics, trends, processes; role of change agent in school organization; leadership techniques for facilitating change.

EDF 590. Cooperative Education (1-8). An individualized, contracted field experience with business, industry, government, or social service agencies. The 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.

EDF 591. Workshop (1-6). No more than two workshops for a combined maximum of 8 credits can be applied toward a master's program.

EDF 596. Individual Study (1-6). By permission. May be repeated for credit.

EDF 597. Graduate Research (1-10). Individual student research under the direction of a faculty member. Maximum of 10 credits may be included on course of study for the master's degree.

EDF 598. Special Topics (1-6). May be repeated for credit.

EDF 599. Seminar (1-5). May be repeated for credit.

EDF 700. Master's Thesis, Project Study, and/or Examination (1-6). Designed to credit and record supervised study for the master's thesis, non-thesis project, studio project, public recital, and/or examination. Prerequisite: EDF 510. By permission. May be repeated up to 6 credits. Grade will either be S or U.

EDHE 510. History of Higher Education (3). The primary purpose of the course is to provide an overview of the evolution of higher education in the United States. Prerequisite: enrolled in master of education higher education. Formerly, EDAD 510.

EDHE 511. Research in Higher Education (4). An introduction to the characteristics and various approaches to designing and conducting research projects in higher education. Prerequisite: enrolled in the master of education higher education. Formerly, EDAD 511.

EDHE 515. College Student Development (3). Theories of student development, and their applications in higher education student affairs programs, services, and activities. Emphasis will be placed on theories of psychosocial, cognitive, moral, environmental, and identity development (minority, traditional age, and non-traditional), as well as theories of learning. Prerequisite: enrolled in the master of education higher education. Formerly, EDAD 515.

EDHE 517. Organizational

Dynamics (3). Overview of organizations as dynamic systems, emphasizing a culture of change influenced by intra-personal and interpersonal beliefs and behavior relative to ethics, leadership, motivation, communication, decision-making, problem solving, conflict resolution, and stress; impacting professional growth. Prerequisite: enrolled in the master of education higher education. Formerly, EDAD 517.

EDHE 518. Program Evaluation and

Assessment (3). Overview of program evaluation planning, and how to assess programs efficiently at various higher education settings. Prerequisite: enrolled in the master of education higher education. Formerly, EDAD 518.

EDHE 525. Organizational

Communication in Higher Education (3). This course will provide the theoretical fundamentals in communication, apply communication strategy to oral and written business assignments, and focus on how organizations communicate to their internal and external stakeholders. Prerequisite: enrolled in master of higher education.

EDHE 572. Leadership and

Supervision in Higher Education (3). Develop leadership techniques and behavior traits to improve productivity of supervisors and leaders in the workplace, while enhancing interpersonal skills for career success. Prerequisite: enrolled in master of higher education.

EDHE 581. Finance in Colleges and

Universities (4). Fundamental considerations in the finance of institutions of higher education. Prerequisite: enrolled in master of higher education.

EDHE 589. Higher Education Law

(4). Examination of legal issues relevant to American colleges and universities to provide students with the fundamental knowledge of

higher education law for administrators. Prerequisite: enrolled in master of higher education.

EDLM 514. 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 516. 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 526. 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 536. 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 548. 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 558. 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 568. 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 578. 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.

EDLT 520. Literacy Curriculum:

Design and Delivery (5). An in-depth research-based analysis of literacy curriculum design and delivery in K-12 settings. Prerequisite: admission to the Master of Education Literacy Program. Corequisite: EDLT 592A.

EDLT 521. Program Organization: Literacy Coaching and Leadership (5). Literacy leadership in K-12 settings including research-based practices in coaching, supervision, program organization, grant writing, and professional development. Prerequisite: admission to the Master of Education Literacy Program. Corequisite: EDLT 592B.

EDLT 523. Issues and Trends in Literacy Research (4). Identification and in-depth study of issues and trends related to literacy instruction. Recent literacy research is pursued with emphasis on classroom application in K-12 settings. By permission of instructor. Corequisite: EDLT 534.

EDLT 525. Psychology of Reading (3). Principles of learning and readiness, perception, psychological, and physiological aspects of reading. PSY 525 and EDLT 525 are cross-listed courses, students may not receive credit for both. Prerequisites: a reading methods course, and a basic psychology of learning course.

EDLT 526. Assessing Literacy (3). Selecting, administering, and analyzing multiple literacy assessment and diagnostic tools for use in the K-12 settings will be emphasized. Prerequisite: admission to the Master of Education Literacy Program. Corequisite: EDLT 528 and EDLT 592B.

EDLT 528. Personalizing Literacy Instruction (3). Strategies and tools for personalizing data-driven literacy instruction in a K-12 setting. Prerequisite: admission to the Master of Education Literacy Program. Corequisite: EDLT 526 and EDLT 592B.

EDLT 534. Learning Theories: Research and Applications (4). Advanced study of learning theories. Clarification of teacher beliefs, adjustment of evidence-based instructional practices with theory and research. By permission

of instructor. EDLT 534 and EDSE 534 are cross-listed courses, students may not receive credit for both. Corequisite: EDLT 523.

EDLT 535. Teaching Diverse Learners (5). Advanced study of current research as it relates to the instructional, social, and emotional needs of diverse learners and differentiation of instruction to meet the needs of all learners. Specific focus on critical role of teacher-leaders as educators in their classrooms, schools, and communities. EDLT 535 and EDSE 535 are cross-listed courses, students may not receive credit for both. Prerequisite: admission to the Master of Education, Special Education Program or Literacy Program. Corequisite: EDSE 592C.

EDLT 536. Understanding Research Methods (3). Overview of qualitative and quantitative methods. Develop skills as critical consumers of educational research, and an understanding of evidence-based instructional practice. Focus on action research as a way to analyze and improved instructional practice. EDLT 536 and EDSE 536 are cross-listed courses, students may not receive credit for both. Prerequisite: admission to the Master of Education, Special Education Program or Literacy Program. Corequisite: EDLT 537.

EDLT 537. Designing and Writing Research (3). Develop skills of designing and writing research. Prepare a research proposal that incorporates principles, processes, values, and roles of action research. Emphasis on conducting action research as a way to analyze and improved instructional practice. EDLT 537 and EDSE 537 are cross-listed courses, students may not receive credit for both. Prerequisite: admission to the Master of Education, Special Education Program or Literacy Program. Corequisite: EDLT 536.

EDLT 590. Cooperative Education (1-8). An individualized contracted field experience with business, industry, government, or social service agencies. The contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval is required. May be repeated for credit.

EDLT 591. Workshop (1-6). No more than two workshops for a combined maximum of 8 credits can be applied toward a Master's program. May be repeated for credit.

EDLT 592A. Practicum: Literacy Curriculum-Design and Delivery (1). Application of literacy curriculum design and delivery K-12 settings. Prerequisite: admission to the Master of Education, Literacy Program. Corequisite: EDLT 520. Grade will either be S or U.

EDLT 592B. Practicum: Program Organization (1). Application of program organization, literacy coaching and leadership in K-12 settings. Prerequisite: admission to the Master of Education, Literacy Program. Corequisite: EDLT 521. Grade will either be S or U.

EDLT 592C. Practicum: Teaching Diverse Learners (1). Development and implementation of an advocacy plan related to the instructional, social, and emotional needs of diverse learners. Implementation of differentiation instruction to meet the needs of all learners. EDLT 592C and EDSE 592C are cross-listed courses, students may not received credit for both. Prerequisite: admission to the Masters of Education, Special Education Program or Literacy Program. Corequisite: EDLT 535. Grade will either be S or U.

EDLT 592D. Practicum: Assessing and Personalizing Literacy Growth and Development (2). Experience working with one student implementing literacy assessment and personalization strategies.

Includes the preparation of a case study. Prerequisite: admission to the Master of Education, Literacy Program. Corequisite: EDLT 526 and EDLT 528. Grade will either be S or U.

EDLT 596. Independent Study (1-6).

May be repeated for credit.

EDLT 597. Graduate Research (1-10).

Individual student research under the direction of a faculty member. Maximum of 10 credits may be included on Course of Study for the Master's degree.

EDLT 598. Special Topics (1-6). May be repeated for credit.

EDLT 599. Seminar (1-5). May be repeated for credit.

EDLT 700. Master's Thesis, Project Study (1-6). Designed to credit and record supervised study for the publish-ready article. Prerequisite: all courses in the Master of Education, Literacy Program, and permission of the chair of student's graduate faculty supervisory committee. May be repeated for credit. Grade will either be S or U.

EDSE 501. Orientation, Foundations, and Issues (2). Orientation of the graduate student to the Special Education Master's Degree Program. Current issues in the identification, assessment, instruction, and evaluation of students with disabilities will be explored through readings, discussions, and presentations. Prerequisite: teaching experience.

EDSE 503. High-prevalence Categories of Exceptionality (3). Etiology, social issues, and management strategies for students with mental retardation, learning disabilities, and behavioral disorders. Prerequisite: EDSE 501.

EDSE 510. Instructional Management Principles (3). Applied Behavior Analysis (ABA) principles will be presented. Their interpretation in a range of research will be presented.

EDSE 512. Educational Rights of Individuals with Disabilities (3). Designed to prepare graduate

students to use legal decisions to assist individuals with disabilities and their families in creating an appropriate educational environment. Prerequisite: EDSE 501.

EDSE 520. Behavioral Intervention for Students with Disabilities (5).

This course examines the evidence based and practical strategies for evaluating and implementing behavioral interventions for students with disabilities.

Prerequisite: admission to the Masters of Education, Special Education Program.

EDSE 521. Functional Behavioral and Instructional Assessment (3).

Current effective assessment processes will be defined, developed, and defended. Included will be goal establishment, rationale for assessment processes utilized, and clarification of administrative procedures. Prerequisite: EDSE 501.

EDSE 522.

Collaboration/Consultation (5). Designed to prepare educators working with special needs to critically reflect upon and to identify specific strengths in the areas of inter/intra personal skills. Prerequisite: admission to the Masters of Education, Special Education Program.

EDSE 524. Curriculum and Assessment for Students with Disabilities (5). The course examines the evidence-based and practical strategies for evaluating and implementing curriculum and assessments for students with disabilities. Prerequisite: admission to the Master of Education, Special Education Program.

EDSE 525. Instruction and Assessment for Students with Disabilities (5). Designed to examine evidence-based and practical strategies for evaluating and implementing instruction and assessments for students with disabilities. Prerequisite: admission to the Masters of Education, Special Education Program.

EDSE 534. Learning Theories: Research and Applications (4).

Advanced study of learning theories. Clarification of teacher beliefs, adjustment of evidence-based instructional practices with theory and research. By permission of instructor.

EDSE 535. Teaching Diverse

Learners (5). Advanced study of current research as it relates to the instructional, social, and emotional needs of diverse learners and differentiation of instruction to meet the needs of all learners. Specific focus on critical role of teacher-leaders as educators in their classrooms, schools, and communities. EDLT 535 and EDSE 535 are cross-listed courses, students may not received credit for both. Prerequisite: admission to the Masters of Education, Special Education Program or Literacy Program. Corequisite: EDSE 592C.

EDSE 536. Understanding Research

Methods (3). Overview of qualitative and quantitative methods. Develop skills as critical consumers of educational research, and an understanding of evidence-based instructional practice. Focus on action research as a way to analyze and improved instructional practice. EDLT 536 and EDSE 536 are cross-listed classes, students may not received credit for both. Prerequisite: admission to the Masters of Education, Special Education Program or Literacy Program. Corequisite: EDSE 537.

