Central Washington 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.

Interim Associate Vice President:
Richard S. Mack

Associate Director of Sponsored Research: Wendy Bohrsen

Research and Sponsored Programs Administrator: Julie Guggino

Admissions/Records and Graduation

Program Support Supervisor: Christie Fevergeon

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E-mail: masters@cwu.edu

Web Site: http://www.cwu.edu/~masters

Business hours: 8 a.m.- 5 p.m., Monday-Friday (Pacific Time), except holidays. If you call during non-business hours, be sure to let us know when and where to reach you and we will return your call as soon as possible.

General Information

The graduate experience at CWU is challenging, rewarding, and exciting. But, like every quality experience, it is subject to certain rules and policies to insure that high academic standards are maintained. Below, we present information about CWU’s graduate programs. We seek to ensure that graduate students are fully apprised of the policies and procedures governing student progress. It is the responsibility of graduate students to familiarize themselves with these and the policies of the programs in which they are enrolled.

Central Washington University believes in equal educational and employment opportunity for all without regard to race, color, creed, national origin, sex, 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, will be found in various sections of this university bulletin. Please consult the Table of Contents or catalog index for further information.

Definition of a Graduate Student

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

Programs of Graduate Study

Graduate Degrees. Central Washington University offers the following graduate degrees:

- Master of Arts
  - Art
  - English: Literature
  - English: TESL/TEFL
  - History
  - Individual Studies
  - Theatre Production

- Master of Arts for Teachers
  - Mathematics

- Master of Education
  - Administration
  - Individual Studies
  - Master Teacher
  - Reading Specialist
  - School Counseling
  - School Psychology
  - Special Education
  - Supervision and Curriculum

- Master of Fine Arts
  - Art

- Master of Music
  - Music

- Master of Professional Accountancy

- Master of Science
  - Biology
  - Chemistry
  - Counseling Psychology
  - Engineering Technology
  - Experimental Psychology
  - Family and Consumer Sciences
  - Geology
  - Individual Studies
  - Organization Development
  - Health, Human Performance, and Recreation
  - Resource Management

The following programs are on reserve status and are not accepting new students: M.Ed, Science Education; M.Ed, Social Science; M.S., Mathematics, M.Ed., Business and Marketing Education.

Graduate Certificate Programs

In addition to the degree programs available CWU offers the following graduate certificate programs. See Graduate Certificate Programs below for details.

Renewal of Initial or Residency Certificate
Fifth-year of Study for Continuing or Professional Certificate
Endorsement-Only Program
Initial Principal’s Certificate
Continuing Principals’ Certificate
Continuing Program Administrator
Educational Staff Associate Certificate
School Counselor
School Psychologist

APPLICATION AND ADMISSION TO GRADUATE STUDY

Admissions Information

Central Washington University 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 United States or the equivalent from an institution abroad. The applicant must demonstrate, in the opinion of the faculty and the Associate Vice President of Graduate Studies and Research, the ability to successfully complete a master’s degree, and must have achieved at least a 3.0 (B) average in all course work attempted during the last 90 quarter hours (60 semester hours) of study.

Probationary. An applicant who does not meet the minimum admissions requirements, but who shows promise of success in a graduate program, will be considered for admission. He/she may be admitted on
probationary status, based on departmental recommendations and a favorable review by the Associate Vice President of Graduate Studies and Research. If admitted, the applicant is placed on probation for one quarter, during which time he/she must complete at least 10 credits of course work 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/she will be dropped from the program.

Conditional. An applicant may also be conditionally admitted to master’s programs when he/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.

International Applicant
In addition to the above requirements, all international applicants must complete the Application of International Students, obtainable from the Office of Admissions. If the applicant’s native language is not English, he/she is required to submit one of the following: a) a minimum TOEFL score of 550 paper-based (213 computer-based), or b) a baccalaureate degree from an accredited U.S. university. An applicant applying to any program in the Department of English must also take the Test of Written English (TWE). Applicants admitted to the program who score less than 5.0 will be required to enroll in a Second Language courses during their first quarter.

International applicants are also required to submit evidence that sufficient funding is available in U.S. currency through either personal resources and/or a sponsor for one academic year’s experience at CWU.

Applying to CWU
CWU welcomes applications from all those who meet our minimum requirements for admission. To apply, obtain a set of our application materials from the Office of Admissions: Central Washington University, 400 East 8th Avenue, Ellensburg, Washington 98926-7463. Telephone: (509) 963-3001, Fax: (509) 963-3022. E-mail: cwuadmis@cwu.edu. A completed application file consists of the following materials received by the Office of Admissions:
1. A completed Admission Application.
3. Three (3) 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. Scores should be no more than five years old at the time of application.
6. A non-refundable application fee of $35 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 out to Central Washington University and send it, along with the other application materials, to the Admissions Office. If you prefer to pay by credit card, you may send us the card number and expiration date or telephone the Cashier’s Office with this information (509-963-2224). Cash transactions should be made in person at the Cashier’s Office, Barge Hall 104.