EDSE 537. Designing and Writing

Research (3). Develop skills of designing and writing research. Prepare a research proposal that incorporates principles, processes, values, and roles of action research. Emphasis on conducting action research as a way to analyze and improved instructional practice. EDLT 537 and EDSE 537 are cross-listed courses, students may not received credit for both. Prerequisite: admission to the Masters of Education, Special

- Education Program or Literacy Program. Corequisite: EDSE 536.
- EDSE 585. Administration and Supervision of Programs for Individuals with Disabilities (3).** The course will focus on the administrative process of designing, developing, preparing for implementation, and evaluating the procedural and substantive safeguards related to administering and supervising programs for individuals with disabilities. Prerequisite: EDSE 501.
- EDSE 590. Cooperative Education (1-8).** An individualized, contracted field experience with business, industry, government, or social service agencies. The 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.
- EDSE 591. Workshop (1-6).** No more than two workshops for a combined maximum of 8 credits can be applied toward a master's program.
- EDSE 592C. Practicum: Teaching Diverse Learners (1).** Development and implementation of an advocacy plan related to the instructional, social, and emotional needs of diverse learners. Implementation of differentiation instruction to meet the needs of all learners. EDLT 592C and EDSE 592C are cross-listed classes, students may not receive credit for both. Prerequisite: admission to the Masters of Education, Special Education Program or Literacy Program. Corequisite: EDLT 535. Grade will either be S or U.
- EDSE 596. Individual Study (1-6).** By permission. May be repeated for credit.
- EDSE 597. Graduate Research in Special Education (4).** Specialty-area research and research report preparation. Prerequisites: EDSE 501 and EDSE 503 and EDF 510. May be repeated for credit.
- EDSE 598. Special Topics (1-6).** May be repeated for credit.
- EDSE 599. Seminar (1-5).** May be repeated for credit.
- EDSE 682. Internship in Special Education School Administration (4-16).** Meets the internship requirements outlined by the State Board of Education for candidates seeking director of special education certification. Permission to register after admittance by the administrator preparation board. Credits earned in an administrative internship will not exceed a total of 16. No more than 4 credits are applicable to the credit requirements for the master's degree. May be repeated for credit. Grade will either be S or U.
- EDSE 683. Pre-autumn Internship in Special Education School Administration (4).** Emphasis is on the responsibilities of special education prior to and during the opening of the school year. By permission. Combines with EDSE 682 for 16 total credits in administrative internship. Grade will either be S or U.
- EDSE 684. Internship in Professional Affiliated Disciplines (2-12).** Students will complete an internship in an affiliated area/discipline of special education, furthering understanding of practices, policies, and supports available and appropriate for individuals with disabilities and their families. Approval for the internship, specific internship goals, and activities will be arranged with the graduate committee chair and representative from the participating agency. Prerequisites: EDSE 501, EDSE 503, and EDF 510. Grade will either be S or U.
- EDSE 700. Master's Thesis and/or Project Study (1-6).** Designed to credit and record supervised study for the Master's thesis, non-thesis project, studio project and/or public recital. Permission of chair of student's graduate faculty supervisory committee. May be repeated up to 6 credits. Grade will either be S or U.
- ENG 500. Professional Development (1-5).** Development topics and issues for in-service and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. May be repeated for credit. XCLUD GPA.
- ENG 510. Teaching First-year Composition (1-5).** The study and practice of the teaching of composition. Associated classroom experience as a teaching assistant or other experience as approved by the department. Does not count toward the MA degree. By permission. May be repeated for credit. Grade will either be S or U.
- ENG 512. Introduction to English Graduate Study (5).** The philosophy of literature; research methods. Required of all MA candidates.
- ENG 513. Composition Theory (5).** Focuses on research, theories, and practical issues relevant to the teaching of composition.
- ENG 515. Advanced Studies in American Literature (5).** May be repeated for credit under a different subtitle. Prerequisite: ENG 512. May be repeated for credit.
- ENG 517. Advanced Studies in World Literature (5).** May be repeated for credit under a different subtitle. Prerequisite: ENG 512. May be repeated for credit.
- ENG 518. Advanced Literary and Critical Theory (5).** Advanced study of the theory and practice of various critical perspectives and strategies as they inform the study of literary texts. Prerequisite: ENG 512.
- ENG 519. Advanced Studies in British Literature (5).** May be repeated for credit under different a subtitle. Prerequisite: ENG 512. May be repeated for credit.
- ENG 531. Principles and Practices of TESOL (5).** Focuses on research,

- theories, and approaches relevant to the teaching of English to speakers of other languages. Prerequisite: admittance to the TESOL Graduate Program.
- ENG 532. Phonetics and Phonology** (5). Study of English phonetics and phonology as well as pronunciation pedagogy. Prerequisite: Admission to the TESOL Graduate Program.
- ENG 533. Second Language Acquisition** (5). Integrated historical and contemporary views on language and non-language factors affecting second language acquisition and on methodology in second language teaching and learning. Co-prerequisites: ENG 532 and admission to the Graduate English TESOL Program.
- ENG 535. Linguistics, Literature, and TESOL** (5). Linguistic perspectives on an approaches to literature, with an emphasis on poetry and prose. Prerequisite: admission to the TESOL Graduate Program.
- ENG 537. Pedagogical Grammar and Discourse** (5). Study of English grammar and approaches to grammar instruction. Prerequisite: admission to the TESOL Graduate Program.
- ENG 538. Pedagogical Grammar and Discourse II** (5). Advanced study of English grammar, discourse, and approaches to grammar instruction. Prerequisite: ENG 537.
- ENG 580. CWWP I: Writing Pedagogy** (6). Summer course in which K-12 teachers learn to implement writing and language arts across the curriculum and prepare to lead teacher in-service workshops. Participants must register concurrently for EDCS 581. By permission.
- ENG 588. Thesis/Project Colloquium** (2). This course covers applied English research skills, including forms of inquiry, literature reviews, annotated bibliographies, and scholarly conventions. Students will produce a formal research proposal. Prerequisites: ENG 512 and graduate GPA of 3.7 or higher.
- ENG 591. Workshop** (1-6). May be repeated for credit.
- ENG 592. Practicum** (1-5). Supervised field experience in literacy education or teaching English as a second language/foreign language. May be repeated for credit. Grade will either be S or U.
- ENG 595. Graduate Research** (2-10). For students doing advanced research, writing, and study. Prerequisite: ENG 512. Students using faculty time and departmental resources for thesis work must be registered for ENG 595 or 700. May not be included in the course of study for the master's degree. May be repeated for credit. Grade will either be S or U.
- ENG 596. Individual Study** (1-6). May be repeated for credit.
- ENG 598. Special Topics** (1-6). May be repeated for credit.
- ENG 599. Seminar** (1-5). May be repeated for credit.
- ENG 700. Master's Thesis/Project** (1-6). Designed to credit and record supervised study for the master's thesis/project. May be repeated up to 6 credits. Grade will either be S or U.
- ETSC 540. Work Design and Facilities Layout** (4). Analysis of work process requirements and translation into work designs, and into space, layout, and adjacency requirements. Optimization of throughput, efficiency, workflow, safety, health, and usability. Integration of material handling, storage systems, and mechanical systems.
- ETSC 541. Industrial Operations Management** (4). Operations Management within the context of Industrial Engineering. Topics include, but are not limited to, forecasting, scheduling, lean production, capacity management, inventory management, aggregate planning, supply chain management, logistics, maintenance and reliability, and decision making. Prerequisite: ETSC 540 or permission of instructor.
- EXSC 551. Advanced Physiology of Exercise I: Metabolism and Skeletal Muscle** (4). Application of physiological principles to the regulation of cellular and organic processes during exercise. Regulation, control, and adaptation of metabolic pathways. Response and adaptation of skeletal muscle to both acute and chronic exercise. Prerequisite: admission to the NEHS graduate program or permission of the instructor.
- EXSC 552. Advanced Physiology of Exercise II: Pulmonary Cardiovascular Systems** (4). Responses and adaptations of cardiovascular and pulmonary systems to acute and chronic exercise. Neural and humoral mechanisms of control during exercise. Prerequisite: EXSC 551 or permission of the instructor.
- EXSC 553. Laboratory Techniques in Stress Physiology** (5). Techniques for the assessment of human physiological characteristics during rest and exercise stress. Prerequisites: EXSC 551 and 552. Two hours lecture and two hours lab per week.
- EXSC 555. Environmental Stress and Human Performance** (3). Influence of a variety of environmental factors on human performance. Adaptations to environmental stressors through constant exposure. Prerequisites: EXSC 551 and 552.
- EXSC 556. Ergogenic Aids and Human Performance** (3). Use of physical, physiological, pharmacological, and psychological aids to improve human performance. Prerequisites: EXSC 551 and 552.
- EXSC 557. Research Methods and Design in Exercise and Nutritional Science** (4). Concepts of the scientific research process including selection of a research topic, literature review, project methods and design, hypothesis testing, and

research proposals for exercise and nutritional science will be studied.
Prerequisite: EXSC 560.

EXSC 559. Applied Kinesiology (3). Study of human movement from a multidisciplinary perspective. Disciplines may include anthropology, sociology, psychology, economics, medicine, exercise physiology, biomechanics, nutrition, motor learning, motor development, and physical education. Prerequisites: EXSC 551 and EXSC 552 or permission of the instructor.

EXSC 560. Inferential Statistics in Exercise and Nutritional Sciences (4). Concepts of quantitative procedures including correlation, regression, t-tests, and ANOVA's up to two-way will be studied with results statements generated using data sets drawn from research in these disciplines. EXSC 560 and HPE 560 are equivalent course, students may not receive credit for both.

EXSC 562. Clinical Exercise Physiology (3). This course introduces students to exercise principles and applications as they relate to individuals with chronic diseases and disabilities.
Prerequisites: EXSC 551 or EXSC 552.

EXSC 564. Gross Human Anatomy: Cadaver Dissection (1). Gross anatomy dissection of cadaver. One lab session weekly. Can be repeated for up to two credits during the same quarter.

EXSC 590. Cooperative Education (1-6). An individualized, contracted field experience with business, industry, government, or social service agencies. The contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. By permission. Grade will either be S or U.

EXSC 595. Graduate Research (1-6). Development and investigation of an approved laboratory or field research problem. Maximum of 6

credits may be included in course of study for the master's degree.

EXSC 596. Individual Study (1-6). By permission. May be repeated for credit.

EXSC 598. Special Topics (1-5). May be repeated for credit.

EXSC 599. Seminar (1-5). May be repeated for credit.

EXSC 700. Master's Thesis, Project Study, and/or Examination (1-6). Designed to credit and record supervised study for the master's thesis, non-thesis project, and/or examination. Prerequisite: permission of chair of student's graduate faculty supervisory committee. By permission. May be repeated up to 6 credits. Grade will either be S or U.

FCSG 500. Professional Development (1-5). Development topics and issues for in-service and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. May be repeated for credit

FCSG 501. Research Methods (4). An examination of methods of conducting research on human behavior with an emphasis on application. FCSG and CTE 501 are cross-listed courses; students may not receive credit for both.

FCSG 502. Statistics (4). Introduction to the quantitative statistics in social sciences. Topics include conducting analyses using computer software (SPSS), evaluating the results of statistical analyses, and drawing appropriate conclusions. FCSG and CTE 502 are equivalent courses; students may not receive credit for both.

FCSG 509. Civic Engagement (3). Student will use program of study content knowledge to improve a community situation. UNIV 509, FCSG 509, EDAD 509, and EDCS 509 are layered courses; students may only receive up to 12 credits.

May be repeated for credit. Grade will either be S or U.

FCSG 512. Career Transitions (4). Identify body of knowledge for profession and required skills. Investigate professional development options and assessment strategies for the options. Grade will either be S or U.

FCSG 522. Survey of Research (1-5). The historical, philosophical, and legislative basis of program development and profession growth. CTE 522, FCSG 522, and FS 522 and are cross-listed courses; students may not receive credit for both. May be repeated for credit.

FCSG 526. Program Delivery Methods (1-5). Course addresses theories of learning and human development in selecting program delivery strategies and resources. Includes models for management, assessment, evaluation, and public relations. CTE 526 and FCSG 526 are cross-listed courses; students may not receive credit for both. May be repeated for credit.

FCSG 580. Administration (1-5). The study of the administration and directorship of the laws, trends, issues and agency or program standards. CTE 580 and FCSG 580 are cross-listed courses; students may not receive credit for both. May be repeated for credit.

FCSG 581. Program Resource Management (1-5). Grant writing and the study of the local, state, and federal financing (both revenue and expenditure). CTE 581 and FCSG 581 are cross-listed courses; students may not receive credit for both. May be repeated for credit.

FCSG 582. Curriculum Development (1-5). Use program standards to determine and develop program scope and content. CTE 582, FS 582, and FCSG 582 are cross-listed courses, students may not receive credit for both. May be repeated for credit.

FCSG 583. Partnerships and Advisory Committees (1-5). Examination of how education

systems create and use industry partnerships, and advisory committees to enhance education programs. CTE 583 and FCSG 583 are cross-listed courses; students may not receive credit for both. May be repeated for credit.

FCSG 584. Supervision and Evaluation (1-5). The development of constructive guidance, observation and assessment skills. CTE 584 and FCSG 584 are cross-listed courses; students may not receive credit for both. May be repeated for credit.

FCSG 590. 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. May be repeated for credit. Grade will either be S or U.

FCSG 592. Practicum (2-16). Supervised field experience in specialization content area. CTE 592 and FCSG 592 are cross-listed courses; students may not receive credit for both. Prerequisite: student must be at graduate standing to enroll in this course. May be repeated for credit. Grade will either be S or U.

FCSG 595. Graduate Research (1-10). Development and investigation of an approved laboratory or field research problem. By permission. Maximum of 6 credits may be included in course of study for the master's degree. Grade will either be S or U.

FCSG 596. Individual Study (1-6). May be repeated for credit.

FCSG 598. Special Topics (1-6). May be repeated for credit.

FCSG 599. Seminar (1-5). May be repeated for credit.

FCSG 700. Master's Thesis, Project Study, and/or Examination (1-6). Designed to credit and record supervised study for the master's thesis, non-thesis project, studio project, public recital, and/or

examination. By permission. May be repeated up to 6 credits. Grade will either be S or U.

FIN 570. Advanced Financial Management (5). An in-depth and rigorous review of the theory and empirical evidence related to the investment and financing policies of the firm, including, financial evaluations, capital management, financial decisions, and risk analysis through lectures and cases. Prerequisite: admission to the Master of Professional Accountancy Program.

FNLA 500. Professional Development (1-5). Development topics and issues for in-service and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. May be repeated for credit. Xclud GPA.

FS 503. 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 more than one.

FS 519. 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 layered courses; students may not receive credit for both.

FS 522. Survey of Research (1-5). The historical, philosophical, and legislative basis of program development and professional growth. CTE 522, FCSG 522, and FS 522 are cross-listed courses; students may not receive credit for both. May be repeated for credit.

FS 532. Family Interaction (4). Analysis of relevant literature associated with establishing and

maintaining interpersonal and family relationships. Prerequisite: 8 credits of upper-division coursework in family studies or the behavioral sciences.

FS 533. Family Life Education (4). The broad objective, 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.

FS 539. 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.

FS 542. Conflict Management (3). Introduction to conflict management. Topics include using power, analyzing personality traits, assessing conflict, negotiating skills, mediating skills, and how to build partnerships and long-term positive relationships in the work place and in one's personal life.

FS 544. 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 544 are layered courses; students may not receive credit for both.

FS 545. 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 may not receive credit for both. Prerequisite: admission to the family studies graduate program or permission of instructor.

FS 547. Families and Poverty (4). This course explores how families experience poverty, including its consequences on family formation, relationships, and well-being. It also critically examines policies

designed to reduce family poverty and their impacts on society.

FS 582. Curriculum Development (1-5). Use program standards to determine and develop program scope and content. CTE 582, FS 582, and FCSG 582 are cross-listed courses, students may not receive credit for both, may be repeated for credit.

FS 590. Cooperative Education in Family and Consumer Science (1-12). A field experience in business, industry, government, or service agency that is relevant to and consistent with the family life education profession. By permission.

GEOG 527. 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, ANTH 527, GEOG 427, GEOG 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.

GEOG 596. Individual Study (1-6). May be repeated for credit.

GEOG 599. Seminar (1-5). May be repeated for credit.

GEOL 501. Current Topics in Geology (3). Course will introduce beginning graduate students to current research topics in a variety of subdisciplines in geology through readings, discussions, and student presentations.

GEOL 502. Regional Field Geology of the Pacific Northwest (2). Field studies in the Pacific Northwestern United States and Canada.

GEOL 503. Introductory Graduate Research Methods (3). Discussion and exploration of research methods in geology, including

library and Internet resources, thesis project selection and design, and literature review. Prerequisites: GEOL 501 and GEOL 502. Three hours per week.

GEOL 504. Graduate Seminar Series (1). Research seminar series comprising the Geological Sciences weekly seminar series. Includes discussion with speaker following seminar. May be repeated for a total of 12 credits. Grade will either be S or U.

GEOL 515. 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. Three hours of lecture and four hours of laboratory per week. GEOL 415 and 515 are layered courses; students may not receive credit for both. Prerequisites: Either GEOL 101 or 102, and 101LAB.

GEOL 523. 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 layered courses; students may not receive credit for both. Prerequisites: GEOL 501 and GEOL 502.

GEOL 525. 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, 181LAB, CHEM 182, and 182LAB.

GEOL 530. 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, 530, and GEOL 430 are cross-listed courses; students may not receive credit for more than one. Prerequisites: GEOG 410 or GEOL 210.

GEOL 532. 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: GEOL 101 or GEOL 102, 101LAB, GEOL 200, and GEOL 210.

GEOL 534. 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. Prerequisites: GEOL 101, 101LAB, GEOL 370, and either GEOL 200 or GEOL 210

GEOL 541. Climate Variability and Climate Change (5). Examine past, present, and future changes in climate, and the factors that contribute to climate change of various timescales. GEOL 441 and GEOL 541 are layered courses; students may not receive credit for both. Prerequisite: GEOL 200.

GEOL 545. 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: GEOL 101 or GEOL 102, 101LAB, and MATH 154.

GEOL 553. Seismology (5). Elasticity theory, the wave equation, ray theory, diffraction, waveform modeling, travel time inversion. Data analysis. Three hours lecture and four hours of scientific computing lab per week. Offered alternate years. GEOL 453 and GEOL 553 are layered courses; students may not receive credit for both. Prerequisite: MATH 173.

GEOL 556. Geodynamics (5). Study of plate tectonics and mountain building processes that shape our Earth. Lab includes introduction to Matlab software for analysis and visualization. Required field trip. GEOL 456 and GEOL 556 are equivalent courses; student may not receive credit for both.

Prerequisite: GEOL 101. Co-requisite: MATH 172.

GEOL 565. Tectonic Evolution of Orogenic Belts (2). Overview of the tectonic, structural, stratigraphic, and geophysical evolution of orogenic belts. Two hours of discussion and student presentation per week. May be repeated once for credit under a different title.

GEOL 570. Fluvial Geomorphology (4). Advanced course covering hydrologic and geomorphic processes in rivers. Exploration of current geomorphic research, practical experience in field techniques, and geomorphic models. Prerequisite: GEOL 386.

GEOL 574. Quaternary Geology (4). Study of geological processes affecting Earth's most recent history. Course emphasizes global quaternary environmental change, glacial epochs, paleoclimatic methods, and dating techniques. GEOL 474 and 574 are layered courses; students may not receive

credit for both.

Prerequisite: GEOL 386.

GEOL 575. 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. Required field trips. GEOL 475 and GEOL 575 are layered courses; students may not receive credit for both. Offered in alternate years. By permission.

GEOL 576. 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: graduate standing.

GEOL 578. 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. Required field trips. GEOL 478 and GEOL 578 are layered courses; students may not receive credit for both. Offered in alternate years. By permission.

GEOL 583. 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 and required laboratory work and field trips. GEOL 483 and GEOL 583 are layered courses; students may not receive credit for both. Offered in alternate years.

Prerequisites: CHEM 182, 182LAB, and MATH 154.

GEOL 584. Geochronology (5). Principles, analytical methods, and interpretation of several of the most widely applied geochronologic

methods. Computer-based data analysis of problems in igneous and metamorphic petrology, structural geology, sedimentary geology, geomorphology, paleoseismology, and planetary science. GEOL 484 and 584 are layered courses; students may not receive credit for both. Prerequisites: MATH 172 and GEOL 346.

GEOL 595. Graduate Research (1-10). May be repeated for credit. Grade will either be S or U.

GEOL 596. Individual Study (1-5).

May be repeated for credit.

GEOL 598. Special Topics (1-6). May be repeated for credit.

GEOL 599. Seminar (1-5). May be repeated for credit.

GEOL 700. Master's Thesis, Project Study, and/or Examination (1-6). Designed to credit and record supervised study for the master's thesis, non-thesis project, studio project, public recital, and/or examination. By permission. May be repeated up to 6 credits. Grade will either be S or U.

HED 500. Professional Development (1-5). Development topics and issues for in-service and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. May be repeated for credit.

HED 590. Cooperative Education (1-6). An individualized contracted field experience with business, industry, government, or social service agencies. The 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.

HED 591. Workshop (1-6). May be repeated for credit.

HED 596. Individual Study (1-6). By permission. May be repeated for credit.

HED 598. Special Topics (1-6). May be repeated for credit.

HED 599. Seminar (1-5). May be repeated for credit.

HIST 511. Historiography (5).

HIST 512. History Graduate

Readings Seminar (5). May be repeated for credit.

HIST 515. History Graduate

Research Seminar (5). May be repeated for credit.

HIST 522. British Isles to 1485 (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 523. 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 524. 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 526. 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 527. Modern Britain and the Empire since 1763 (5).

History of Britain and the Empire since the Seven Years' War. Topics include

growth of the 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 528. 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 534. American Indian History

to 1795 (5). Discussion and lecture course on Native American history from 1492 to the founding of the American Republic in 1789, and an introduction to the discipline and practice of ethnohistory, which combines traditional historical analysis with ethnographic concepts and research methodologies. HIST 434 and 534 are layered courses; students may not receive credit for both.

HIST 538. 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 540. The American Revolution

(5). Causes and consequences of the American Revolution, 1688-1789. HIST 440 and HIST 540 are layered courses; students may not receive credit for both.

HIST 542. 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 543. 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 544. 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 the North and South during the Civil War, and the aftermath of the war. HIST 444 and HIST 544 are layered course; students may not receive credit for both.

HIST 550. Exploring U.S. Cultural

History (5). Thematic approach to 19th-century cultural transformations in the U.S. Selected topics; mesmerism, utopias, true womanhood, women's rights, slave spirituals, confidence men, gold rushes. HIST 450 and HIST 550 are layered courses; students may not receive credit for both.

HIST 551. 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 552. 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 553. 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 554. 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 560. Religion in Latin America (5). Analysis the relationship between individuals, religions and 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 562. 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 563. 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 564. 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 565. 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 569. History of Russian and Soviet Women (5). Examination of the social status and cultural representations of women in Russia and the Soviet Union from the 17th-century to the present. HIST 469 and HIST 569 are layered courses;

students may not receive credit for both.

HIST 572. 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 573. 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 574. 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 578. 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, HIST 478, and HIST 578 are cross-listed courses; student may not receive credit for more than one.

HIST 583. 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 588. 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 590. 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. By permission. May be repeated for credit. Grade will either be S or U.

HIST 591. Workshop (1-6). HIST 491 and HIST 591 are layered courses; students may not receive credit for both. Grade will either be S or U.

HIST 595. Graduate Research (1-10). For students doing preliminary or ongoing thesis/project research. May not be included in the course of study for the master's degree. By permission. May be repeated for credit. Grade will either be S or U.

HIST 596. Individual Study (1-6). For students who wish to do directed readings and study in secondary literature on specific topics that are not offered as existing courses. By permission. May be repeated for credit.

HIST 598. Special Topics (1-6). May be repeated for credit.

HIST 599. Seminar (1-5). May be repeated for credit.

HIST 700. Master's Thesis, Project Study, and/or Examination (1-6). Designed to credit and record supervised study for the master's thesis, non-thesis project, studio project, public recital, and/or examination. By permission. May be repeated up to 6 credits. Grade will either be S or U.

HPE 510. Issues in Health and Physical Education (3). Examination of current issues, problems, and challenges affecting health and physical education professions.

HPE 546. Advanced Administration of Athletics (3). Principles and practices of athletic administration: budgeting, resource control, personnel development, alumni relations. By permission.

HPE 547. Healthy Living for

Athletes, Coaches, and

Administrators (3). Provides

insights and ameliorations for the effects of the stressful lifestyle of athletes, coaches, and athletic department administrators. Students will develop a handbook of information, stress identifier exercises, and lifestyle adjustment techniques. May be repeated up to six credits.

HPE 557. Research Methods and Design in Health and Physical Education (4).

Introduction to the process of planning and understanding research.

HPE 560. Statistical Applications in Health and Physical Education (4).

Application of statistics to research in health and physical education. Analysis of data sets drawn from research in these disciplines. HPE 560 and EXSC 560 are layered courses; students may not receive credit for both.

HPE 561. Tactical Applications to Movement Development and Sport (3).

This course examines how the tactical games approach can be applied at elementary and secondary levels in a variety of developmentally appropriate sports and activities. Prerequisite: accepted in HPE Masters Program (HAPEG).

HPE 570. Legal Liability and Risk Management (3).

Lecture and discussion course on general legal terminology, personal and tort law, and methods used to implement organizational risk management programs.

HPE 572. Foundations of School Health Education (3).

this course is designed to provide health and physical education (HPE) graduate students the knowledge and skills needed to teach comprehensive school health education with a major emphasis on nutrition, injury prevention/safety, alcohol, tobacco, drugs and sexuality education.

HPE 573. Pedagogical Content Knowledge in School Health

Education (3). This course is designed to provide health and physical education (HPE) graduate students the knowledge and pedagogical content knowledge and skills necessary to teach comprehensive school health education in the K-12 setting.

Prerequisite: HPE 571.

HPE 577. Physical Education

Curriculum Design (3). Design and creation of a physical education curriculum that meets state and national standards.

HPE 578. Physical Education Program Promotion (3).

Understanding the various strategies currently being used by physical education teachers to promote their programs and developing a school-based promotional plan.

HPE 579. Supervision of Student Teachers in Physical Education (3).

Introduction to the history of supervision, a breakdown of the process, and opportunities to practice supervision conferencing.

HPE 580. Physical Education Grant Writing and Fundraising (3).

This course is designed to assist students in obtaining the skills and knowledge necessary for writing funding proposals in physical education and related fields.

HPE 581. Technological Applications in Health and Physical Education (3).

Introduction to technological applications in HHPN and strategies for delivery of CWU online MS degree program in HHPN. Prerequisite: admission to HHPN graduate program.

HPE 583. Leadership and Decision Making in Interscholastic Sports (3).

Students will examine the characteristics and skills of effective leaders and investigate the various roles and responsibilities of the athletic director. Students will define and apply knowledge of management, supervision, and decision-making skills and strategies used by effective leaders

in athletics. Prerequisite: admission to the master of science in PESPH.

HPE 584. Mentoring of Coaches and Athletes (3).

The mentoring course provides students with the knowledge, skills, and personal behaviors, and relationships that affect the athletic director's ability to mentor coaches and student-athletes. Students will review the concepts of leadership and apply them to mentoring theory.

Mentoring theory and leadership skills will be applied to mentoring activities within and outside of the class in efforts to create a mentoring program. Prerequisite: open to students in the physical education, school, and public health program.

HPE 585. Event, Facilities, and Scheduling Management of Sport (3).

Provides students with the knowledge and understanding of the protocols and process of scheduling and managing events and facilities. Students will practice scheduling and management processes. Organizational, communication, and technological skills will be emphasized and refined. Prerequisite: admitted to the Athletic Administration Program.

HPE 586. Athletic Budgeting, Finance, and Fundraising (3).

Budgeting and fund raising course provides students with the exploration and applications of budgeting and fundraising philosophies, considerations, strategies, and timelines for athletic programs. Students will examine various development and planning processes for athletic budgeting and fundraising, including the consideration of equity principles. Prerequisite: open to students in the physical education, school, and public health program.

HPE 587. Governing Organizations in Sports and Athletics (2).

This course provides students with the knowledge and understanding of the agencies that regulate, support, and review sport and athletic

programs, such as the NCAA, NFHS, WIAA, and other athletic-related associations. Prerequisite: Admission to the MS in PESPH.

HPE 595. Graduate Research (1-6). Development and investigation of an approved laboratory or field research problem. May be repeated. Maximum of 6 credits may be included in course of study for the master's degree. Prerequisite: permission of major advisor. By permission. May be repeated for credit.

HPE 598. Special Topics (1-5).

HPE 599. Seminar (1-5). May be repeated for credit.

HPE 700. Master's Thesis, Project Study, and/or Examination (1-6). Designed to credit and record supervised study for the master's thesis, non-thesis project, and/or examination. Prerequisite: permission of chair of student's graduate faculty supervisory committee. By permission. May be repeated up to 6 credits. Grade will either be S or U.

IET 500. Professional Development (1-5). Development topics and issues for in-service and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. May be repeated for credit.

IET 501. Industrial and Academic Research Methods (4). An introduction to the research methods and tools used for industrial research. Topics include problem definition, review of literature, types of research, research design, analysis of results, writing a research proposal, writing a research paper, and analytical tools used for applied research by engineers and technologists in industry.

IET 512. Alternative Energy Systems (4). Study of alternative energy technology and their societal issues.

Similar to MET 412. Credit for both granted only by department chair.

IET 521. Product Design and Development (4). Methodology for the design and development of industrial and commercial products from conceptual stage to saleable product. Three hours lecture and two hours laboratory per week. Prerequisites: MET 419.

IET 522. Programmable Logic Controller (PLC) Applications (4). A study of programmable logic controller concepts, components, systems, programming, and applications. Lecture and laboratory. Similar to IET 373. Credit for both granted only by department chair. By permission.

IET 523. Emerging Technologies (4). A comprehensive examination of recent technological innovations in materials, manufacturing, electronics, and instrumentation, with emphasis on design and application case studies. By permission.

IET 524. Quality Control (4). Provides foundation for understanding and applying statistical quality control techniques and product reliability procedures. Similar to IET 380. Credit for both granted only by department chair. Prerequisites: OMIS 221 or permission of instructor.

IET 525. Systems Analysis and Simulation (4). Theoretical and practical techniques for modeling and analyzing various systems including product designs, manufacturing facilities, and fluid/thermal systems. System testing and evaluation methodology will be investigated. Prerequisite: MET 327 or permission of instructor.

IET 526. Engineering Project Cost Analysis (4). Techniques of economic cost analysis and modeling applied to engineering projects. Similar to IET 301. Credit for both granted only by department chair.

IET 530. Fundamentals of Lasers (4). Overview of laser technology with emphasis on characteristics, safety, and application. Four hours lecture per week. Prerequisites: PHYS 113.

IET 532. Generation and Transmission of Electrical Power (4). A study of the generation and transmission of electrical energy. Similar to EET 432. Credit for both granted only by department chair. Prerequisite: EET 332.

IET 552. 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 analysis, and professional problem solving. Develop and present research on sustainability.

IET 555. 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. IET 455 and IET 555 are layered courses; student may not receive credit for both. Instructor consent should be based on student industrial experience and career goals. By permission.

IET 560. Finite Element Analysis (4). Computerized modeling of structural, vibrational, and thermal design problems. Lecture and laboratory. Similar to MET 420. Credit for both granted only by department chair. Prerequisites: IET 160 and MET 426.

IET 577. Robotics (4). Microprocessor applications in robotics, automated systems, and digital control. Lecture and laboratory. Similar to EET 477. Credit for both granted only by department chair. Prerequisites: EET 375 and EET 342.

IET 582. Plastics and Composites (4). Composition, characteristics and classifications of plastics and composite materials incorporating

design, industrial applications, processing, and fabrication. Similar to MET 382. Credit for both granted only by department chair. Prerequisites: CHEM 111/111L or CHEM 181/181L.

IET 583. Ceramics and Composites

(4). Composition characterization and classification of ceramics and related composite materials incorporating industrial applications, processing, and fabrication. Similar to MET 483. Credit for both granted only by department chair. Prerequisites: CHEM 181 or CHEM 111.

IET 589. Master's Capstone (3-4).

This seminar provides a review of the required courses and preparation for and administration of the comprehensive exam taken by MSET students. The review will also contribute to the program curriculum development.

Prerequisites: within 10 credits of graduation or permission of the instructor and admission to the Master of Science in Engineering Technology Program.

IET 592. Field Studies (1-10).

Prerequisite: faculty advisor and department approval. No more than 10 credits may be taken toward the master's degree. May be repeated for credit.

IET 595. Graduate Research (1-6).

Conduct research or use for program evaluation activity. Prerequisite: permission of advisor. Maximum of six credits may be included on the course of study for the master's degree.

IET 596. Individual Study (1-6). May be repeated for credit.

IET 598. Special Topics (1-6).

IET 599. Seminar (1-5). May be repeated for credit.

IET 700. Thesis or Option (6).

Designed to credit and record supervised study for the master's thesis, non-thesis project, or examination. Prerequisite: permission of chair of student's graduate faculty supervisory committee. May be repeated for up

to 6 credits. Grade will either be S or U.

IS 590. Cooperative Education (1-6).

An individualized, contracted field experience with business, industry, government, or social service agencies. The contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty and coordination. By permission. May be repeated for credit. Grade will either be S or U.

IS 596. Individual Study (1-6).

Prerequisite: permission of the dean for Graduate Studies and Research.

IS 700. Master's Thesis/Examination

(1-6). Designated to credit and record supervised study for the master's thesis, non-thesis project, studio project, public recital, and/or examination. Prerequisite: permission of chair of the student's graduate faculty supervisory committee. May be repeated up to six credits. Grade will be either S or U.

IT 590. Cooperative Education (1-8).

An individualized contracted field experience with IT and ADMG organizations, industry, government, or social service agencies. The contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prerequisite: by permission of instructor. May be repeated up to 8 credits. Grade will either be S or U.

IT 592. Practicum (1-6). Prerequisite: by permission of instructor.

IT 596. Individual Study (1-6).

IT 598. Special Topics (1-6).

Prerequisite: by permission of instructor. May be repeated up to 12 credits under a different subtitle.

IT 632. Sustainable IT (4). Explores ways that green IT can help an organization reduce its carbon footprint, utilize environmentally friendly materials, and accomplish effective reuse/recycling. How to use IT in a way that maximizes positive benefits and minimizes

negative impacts. Co- or prerequisite: ADMG 501.

IT 642. Strategic Management for IT

(4). Provides a practical approach to IT Management practices and issues. Looks at IT components, includes including hardware, software, networks and data. Co- or prerequisite: ADMG 501.

IT 657. Strategic IT Security (4).

Provides a comprehensive view of information security policies and frameworks form the raw organizational mechanics of building to the psychology of implementation. Presents an effective balance between technical knowledge and soft skills. Co- or prerequisite: ADMG 501.

IT 682. Enterprise Analytics (4). This

course covers the application of data-oriented analysis techniques for business intelligence and organizational decision-making. Students will examine a range of tools to enhance the managerial decision making process such as pivot tables, descriptive statistics, statistical process control for business process improvement, and data models to predict future trends. Co- or prerequisites: ADMG 501 and ADMG 545.

IT 689. Capstone Written Project (4).

Serves as a means to distill the recurring themes and issues presented throughout the graduate program and creates a product that will contribute to the solution of real-world problems and concerns in the area of Information Technology. Co- or prerequisites: ADMG 501 and ADMG 525.

IT 700. Master's Thesis and/or Project Study (1-6). Designed to

credit and record supervised study for the Master's thesis, non-thesis project, studio project, public recital and/or examination. Prerequisite: by permission of instructor. May be repeated up to 12 credits. Grade will either be S or U.

LAJ 511. Theories of Crime,

Deviance, and Justice (4). Course will examine the leading scientific

explanations for crime causation as well as the social, political, and legal response to crime in society.

Prerequisite: admission to the Law and Justice MS Program or instructor permission.

LAJ 515. Personnel Issues in Criminal Justice (5). Addresses issues such as recruitment, retention, supervision, evaluation, workplace human rights, and disciplinary issues.

Prerequisite: admissions to the MS in Law and Justice Program.

LAJ 516. Organizational Leadership (4). This course will provide students an opportunity to learn about transformational, transactional, and servant leadership styles. Prerequisite: admission to the Law and Justice MS Program or instructor permission.

LAJ 520. Constitutional Issues in Criminal Justice (4). This course examines constitutional issues emerging within the context of the criminal justice system, law enforcement, prosecution, defense, judiciary, corrections, and community supervision. United States Supreme Court decisions reversing and modifying previous case law and effecting criminal justice practices and policy will be presented and discussed.

Prerequisite: admission to the Law and Justice MS Program or instructor permission.

LAJ 524. Policy Analysis (4). This course will provide students an opportunity to learn about institutions, bureaucracy and policy analysis and implementation.

LAJ 535. Research Methods (4). The emphasis of this course is on developing students' ability to perform research designs, data collection, data processing and analysis in the field of criminal justice. Various research techniques will be covered, the analysis of both quantitative and qualitative, data, writing research reports and

proposals, and the use of computers in research.

LAJ 536. Statistics and Data Analysis (4). Course will cover quantitative data analysis with an emphasis on univariate, bivariate, and multivariate statistical techniques typically used in criminal justice and criminological research.

LAJ 540. Law and Social Control (4). This course examines the nature of social control as it is vested in the objectives, procedures, and authority of law and the social—legal implications of social control and the limits of criminal law as a method of social control. Prerequisite: admission to the Law and Justice MS Program or instructor permission.

LAJ 541. Race, Class, Gender, and Justice (4). This course will provide students an opportunity to learn about race, class, gender, and how these relate to the dispensation of justice. Prerequisite: admission to the Law and Justice MS Program or instructor permission. Formerly, LAJ 525, students may not receive credit for both.

LAJ 542. Criminal Justice History (4). This course will focus on societal response to crime and disorder in the United States from the colonial period through the 20th century. Emphasis will be placed on the study of the social forces that influenced the development of the criminal law and its institutions of social control.

Prerequisite: admission to the Law and Justice MS Program or instructor permission. Formerly, LAJ 530, students may not receive credit for both.

LAJ 543. Theory and Evidence on Crime Prevention (4). Course will review the contemporary research in applied crime prevention techniques used in criminology and criminal justice. Prerequisites: admission to Law and Justice MS Program or instructor permission.

LAJ 544. Theory and Evidence in Policing (4). Course will focus on

contemporary research on the role and function of the police, police effectiveness, and modern police strategies and tactics. Prerequisites: admission to Law and Justice MS Program or instructor permission.

LAJ 545. Ethical Studies (4). Course will review ethical questions and principles in the area of criminal justice and criminology.

LAJ 546. Theory and Evidence in Corrections (4). Course will review the theory that underpins modern corrections and review empirical research on contemporary best practices in corrections. Prerequisites: admission to Law and Justice MS Program or instructor permission.

LAJ 547. Theory and Evidence in Courts and Law (4). Course will review research on court actors, court administration, and legal issues, with an emphasis on how these elements impact the court function. Prerequisites: admission to Law and Justice MS Program and completion of LAJ 535 and LAJ 536 or instructor permission.

LAJ 548. Decision Making in Law and Justice (4). Review of literature on correlates of decision making with a focus on victim crime reporting, use of force, arrest, bail, charging, sentencing, and release. Prerequisites: admission to Law and Justice MS Program or instructor permission.

LAJ 549. Juvenile Justice (4). Course will review the current literature on juvenile delinquency, the role and function of the juvenile justice system, and critical. Prerequisites: admission to Law and Justice MS Program or instructor permission.

LAJ 550. Advanced Research Methodology (4). This course will explore advanced research techniques often utilized in criminal justice and criminological research. Prerequisites: admission to Law and Justice MS Program and completion of LAJ 535 and LAJ 536 or instructor permission.

LAJ 551. Legal Liability for Professionals (4). This course is designed to assist graduate students enhance their understanding of legal liability issues in administration. The course will provide an overview of liability issues facing criminal justice personnel. Students will also analyze strategies that will enable them to reduce risk of exposure to civil and criminal liability. Prerequisite: admission to the Law and Justice MS Program or instructor permission. Formerly, LAJ 575, students may not receive credit for both.

LAJ 552. Criminal Justice Controversies (4). Course will examine contemporary controversies and challenges in criminology and criminal justice. Course will focus on recent literature reviewing core issues in the field. Prerequisites: admission to Law and Justice MS Program or instructor permission.

LAJ 590. Cooperative Education (1-8). This course will provide the students an opportunity to briefly work in an area of their choosing while having a qualified professional mentor their work. Prerequisite: admission to the Law and Justice MS Program or instructor permission. By permission. May be repeated up to 4 credits. Grade will be S or U.

LAJ 596. Individual Study (1-6). This course will provide the students an opportunity to conduct research in an area of their choosing while having a qualified professional mentor their work. Prerequisites: admission to the Law and Justice MS Program or instructor permission. May be repeated up to 4 credits.

LAJ 598. Special Topics (1-5). Prerequisite: admissions to the MS in Law and Justice Program. May be repeated for credit under different titles.

LAJ 689. Master's Capstone (4). An end-of-program course, which

includes a basic review of courses, an oral/written examination and program assessment. The student must have completion of core courses and within eight credits of graduation or permission from the Chair in order to register for this course. Prerequisite: admission to the Law and Justice MS Program. Grade will either be S or U.

LAJ 700. Master's Thesis, Project, Study, or Portfolio (1-6). Designed to credit and record supervised study for the master's thesis, non-thesis project, studio project, public recital, and/or examination. Prerequisites: admission to the Law and Justice MS Program or instructor permission. May be repeated for credit. Grade will either be S or U.

LIB 500. Professional Development (1-5). Development topics and issues for in-service and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. May be repeated for credit.

MATH 500. Professional Development (1-5). Development topics and issues for in-service and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. May be repeated for credit.

MATH 505. Proof Writing (1). Review the essentials of mathematical proofs and how to write proofs for mathematical understanding. May be repeated up to 3 credits.

MATH 506. Technology for Teaching Mathematics (1). Methods of appropriate use of technology for teaching mathematics. May be repeated up to 3 credits.

MATH 510. Games of Chance (3). Requiring only the fundamental

ideas of basic probability, this course applies and investigates the popular casino games of chance, gambling systems and strategies, the "law of averages," cheating, and the "Gambler's Ruin." Offered in summers only.

MATH 522. Modern Programs in Mathematics (2). Prerequisite: one year of teaching experience in mathematics or permission. Offered in summers only.

MATH 523. Math Methods for Jr. High School (2). Problems and methods associated with the teaching of mathematics in the junior high or middle school. Prerequisite: one year of teaching experience in mathematics. Offered in summers only.

MATH 524. Math Methods for High School (2). Problems and methods associated with the teaching of mathematics in high school. Prerequisite: one year of teaching experience in mathematics. Offered in summers only.

MATH 526. Research Design in Mathematics Education (4). This course is an introduction to current research practices in mathematical education. It focuses on evaluating the designs of existent research as well as developing designs for student research leading to student projects and theses. Prerequisite: MATH 311 with a grade of C or higher.

MATH 527. Advanced Statistical Analysis (4). This course is an introduction to statistical methods used in current research practices in mathematics education. This course focuses on interpreting statistics presented in extent research as well as using computer software to generate statistics. Prerequisite: MATH 526.

MATH 550. Transformational Geometry (3). A study of the group of transformations of the plane: reflections, rotations, translations, glide reflections. As time permits, the properties of dilation's and affinities also will be discussed.

Prerequisite: MATH 455. Offered in summers only.

MATH 562. Modern Algebra for Teachers (3). Reexamination of the fundamental algebraic structures: groups, rings, integral domains, and fields, with examples and applications. Offered in summers only. Prerequisites: MATH 360 and one year of teaching experience.

MATH 565. Applied Numerical Methods I (5). Course covers the following list of topics: numerical stability, iterative methods, canonical forms of matrices, singular value decomposition, computation of eigenvalues and eigenvectors, dominant eigenvalue. Prerequisites: MATH 173, MATH 265, and MATH 330.

MATH 566. Matrices and Their Applications (3). Matrix algebra including finite Markov chains with applications to business, psychology, genetics, and learning models. Sociometric applications to conflict and dominance. Prerequisite: MATH 153. Offered in summers only.

MATH 567. Applied Numerical Methods II (5). Course covers the following list of topics: dominant eigenvalue, least square approximation and projections, discretization, well-posed problems, numerical solutions to ordinary differential equations (ODE's) interpolation, linear programming, and the simplex method. Prerequisites: MATH 173, MATH 265, and MATH 330.

MATH 570. Calculus for Secondary Teachers (3). A re-examination of the processes of differentiation and integration emphasizing their application to the natural, behavioral, social, and managerial sciences. Prerequisite: MATH 173 or equivalent and one year of teaching experience. Offered in summers only.

MATH 572. Elementary Real Analysis (3). Examines fundamental concepts of sets, sequences, limits, series, functions,

continuity, and differentiability. Prerequisite: MATH 173 or equivalent and one year of teaching experience. Offered in summers only.

MATH 591. Workshop (1-6). No more than two workshops for a combined maximum of eight credits can be applied toward a master's program.

MATH 595. Graduate Research (1-10). Prerequisite: permission of advisor. May be repeated for credit. A maximum of five credits may count toward degree requirements. Grade will either be S or U.

MATH 596. Individual Study (1-6). By permission.

MATH 598. Special Topics (1-6). Course content identified by title in the university class schedule. May be repeated for credit.

MATH 599. Seminar (1-5). By permission. May be repeated for credit.

MATH 700. Master's Thesis, Project Study, and/or Examination (1-6). Designed to credit and record supervised study for the master's thesis, non-thesis project, studio project, public recital, and/or examination. Prerequisite: permission of chair of student's graduate faculty supervisory committee. May be repeated up to six credits. Grade will either be S or U.

MGT 525. Strategic Management/Business Simulation (5). Developing accountants as business advisers. Performance measurement, financing, and overall corporate strategy. Business simulation involving professionals. Prerequisite: admission to the Master of Professional Accountancy Program.

MGT 589. Business Ethics (5). Examination of organizational and professional ethics through a behavioral lens with emphasis on making ethical decisions in these contexts. Prerequisite: admission to the Masters of Professional Accountancy Program.

MUS 500. Professional Development (1-5). Development topics and issues for in-service and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. May be repeated for credit.

MUS 510. Vocal Jazz Choir (1). 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. May be repeated for up to six credits. For graduate students. Must attend all scheduled rehearsals and performances. By permission. May be repeated for credit.

MUS 513. Flute Choir (1). Two hours of rehearsal per week plus all scheduled rehearsals and performances. For graduate students. Prerequisites: previous experience in flute performance. May be repeated for credit.

MUS 514. Brass Choir (1). For graduate students. See MUS 214 for description. By permission. May be repeated for credit.

MUS 515. Chamber Orchestra (1). By permission of instructor. For graduate students. See MUS 215 for description. May be repeated for credit.

MUS 517. Chamber Music Ensemble (1). One hour coaching plus two hours rehearsal per week plus all scheduled rehearsals and performances. Instruction available in performance areas A, C-E, H, L. By permission. May be repeated for credit.

MUS 520. Methods of Teaching Theory (3). By permission.

MUS 521. Methods of Musical Research (3). Learning to formulate a logical approach to the process of identification, location, and evaluation of materials available to the music researcher and

developing expertise in technical writing about music.

MUS 522. Advanced Orchestration

(3). Study of various scores and treatises. Individual projects.

Prerequisite: MUS 422C. May be repeated for credit.

MUS 523. Advanced Composition

(3). Selected topics in composition.

Prerequisite: MUS 420. May be repeated for credit.

MUS 529. Percussion Ensemble (1).

For graduate students. See MUS 229 for description. By permission. May be repeated for credit.

MUS 532. Big Band (1). Must attend

all scheduled rehearsals and performances. For graduate students. See MUS 232 for description. By permission. May be repeated for credit.

MUS 535. Laboratory Choir (1). For

graduate students. Two hours of rehearsal per week plus all scheduled rehearsals and performances. By permission. May be repeated for credit.

MUS 536. Diction for Singers 1 (2).

A course designed 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. At the graduate level students will be focusing on finer details within each language and preparing more advanced texts.

MUS 537. 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 language, the correct execution of German sounds, and the basic pronunciation rules of German. Prerequisite: MUS 536

MUS 538. 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.

At the graduate level students will be focusing on finer details of French, and preparing more advanced texts. Prerequisite: MUS 536.

MUS 541. Advanced Conducting (3).

Emphasis upon the conducting of advanced literature in the major performance media. Prerequisite: MUS 342. May be repeated for credit.

MUS 547. Electronic Music

Composition (3). Studies in electronic music with emphasis on compositional technique. MUS 347 and MUS 547 are layered courses; students may not receive credit for both. Prerequisite: MUS 347.

MUS 549. Jazz Improvisation for the

Jazz Impaired Teacher (2). The course is designed to be an online class that addresses the needs of a teacher or current upper division student who has had little or no experience in teaching jazz improvisation. The basic skills addressed in the class will be jazz piano, composing, skills needed to create a jazz solo, and learning the jazz language through transcribing a recorded jazz solo. Prerequisite: undergraduate degree in music or by permission.

MUS 554H. Advanced Technique

Class: Guitar (1-3). For advanced study on secondary instruments. May be repeated up to 6 credits.

MUS 558. Survey of Solo Vocal

Literature (3). All periods, performance or listening. Background, stylistic traits, and performance concepts of the Art Song. By permission.

MUS 560. Instructional

Development in Music Education (3). Curriculum design, learning styles, rehearsal and classroom management, and current trends impacting music education.

MUS 561. Opera Workshop (1-2). A

class leading to the performance of scenes or single acts from opera. By

permission of instructor. May be repeated for credit.

MUS 562. Opera Production (1-3). A

class leading to performance of a complete opera. MUS 462 and MUS 562 are layered courses; students may not receive credit for both. May be repeated for credit.

MUS 564. Major Applied Area

(Individual Instruction) (2 or 4). Half-hour lesson per week for 2 credits or an hour lesson per week for 4 credits. Instruction available in performance areas A-H. Open to non-performance and non-performance pedagogy majors with permission of instructor. May be repeated for credit.

MUS 564A. Major Applied Area:

Piano (2 or 4). Half-hour lesson per week for 2 credits or an hour lesson per week for 4 credits. Instruction available in performance areas A-H. Open to non-performance and non-performance pedagogy majors with permission of instructor. May be repeated for credit.

MUS 564B. Major Applied Area:

Voice (2 or 4). Half-hour lesson per week for 2 credits or an hour lesson per week for 4 credits. Instruction available in performance areas A-H. Open to non-performance and non-performance pedagogy majors with permission of instructor. May be repeated for credit.

MUS 564C. Major Applied Area:

Strings (2 or 4). Half-hour lesson per week for 2 credits or an hour lesson per week for 4 credits. Instruction available in performance areas A-H. Open to non-performance and non-performance pedagogy majors with permission of instructor. May be repeated for credit.

MUS 564D. Major Applied Area:

Woodwinds (2 or 4). Half-hour lesson per week for 2 credits or an hour lesson per week for 4 credits. Instruction available in performance areas A-H. Open to non-performance and non-performance pedagogy majors with

permission of instructor. May be repeated for credit.

MUS 564E. Major Applied Area: Brass (2 or 4). One half-hour lesson per week for 2 credits; one hour lesson per week for 4 credits; 1 credit if offered one term only during summer session. All students enrolled in lessons will register for the weekly recital hour. Instruction available in performance areas A-I. Open to non-Performance and non-Performance Pedagogy majors. By permission of instructor. May be repeated for credit.

MUS 564G. Major Applied Area: Percussion (2 or 4). Half-hour lesson per week for 2 credits or an hour lesson per week for 4 credits. Instruction available in performance areas A-H. Open to non-performance and non-performance pedagogy majors with permission of instructor. May be repeated for credit.

MUS 564H. Major Applied Area: Guitar (2 or 4). Half-hour lesson per week for 2 credits or an hour lesson per week for 4 credits. Instruction available in performance areas A-H. Open to non-performance and non-performance pedagogy majors with permission of instructor. May be repeated for credit.

MUS 566. Wind Ensemble (1-2). Open to students with demonstrated proficiency on band instruments by audition or permission of the instructor. Five hours rehearsal per week plus all scheduled rehearsals and performances. For graduate students. Two credits normally offered during academic year and one credit if offered one term only during summer session. For graduate students. May be repeated for credit.

MUS 567. University Choir (1-2). See MUS 267 for description. Two credits normally offered during academic year and one credit if offered one term only during summer session. For graduate

students. May be repeated for credit.

MUS 568. Chamber Choir (2). See MUS 268 for complete description. May be repeated for credit.

MUS 571. History of Orchestra Music (3). Forms and styles from the 17th to 20th centuries.

MUS 572. Music in the 20th Century (3). Forms and styles relevant to 20th-century music.

MUS 573. History of Opera (3).

MUS 574. Jazz Styles and History (3). A survey of jazz history focused on the evolution of jazz styles. Course activities include analysis, transcription, guided listening, imitative composition, research, and essay writing.

MUS 575. History of Chamber Music (3). Forms and styles from the late 16th-century to the present.

MUS 576. History of Choral Music (3). Forms and styles from medieval to modern.

MUS 577. Orchestra (1-2). Open to all students proficient on orchestral instruments by permission of director. Five hours rehearsal per week plus all scheduled rehearsals and performances. Two credits normally offered during academic year and one credit if offered one term only during summer session. For graduate students. May be repeated for credit.

MUS 579. Aesthetics of Music (3). Examination of various perspectives in the meaning and value of music.

MUS 587. Marching and Concert Band (1-2). Fall quarter only. See MUS 287 for description. For graduate students. May be repeated for credit.

MUS 588. Symphonic Band (2). See MUS 288 for description. For graduate students. May be repeated for credit.

MUS 592. Accompanying Practicum (1-3). By assignment of instructor. Minimum three hours rehearsal weekly per credit plus performances. For graduate

students. May be repeated for credit.

MUS 595. Graduate Research (2). For students doing preliminary or continuing thesis/project research. May be repeated once for credit. May not be included in the course of study or counted toward the master's degree. By permission. May be repeated for credit. Grade will either be S or U.

MUS 596. Individual Study (1-6).

May be repeated for credit.

MUS 598. Special Topics (1-6). May be repeated for credit.

MUS 599. Seminar (1-5). May be repeated for credit.

MUS 600. Graduate Cognate Project (1). Students in approved graduate cognates in music must register for this course in the quarter they complete an approved culminating project. See specific cognate descriptions for details. Grade will either be S or U.

MUS 610. Graduate Seminar in Music: Composer (1-3). Study of a particular composer's life and works. Prerequisite: graduate standing. May be repeated up to 6 credits.

MUS 611. Graduate Seminar in Music: Music Education (1-3). Seminar in selected topics in music education. Prerequisite: graduate standing. May be repeated up to 6 credits.

MUS 612. Graduate Seminar in Music: Music History/Literature (1-3). Seminar in selected topics in music history/literature. Prerequisite: graduate standing. May be repeated up to 6 credits.

MUS 613. Graduate Seminar in Music: Music Theory/Composition (1-3). Seminar in selected topics in music theory and/or composition. Prerequisite: graduate standing. May be repeated up to 6 credits.

MUS 614. Graduate Seminar in Music: Performance/Pedagogy (1-3). Seminar in selected topics in music performance and/or pedagogy. Prerequisite: graduate

standing. May be repeated up to 6 credits.

MUS 615. Graduate Seminar in Music: Conducting (1-3). Seminar in selected topics in conducting. Prerequisite: graduate standing. May be repeated up to 6 credits.

MUS 664. Major Applied Area (Individual Instruction) (2 or 4). Half-hour lesson per week for 2 credits or an hour lesson per week for 4 credits. Instruction available in performance areas A-H. Open to performance and performance pedagogy majors with permission of instructor. May be repeated for credit.

MUS 700. Master's Thesis, Project Study, and/or Examination (1-6). Designed to credit and record supervised study for the master's thesis, non-thesis project, studio project, public recital, and/or examination. Prerequisite: permission of chair of student's graduate faculty supervisory committee. May be repeated up to 6 credits. Grade will either be S or U.

NUTR 541. Applications in Dietetics (5). Concepts in clinical and community nutrition as well as food service management and administration. Interviewing and communication; assessing clients for nutritional risk; production and procurement practices; management functions and computer and research applications.

NUTR 543. Advanced Nutritional Biochemistry (3). Advanced study of the effects of macro and micro-nutrients on human metabolism. Prerequisite: NUTR 443.

NUTR 545. Advanced Studies in Developmental Nutrition (4). Review of effects of nutrition on growth and development. Nutritional assessment and evaluation of individuals and programs. Current issues in nutrition policies and programs with emphasis on early childhood. Prerequisite: NUTR 345

NUTR 547. Nutrition Update (3). Recent advances in nutrition research. Advanced study of selected nutrition problems. Prerequisite: NUTR 245. With permission, may repeat every other year.

NUTR 595. Graduate Research (1-10). Development and investigation of an approved laboratory or field research problem. By permission. May be repeated. Maximum of six credits may be included in MS course of study. Grade will either be S or U.

NUTR 596. Individual Study (1-6). May be repeated for credit.

NUTR 598. Special Topics (1-5). May be repeated for credit.

NUTR 700. Master's Thesis (1-6). Designed to credit and record supervised study for the master's thesis. Prerequisite: permission of chair of the student's graduate committee. By permission May be repeated for credit. Grade will either be S or U.

PE 500. Professional Development (1-5). Development topics and issues for in-service and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. May be repeated for credit. Grade will either be S or U.

PE 521. Advanced Football Coaching (3).

PE 523. Advanced Basketball Coaching (3).

PE 540. Socio-psychological Dimensions of Sport (3). The social and psychological factors which affect behavior and performance in sport.

PE 541. Sport and Culture (3). The interrelationship of sport with other aspects of the culture.

PE 560. Systematic Analysis of Teaching Physical Education (3).

PE 561. Curricular Trends in Physical Education (3). Investigation of current trends in physical education curriculum

design. Prerequisite: PE 300 or previous K-12 teaching experience.

PE 590. Cooperative Education (1-6). An individualized, contracted field experience with business, industry, government, or social service agencies. The 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.

PE 591. Workshop (1-6). May be repeated for credit.

PE 596. Individual Study (1-6). By permission. May be repeated for credit.

PE 598. Special Topics (1-6). May be repeated for credit.

PE 599. Seminar (1-5). May be repeated for credit under different titles.

PHYS 561. 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 562. Multiphysics Modeling Using COMSOL (4). Students will learn how to use the multi-physics software package COMSOL to solve problems that involve coupled physical processes. Emphasis is on establishing a computational mesh, choosing appropriate differential equations and boundary conditions, and displaying and interpreting the results. Prerequisites: MATH 376 and PHYS 561.

PHYS 595. Directed Research (1-5). By permission. May be repeated for credit.

POSC 520. Public Sector Management and Administration (5). The impact of United States

constitutional context, executive-legislative relations, intergovernmental and inter-organizational dynamics on executive decision making methods in public sector management at the entity wide, program and resource management levels. Prerequisite: graduate standing.

POSC 521. The Public Executive (5). The function and operation of the executive branch; role and relationship of political executives (both elected and appointed) with the bureaucracy and other branches; leadership and decision-making; the management, supervision, and practice of policy development. Prerequisite: graduate standing.

POSC 522. Comparative Public Administration (5). Comparison of structures, systems and functions of public administration in the U.S. and East Asian countries focused on national development and management. Examined are theories, management principles, functions of bureaucracies and bureaucratic culture. Prerequisite: graduate standing.

POSC 523. Public Finance and Budgeting (5). Survey course of public financial management and budgeting.

POSC 526. Evaluating Public Policy Effectiveness (5). This course applies scientific methods in the public policy administration arena to evaluate the effectiveness of public programs in local and state government. Students apply at least one qualitative method to a real research questions. Prerequisite: graduate standing.

POSC 527. Nonprofit Organization Administration (5). Focuses on the roles played by nonprofit organizations in meeting the public good.

POSC 530. State and Local Government (5). This course examines the administration of local and state government.

POSC 535. Government Information Systems (5). An examination of the role and impact of digital information technology in the process of governance with special attention to the associated issues of transparency, productivity and responsibility.

POSC 537. Intergovernmental Relations (5). Comparative study of the issues involved in implementing governmental programs across multiple jurisdictions.

POSC 550. Administrative Laws and Regulations (5). Exploration of the impact of constitutional arrangements on the activities of administrative agencies in the implementation of distributive, regulatory and redistributive policies with a focus on rule-making, investigation and adjudication.

POSC 560. Comparative Public Policy (5). Comparative analysis of policy and policy process in Western and Non-western setting with a special emphasis on the impact of globalization on both policy and process.

POSC 595. Graduate Research (1-10). For students doing advanced research, writing and study to complete their capstone project required for the master's degree. Prerequisite: all other courses in the master degree program should be completed prior to POSC 595. Co-requisite: either completed or enrolled in all other required course work. Maximum of 10 credits may be included on course of study for the master's degree.

PRIM 595A. Graduate Research in Primatology (1-10). Organize or conduct an approved laboratory and/or field research problem. By permission. Maximum of 10 credits may be included on course of study for the master's degree.

PRIM 595C. CHCI Graduate Research (1-10). Organize or conduct an approved research problem based at Chimpanzee and

Human Communication Institute. By permission. Maximum of 10 credits may be included on course of study for the master's degree.

POSC 598. Special Topics (1-6).

POSC 689. Capstone Project (5). The capstone project bridges the gap between coursework, research, and professional practice. Criteria is set by a faculty advisor. The final project should address political, social, economic, managerial, or other factors relevant to an identified topic. Prerequisite: must be taken in the final quarter of the program.

POSC 700. Master's Thesis and/or Examination (1-6). Designed to credit and record supervised study for the master's degree thesis, non-thesis project, or examination. Prerequisite: all other courses in the master degree program should be completed prior to POSC 700. Co-requisite: either completed or enrolled in all other required course work. By permission only. May be repeated up to 6 credits.

POSC 700. Master's Thesis and/or Examination (1-6). Designed to credit and record supervised study for the master's degree thesis, non-thesis project, or examination. By permission only. May be repeated up to 6 credits.

PRIM 501. Introduction to Primatology (4). Introduces students to the perspectives anthropologists, biologists, and psychologists bring to the study of nonhuman primates.

PRIM 503. Current Issues in Primatology (4). This course surveys current literature in primatology, with students identifying major theoretical and methodological topics of interest to primatologists. Prerequisite: PRIM 501.

PRIM 504. Primate Culture and Cognition (4). Seminar course covering topics in primate social behavior, intelligence, learning processes, communication and culture. Topics will be covered

through weekly reading assignments, class discussions, and a research paper. Prerequisite: PRIM 501.

PRIM 505. History of Primate

Interconnections (4). Survey of the history of human views and uses of nonhuman primates from 1600 through the present; consideration of evolutionary, psychological, and historical interconnections among primates. Prerequisite: PRIM 501.

PRIM 511. Primate Conservation (4).

A seminar that focuses on conservation issues of particular relevance for non-human primates, including deforestation, bushmeat hunting, and pet trade; conservation strategies, including reintroduction, captive management, and ecotourism. PRIM 511 and ANTH 411 are cross-listed courses; students may not receive credit for both.

PRIM 513. Research Methods in

Primate (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 513 and PRIM 513 are layered courses; students may not receive credit for both.

PRIM 598. Special Topics (1-5). May be repeated for credit.

PRIM 700. Master's Thesis, Project Study, and/or Examination (1-6).

Designed to credit and record supervised study for the master's thesis, non-thesis project, studio project, public recital and/or examination. Prerequisite: permission of chair of student's graduate faculty supervisory committee. By permission. May be repeated for credit. Grade will either be S or U.

PSY 500. Professional Development (1-5). Development topics and issues for in-service and continuing education of professionals. Not

applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. May be repeated for credit.

PSY 501. Professional Seminar in School Psychology (3). An

introduction to the activities of school psychologists and the conditions under which they function. Prerequisite: admission to the school psychology program.

PSY 502. Professional Orientation:

Mental Health Counseling (2). Professional identity in mental health counseling. Roles and functions of mental health counselors, professional organizations, credentialing, and accreditation, practices, and standards. Prerequisite: admission to graduate program in mental health counseling. May be repeated up to 4 credits.

PSY 503. Proseminar in School

Counseling (3). Introduction to role of the school counselor; comprehensive, developmental guidance, and counseling programs; interagency collaboration; current professional issues in school counseling. By permission.

PSY 504. Thesis and Project

Management (1). Comprehensive review of thesis/project process including topic and advisor selection, library research, proposal construction, timing of data collection, writing and editing, and final defense. Prerequisite: admittance a masters program in psychology. Grade will either be S or U.

PSY 505. Professional Development in Experimental Psychology (1).

An introduction to graduate school for first-year students with an emphasis on enhancing professional skills, including topics on career paths, written and verbal communication, grant-writing, conference attendance, and professional behavior. By

permission. May be repeated up to 3 credits. Grade will either be S or U.

PSY 510. Instructional Strategies in the Behavioral Sciences (2). This

course will provide the preliminary knowledge and skills necessary to teach undergraduate courses to diverse learners in the behavioral sciences with an emphasis on lesson plan delivery, developing and evaluating course assignments, and utilizing technology in the classroom.

PSY 513. 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 515. 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 (s.g., stress, HIV/AIDS). PSY 415 and PSY 515 are layered courses; students may not receive credit for both. Prerequisite: PSY 101.

PSY 520. 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.

PSY 521. Human Neuroanatomy (4).

An introduction to the anatomical organization and basic functional/clinical principles of the major systems of the human brain and their relation to disease and behavior. PSY 421 and PSY 521 are equivalent courses; students may not receive credit for both.

PSY 525. Psychology of Reading (3).

Principles of learning and readiness, perception, psychological, and physiological

aspects of reading. PSY 525 and EDLT 525 are cross-listed courses; students may not receive credit for both. Prerequisites: a reading methods course, a basic psychology of learning course, or permission of the instructor.

PSY 538. 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 541. Advanced Cognitive Psychology (5). Advanced theories, methods, and research in cognitive psychology and information processing. Prerequisite: PSY 300.

PSY 542. Evolutionary Psychology (4). Application of the principles of evolution by natural selection to the understanding of human and nonhuman behavior and cognition. PSY 542 and PSY 442 are layered courses; students may not receive credit for both.

PSY 544. 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. Prerequisite: either BUS 221 or MATH 311 or PSY 362.

PSY 550. Research in Natural Environments (5). A seminar in describing behavior, developing questions, designing procedures, and analyzing data that address applied and naturalistic research situations. Prerequisites: PSY 300 and PSY 362 and PSY 363.

PSY 551. Behavior Analysis (4). Advanced behavior analytic principles, techniques and strategies applied across a variety of professional settings.

PSY 552. Human Growth and Development, Advanced (3).

Developmental theories, multicultural differences, exceptionality, related research, and implications for education and guidance. Prerequisite: PSY 313, and PSY 314.

PSY 553. Single-subject Design (3). Course will address single-subject designs and methods common to behavior analytic assessments and interventions. Focus will be on behavioral assessment, experimental evaluation, and the measurement, display, and interpretation of single-subject data sets. Includes both lecture and laboratory activities. Prerequisite: PSY 551. By permission.

PSY 554. Behavioral Interventions (4). Research-based behavioral interventions for school, home, business, community, and professional service settings. Prerequisite: admission to the ABA program, or permission of the instructor.

PSY 555. Design and Statistical Analysis for Applied Research (4). Design and statistical analysis of experimental and quasi-experimental research with an emphasis on applied settings. Prerequisite: PSY 363.

PSY 556. Academic Assessment (5). Instruction in the use and administration of academic assessment procedures and instruments for school psychologists. Prerequisite: admission to the School Psychology Program.

PSY 558. Advanced Statistics (5). Advanced topics in analysis of variance and introduction to multiple regression, factor analysis, and MANOVA. Prerequisite: PSY 555.

PSY 559. Advanced Educational Psychology (4). Investigation of principles of learning and behavior as it relates to educational situations, including major theories of learning and development and assessment/evaluation procedures. Prerequisite: PSY 315.

PSY 560. Theories and Practice of Counseling (4). Survey of counseling theories with an introduction to counseling skills and practices. Prerequisite: CCPAC director's approval or admission to Mental Health Counseling, School Counseling, or School Psychology Programs.

PSY 561. Group Counseling (3). Theoretical approaches to group counseling and introductory laboratory/demonstration experience. Prerequisite: PSY 560.

PSY 562. Advanced Principles of Learning (3). Advanced principles of learning theory and behavior analysis in both applied and experimental settings. Prerequisite: PSY 301 or permission of instructor.

PSY 564. Intellectual Assessment (5). Administration of intellectual assessment instruments-early childhood through adult. Variables affecting test performance, interpretation, and report writing are emphasized. Prerequisite: admission to the school psychology program.

PSY 565. Advanced Animal Behavior (5). Advanced knowledge in the study of animal behavior. Three-hour lecture, two-hour laboratory, one-hour independent study per week. PSY 565 and BIOL 465 BIOL 565 are cross-listed courses; students may not receive credit for both.

PSY 566. Behavioral and Social-Emotional Assessment (5). Attainment of competencies in the use of behavioral and social-emotional assessment techniques, with a focus on school-age children. Prerequisite: admission to the school psychology program.

PSY 567. Counseling and Assessment: Children and Adolescents (5). Basic counseling assessment and treatment strategies for common problems presented by child and adolescent clients. Prerequisite: PSY 560 and PSY 593A.

PSY 568. Counseling and Assessment Strategies for Adults (5). Basic counseling assessment and treatment strategies for common problems presented by adult clients. Prerequisite: PSY 560. May be taken concurrently.

PSY 569. Administering School Counseling Programs (4). Strategies for developing, implementing, and evaluating comprehensive school counseling programs; counselor's role in issues such as school climate, school safety, and school crisis information. Prerequisite: PSY 503.

PSY 571. Counseling for Relationships and Families (4). Major theoretical approaches to counseling with couples and families. Prerequisites: PSY 560.

PSY 572. 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 PSY 572 are layered courses; students may not receive credit for both. Prerequisite: PSY 101. May be repeated up to six credits.

PSY 573. Career Development and Counseling (4). Major theories of career development; career assessment; and career intervention, emphasizing individual, ethnic, and cultural differences. By permission.

PSY 574. Multicultural Counseling (3). Multicultural counseling theories and implications for research, training, and practice. By permission.

PSY 575. School-Based Interventions (4). The understanding of the foundations and procedures for implementation of response to intervention and the delivery of

academic and social/behavioral interventions within schools and individual classrooms.

PSY 576. Comparative Psychology (4). Seminar in the study of behavior and cognition across species. PSY 479 and PSY 576 are layered courses; students may not receive credit for both. By permission.

PSY 577. Interviewing Skills for School Psychologists (4). An introduction to interviewing and assessment for school psychologists, with an emphasis on developing skills for interviewing children, parents and other caregivers, and school personnel. Prerequisite: admission to the school psychology program.

PSY 578. Applied Physiological Psychology (4). Physiological bases of various psychological disorders, brain injury and repair, and pharmacological treatment of clinical disorders. By permission.

PSY 579. Psychopharmacology (4). Common drugs, psychotherapeutic agents and hallucinogens. Behavioral effects and physiological mechanisms. PSY 476 and PSY 579 are equivalent courses; students may not receive credit for both.

PSY 580. Current Issues in Psychology (3). May be repeated up to 6 credits.

PSY 583. Consultation (3). Role of the consultant, stages of consultation, application of consultation principles to school and mental health settings.

PSY 584. Behavior Disorders and Psychopathology (4). Major systems of classification for normal and abnormal child/adult behavior. Prerequisite: PSY 449.

PSY 586. Ethics in Research (3). This course will familiarize students with current and emerging ethical issues faced by professional researchers, emphasizing crossdisciplinary topics such as protecting human and non-human participants, data management, mentorship, authorship, and other

responsibilities to colleagues and society.

PSY 587. Ethics in Experimental Psychology and Applied Behavior Analysis (4). This course will familiarize the student with ethical issues and responsibilities of experimental psychologists and behavior analysts. Ethical decision-making processes will be emphasized and the relationship between ethics and law will be explored.

PSY 589. Professional and Ethical Issues (4). Professional, ethical, and legal issues for mental health and school counselors. Prerequisite: PSY 593A.

PSY 590. Internship (1-10). Individualized, contracted field experience in an applied, professional setting. The contractual agreement involves a student learning plan, appropriate cooperating employment supervision, and faculty coordination. Student must carry malpractice and liability insurance. May be repeated up to 20 credits. Grade will either be S or U.

PSY 591. Workshop (1-6). May be repeated for credit.

PSY 592A. Practicum in School Psychology (3). Attainment of competence in the use of observational techniques, anecdotal reports, rating scales, behavioral analyses, and developmental interviews. Prerequisite: admission to the School Psychology Program. Grade will either be S or U.

PSY 592B. Practicum in School Psychology (3). Experience in complete case workups within state and federal requirements. Includes assessments, interpretation of results, treatment plans, and educational programs. Emphasis on developing consultation skills. Prerequisite: PSY 592A. Grade will either be S or U.

PSY 593A. Practicum in Counseling I: Interviewing (4). Interviews, role-playing, observation, and analysis of interview behavior.

Prerequisite: admission to Counseling Psychology, School Counseling, or School Psychology Programs and permission of department chair. To be taken concurrently with PSY560. A maximum of 4 credits may be included on the course of study on the master's degree. Grade will either be S or U.

PSY 593B. Practicum in Counseling II: Assessment (4). Assess client problems, set goals, and plan counseling strategies. Prerequisites: PSY 551 (may be taken concurrently), PSY 560, 593A and permission of department chair. Grade will either be S or U.

PSY 593C. Practicum in Counseling III: Advanced (4). Implementation of counseling strategies with children, adults, couples, or families. Prerequisites: PSY 593B and permission of department chair. Grade will either be S or U.

PSY 593D. Practicum in Counseling IV: Advanced (1-4). Implementation and evaluation of counseling with children, adults, couples, or families. Prerequisites: PSY 567, PSY 571, and PSY 593C (all may be taken concurrently) and permission of the department chair. Grade will either be S or U.

PSY 595. Graduate Research (1-10). Students using faculty and department resources for thesis development must register for PSY 595, PSY 595CHCI, or PSY 700. May be repeated. Not more than 10 credits of PSY 595 and PSY 595CHCI combined may be on the master's degree course of study.

PSY 595CHCI. CHCI Graduate Research (1-10). Directed research or thesis research at the Chimpanzee and Human Communication Institute. Course fee will be assessed. Not more than 10 credits of PSY 595 and PSY 595CHCI combined may be included on the master's degree course of study. May be repeated for credit.

PSY 596. Individual Study (1-6). May be repeated for credit.

PSY 598. Special Topics (1-5).

PSY 599. Seminar (1-5). May be repeated for credit.

PSY 651. Advanced Applied Behavior Analysis (3). This course builds upon the basic principles of learning and applied behavior analysis. Advanced instruction in behavioral programming, data collection, analysis, program generalization, best practices, and current research will be presented. Prerequisite: PSY 551. By permission.

PSY 681A. Mental Health Internship I: Group (3). Supervised counseling of child or adult groups. Some individual internship hours may also be obtained. Prerequisites: PSY 561, PSY 593C and permission of department chair. Grade will either be S or U.

PSY 681B. Mental Health Counseling Internship II: Advanced (1-12). Full-time internship placement in a mental health agency or psychiatric hospital. Prerequisites: PSY 584 and PSY 681A. Grade will either be S or U.

PSY 682A. School Counseling Internship I: Group (3). Supervised counseling of child or adult groups. Prerequisites: PSY 561, PSY 593B, and permission of department chair. Grade will either be S or U.

PSY 682B. School Counseling Internship II: Advanced (1-12). Placement in the public schools (K-12). Prerequisite: PSY 593C and PSY 682A. Grade will either be S or U.

PSY 683. School Psychology Internship (5-15). A full-time placement in school district(K-12). Prerequisite: permission of department chair. May be repeated for credit. Grade will either be S or U.

PSY 684. Field Experiences in Applied Experimental Psychology (1-6). Short term, supervised (non-internship) field experiences in professional settings in

experimental psychology. May include observational and professional activities directly supervised by faculty and site supervisors. No more than 6 credits may be on the master's degree course of study. Prerequisite: admission to graduate study in psychology, and permission of the program director. May be repeated for credit. Grade will either be S or U.

PSY 700. Graduate Thesis, Project Study, and/or Examination (1-6). Designed to credit and record supervised study for the graduate thesis, non-thesis project, studio project, public recital, and/or examination. Prerequisite: permission of chair of student's graduate faculty supervisory committee. May be repeated up to 6 credits. Grade will either be S or U.

REM 501. Introduction to Resource Management (4). The nature of resources; traditional systems of resource management; problems associated with resource "ownership"; principles, and practice of management related to local, regional, and global resources.

REM 502. Policy and Law in Resource Management (5). The scope and formation of U.S. resource policy, history of resource-related policies and legislation, current legislation and policies, future directions in resource policy.

REM 505. Introduction to Graduate Research (3). Discussion and application of research problem definition, research methods, literature review, and funding sources as applied to a research proposal. By permission.

REM 506. Resource Management Colloquium (1). Seminar series for REM students to both observe and present relevant research. All REM students must take this class twice: once as an attendee and, once as an attendee who must also present their research proposal. May be

repeated for credit. Grade will either be S or U.

REM 522. Resource Analysis (5). Problems of resource allocation; techniques of resource determination, cost-benefit analysis, principles of systems analysis, politics of resource analysis, understanding the “planner” and the “developer.” Prerequisite: ECON 462.

REM 540. 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. REM 540, ANTH 440, and GEOG 440 are cross-listed courses; student may not receive credit for more than one.

REM 562. Issues and Conflicts in Resource Management (3). Current issues and problems in resource management.

REM 590. Internship (1-8). Supervised off-campus practical experience in accordance with a written agreement between student, faculty, and cooperating agency. Prerequisite: approval of program coordinator. May be repeated for credit. Grade will either be S or U.

REM 593. Resource Management Field Experience (1-8). Off-campus experience in the field study of resource management. Prerequisite: permission of instructor and program director. May be repeated for credit.

REM 595. Graduate Research (1-10). May be repeated for credit.

REM 598. Special Topics (1-5). May be repeated for credit.

REM 599. Seminar (1-3). May be repeated for credit.

REM 700. Master’s Thesis, Project Study, and/or Examination (1-6). Designed to credit and record supervised study for the master’s thesis, non-thesis project, studio project, public recital, and/or examination. Prerequisite:

permission of chair of student’s graduate faculty supervisory committee. May be repeated up to 6 credits. Grade will either be S or U.

RT 500. Professional Development (1-5). Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. May be repeated for credit.

RT 505. Hospitality Catering (3). Basics of off-premise catering including menu planning, budgeting, logistics, and marketing. NUTR 405, RT 405, and RT 505 are layered courses; students may not receive credit for more than one.

RT 591. Workshop (1-6). May be repeated for credit.

RT 596. Individual Study (1-6). May be repeated for credit.

RT 599. Seminar (1-5). May be repeated for credit under different titles.

SCED 500. Professional Development (1-5). Development topics and issues for in-service and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. May be repeated for credit. XCLUD GPA.

SCED 501. Interdisciplinary Science Inquiry for Teachers (4). An interdisciplinary investigation of applied life, physical, and Earth science concepts applicable to K-12 classrooms using integrated contexts. Inquiry as it applies to scientific process and teaching is emphasized.

SCED 511. 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. May be repeated up to 4 credits.

SCED 521. Life Science Concepts for Teachers (3). An in-depth look at specific life-science concepts applicable to the K-12 classrooms using inquiry-based approaches. Scientific modeling and processes are emphasized.

SCED 542. Teaching Science at Community Colleges (3). Course topics will include the role community colleges play in the educational system, an introduction to teaching and learning philosophy appropriate for teaching science at the community college, and the practical application of learned material in an authentic classroom.

SCED 598. Special Topics (1-5).

SCM 510. Supply Chain Management Principles and Practices (5). Adoption of a supply chain orientation toward business management which emphasizes inter-functional and inter-firm relationships to improve coordination of operations and performance of participants in various types of supply chains. Prerequisite: admission to the Master of Professional Accountancy Program.

SOC 500. Professional Development (1-5). Development topics and issues for in-service and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. May be repeated for credit.

SOC 501. Social Science Research Methods (5). Principles of scientific research methodology applied to human behavior. Prerequisite: graduate standing or permission of instructor.

SOC 564. Statistical Analysis of Social Data I (2). Elementary and advanced descriptive statistics for the social sciences. Topics include

graphical displays of data, probability, measures of central tendency and variability, and measures of association between two or more variables.

SOC 565. Statistical Analysis of Social Data II (2). Elementary and advanced inferential statistics for the social sciences. Topics include statistical inference theory and hypothesis testing of sample means, proportions, correlation and regression coefficients, and other measures of association.

SOC 566. Organization Research and Assessment (5). Principles of scientific research, methodology, and their application to the analysis of organizations. Prerequisite: by permission.

SOC 596. Individual Study (1-6). By permission. May be repeated for credit.

SOC 598. Special Topics (1-6). May be repeated for credit.

SOC 599. Seminar (1-5). May be repeated for credit.

SPAN 500. Professional Development (1-5). Development topics and issues for in-service and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. May be repeated for credit.

TH 500. Professional Development (1-5). Development topics and issues for in-service and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. May be repeated for credit.

TH 501. Introduction to Graduate Studies (1). Introduction to current theatre research topics and library resources. Prerequisite: admission to the MA program.

TH 502. Introduction to the Creative Project (1). Research and preparation for directing the

culminating Creative Project: production of an approved play at the candidate's home venue. Review of MLA and documentation format and content. Prerequisite: TH 501. All coursework (except TH 700) in course of study must be completed. Grade will either be S or U.

TH 503. Survey of Theatre History and Literature (4). Study of important periods of theatre history from beginnings to the present and analysis of selected plays from each period.

TH 505. Research Methods (2). The procedure, techniques, and application of research methods in theatre. Prerequisite: admittance to the Theatre Master's program.

TH 510. Theatre Literature, Theory and Criticism I (4). Explore critical analysis from ancients to modernism and its application to theatre/dramatic texts. Prerequisite: admittance to the Theatre Master's program.

TH 511. Theatre Literature, Theory and Criticism II (4). Explore critical analysis from modernism to the present and its application to theatre/dramatic texts. Prerequisite: admission to MA program or permission of instructor.

TH 512. Studies in Gender Issues (5). The study of theory and practices of gender in drama, films, and contemporary performance culture. May be repeated for credit as topics change.

TH 513. Studies in World Drama (5). The study of theory and practices of post-modern world drama. May be repeated for credit as topics change.

TH 514. Studies in Asian Drama (5). The study of theory and practices of traditional drama, puppetry, and dance-drama forms of Asia. May be repeated for credit as topics change.

TH 515. Studies in Ethnic Drama (5). The study of theory and practices of multicultural plays by people of color and other ethnic groups. May be repeated for credit as topics change.

TH 516. Studies in Classical Drama (5). The study of theory and practices of the drama of the ancients, including Greek and Roman. May be repeated for credit as topics change.

TH 517. Studies in Medieval Drama (5). The study of theory and practices of drama from the early, middle, and/or late Middle Ages in Europe and/or Asia. May be repeated for credit as topics change.

TH 518. Studies in Early Modern Drama (5). The study of theory and practices of drama from the Renaissance, 17th and 18th century in Europe, Asia, and/or the Americas. May be repeated for credit as topics change.

TH 519. Studies in Drama and the State (5). The study of theory and practices of drama of state-controlled censorship and/or sponsorship, i.e., drama under the French Revolution, drama under the Third Reich, or NEA-sponsored performance. May be repeated for credit as topics change.

TH 525. Theatre History Ancients-Renaissance (3). The study of theatrical history from the Ancients through the Renaissance. Prerequisite: admittance to the Theatre Master's program.

TH 526. Theatre History Renaissance-Modernism (3). The study of theatrical history from the Renaissance through Modernism. Prerequisite: admittance to the Theatre Master's program.

TH 527. Theatre History Modernism-Contemporary (3). The study of theatrical history from Modernism to contemporary. Prerequisite: admittance to the Theatre Master's program.

TH 536. Advanced Stage Movement (3). Study and practice in specialized movement techniques for the stage, as applied to the skill development of special movement skills such as; performance, stage, combat, mime or dance at the high school and community college levels. Presented in a workshop

intensive setting. Enrichment students seeking to enroll in this course require previous training and/or experience in stage movement or dance. Prerequisite: admission to the MA in theatre production or department consent. May be repeated up to 6 credits, if the content changes.

TH 540. Contemporary Directing (3). Theory and practice in directing contemporary realistic plays.

TH 541. Graduate Directing II (3). Theory and practice in directing classical plays.

TH 542. Musical Theatre Directing (4). Study of the director's preparation and rehearsal practices for coordinating and mounting a full musical production. Prerequisite: TH 540.

TH 556. Sound Design and Engineering (3). Exploration and application of the elements of design and engineering as they relate to sound for the performing arts.

TH 564. Wig Applications (3). The study and practice of creating and restoring wigs for stage. TH 464 and TH 564 are equivalent courses; student may not receive credit for both. Additional course fees apply.

TH 565. Costuming Methods (3). Study and practice of creating costumes and related accessories for realistic and classic productions found at the high school and community college levels. Presented in a workshop intensive setting. Enrichment students seeking to enroll in this course require previous training and/or experience in theatre. Prerequisite: admission to the MA in theatre production or department consent. May be repeated up to 6 credits if content changes.

TH 566. Mask and Makeup Methods (3). Study and practice of creating masks, makeup, and related accessories and special effects in productions found at the high school and community college levels. Presented in a workshop

intensive setting. Enrichment students seeking to enroll in this course require previous training and/or experience in theatre. Prerequisite: admission to the MA in theatre production or department consent. May be repeated up to 6 credits if content changes.

TH 568. Lighting Methods (3). Study and practice in the concepts of color, instruments, drafting, trouble shooting techniques, and electricity for lighting stage productions with emphasis on equipment and design applications found at the high school and community college levels. Presented in a workshop intensive setting. Enrichment students seeking to enroll in this course require previous training and/or experience in theatre. Prerequisite: admission to the MA in theatre production or department consent. May be repeated up to 6 credits if content changes.

TH 571. Design Methodology (3). Study and practice in the concepts and fundamentals of design for stage productions found at the high school and community college levels. Presented in a workshop intensive setting. Enrichment students seeking to enroll in this course require previous training and/or experience in theatre. Prerequisite: admission to the MA in theatre production or department consent. May be repeated up to 6 credits if content changes.

TH 582. Performance Studies (3). Explores the concept of performance in the 20th and 21st centuries through case studies and scholarship, with special attention paid to the multi-disciplinary nature of the field.

TH 583. Scenic and Property Methods (3). Study and practice of construction, assembly, and scene-shifting techniques; shop safety; painting; and/or prop construction for stage productions found at the

high school and community college levels. Presented in a workshop intensive setting. Enrichment students seeking to enroll in this course require previous training and/or experience in theatre. Prerequisite: admission to the MA in theatre production or department consent. May be repeated up to 6 credits if content changes.

TH 587. 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 more than one. Prerequisite: TH 501 May be repeated up to 8 credits.

TH 588. Dramaturgy (3). Foundations in the research as applied to theatre production, including author, the world of the play, production history, critical analysis, images, and sources, with attention to the influences of social history, culture, and environment on the production.

TH 589. International Applied Studies (1-6). Applied research at international venues. May be repeated up to 6 credits.

TH 591. Workshop (1-6). No more than two workshops for a combined maximum of 8 credits can be applied toward a master's program.

TH 593. Dramaturgical Practicum (1-3). Practical experience in dramaturgy within the context of theatre production. Prerequisite: TH 588. May be repeated up to 6 credits.

TH 595. Culminating Portfolio (1). LiveText portfolio will be employed to build professional portfolios, documenting theatre training and compliance with state certification and NCATE standards. Grade will either be S or U.

TH 596. Individual Study (1-6). May be repeated for credit.

TH 598. Special Topics (1-6). Course content identified by title in the university class schedule. May be repeated for credit under different titles.

TH 599. Seminar (1-5). May be repeated for credit.

TH 600. Capstone Practicum (1). Mentored practicum in directing techniques where student demonstrates mastery of the skills acquired in the program; through the direction of, and participation in, a series of one-act projects in the classroom setting. This course is taken the final summer of study and must be completed satisfactorily in order to advance to the final requirement for graduation, the creative project (TH 700, Thesis). Prerequisite: completion of, or concurrent enrollment in, all course work leading to the creative project. Prerequisite: admission to the MA in theatre production or department consent. Grade will be either S or U.

TH 700. Master's Thesis Project (1-6). Designed to credit and record supervised study for the master's examination. Prerequisite: permission of chair of student's graduate faculty supervisory committee. May be repeated up to 6 credits. Grade will either be S or U.

UNIV 509. Civic Engagement (3). Student will use program of study content knowledge to improve a community situation. UNIV 509, FCSG 509, EDAD 509, and EDCS 509 are cross-listed courses, students may not receive credit for both. May be repeated up to 12 credits. Grade will either be S or U.