Application Deadlines
The deadlines for submitting all application materials are as follows:
April 1 for Summer and Fall Quarter
October 1 for Winter Quarter
January 1 for Spring Quarter

Deferred Admission
If a department at the Graduate School 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/she will be expected to pay the non-refundable matriculation fee of $55 and to obtain the concurrence of the home department and the Associate Vice President of Graduate Studies and Research concerning the quarter in which he/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 School’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, paying the admission application fee and providing additional documents as needed.

Application for Certification and Non-Degree Study
Applications for the Continuing Certificate to the Certification Office must contact the Certification Office to organize an approved program. Applicants for School Counseling or School Psychology programs leading to certification must submit references and GRE scores. Admission procedures to these two certification programs are the same as for Master’s program admission.

Assistantships and Financial Aid
Central Washington University offers a number of assistantships during the academic year to beginning and continuing graduate students. Graduate assistantships are available in each of CWU’s 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. Normally, graduate assistantships are not available. Applicants must 1) be fully admitted to a master’s degree program at the commencement of the contact 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.

Full time assistantships require 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 through a formal written contract letter from the Associate Vice President of Graduate Studies, Research and Faculty. Award announcements are not made until sometime after April 15. Interested persons should contact the Office of Graduate Studies and Research for assistantships and information.

Financial aid is also 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 1.
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 in order 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 Associate Vice President of Graduate Studies and Research is the final arbiter, though he/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 “590” 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 fifteen (15) graduate quarter credits may be applied to a CWU master’s degree, of which no more than nine (9) quarter credits (six (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 who have taken the course(s) for undergraduate credit. Credit sought for transfer must be graded “B” or better and must have been completed no more than six years before the date of the student’s master’s degree program completion.

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 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 School.

Credits used to fulfill requirements for another degree, either at CWU or elsewhere will not be transferred. 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 Associate Vice President of Graduate Studies and Research. The University reserves the right to determine the acceptability of transfer credit from any institution.

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/U) basis (see S/U grading).

Credits from Extension, Workshops, and Correspondence Activity. Not more than a combined maximum of eight (8) credits of workshop courses (591s) may be applied toward a master’s degree. Courses 491 and 492 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/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 Washington University 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 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 above 15 credits and up to 20 credits may be approved by the chair or graduate coordinator of the department of the student’s specialization. Loads above 20 credits are not normally permitted. Exceptions may be made only by the Associate Vice President 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 Associate Vice President 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 better 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 to maintain active status. A master’s degree student may register as a full-time, part-time or as an on-leave student to satisfy the requirement. 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 School. 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 Associate Vice President 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 Associate Vice President 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 School office, Barge Hall 305.

The Course of Study should be filed before a graduate student has completed 25 quarter credits leading to the master’s degree. No more than fifteen (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 School reserve the right to linearize course of study 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 School before the Graduate Committee and 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 Associate Vice President 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 obtained from the Graduate School, 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 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 program proposals must show academic rigor, be programmatically coherent and intellectually sound. Final approval of such programs resides with the Associate Vice President of Graduate Studies and Research.

Prospective applicants seeking to pursue an Individual Studies degree must contact the Dean for Graduate Studies and Research 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 credits of the total required 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/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.

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/his work before the committee. The thesis defense grade will be assigned as either satisfactory or unsatisfactory. Jointly written theses 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 School. 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 School, and has double checked to insure that all style and format rules have been observed, he/she should submit the thesis for review to the Graduate School.

The thesis must include an abstract (150 words or less) described in "Thesis Regulations" available in the Office of Graduate Studies and Research. The original and two 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. An additional copy of the abstract, printed on thesis quality paper, must also be submitted to the Graduate School.

The Graduate School 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 $60 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/she will be assessed $40 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 Institutional Review Board (IRB) for the Protection of Human Subjects. Therefore student research projects which involve human subjects must be reviewed by the university’s Institutional Review Board (IRB) for the Protection of Human Subjects. Students apply for IRB review by filling out a clearance form which can be obtained from the Institutional Review Board or Animal Care and Use Committee below.

Institutional Review Board Approval. Central Washington University 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 student research projects which involve human subjects must be reviewed by the IRB for the Protection of Human Subjects. Students apply for IRB review by filling out a clearance form which can be obtained from the Office of Graduate Studies and Research or on line at http://www.cwu.edu/~hsrc. 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 on line at http://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.

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 School, he/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 Program 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 Theses/Non-Thesis Guidelines available at the Graduate Office or online at the Graduate Studies page (http://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 Dean of Graduate Studies and Research.

Final Folder Evaluation. All students must visit 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. 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 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 insure 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-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 the subsequent quarter with at least two months intervening.

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

A student whose name has been placed on the degree list for a particular quarter and who, nevertheless, does not complete the requirements for degree conferral by the published deadline (two weeks before the last day of finals), but 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 or thesis option where appropriate.
3. Attainment of a cumulative grade point average of 3.0 (B) or better 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.
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 will not be completed without payment of binding and degree fees. The fee for the master’s degree is $10 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. Application forms and further information can be obtained from the Office of the Associate Dean of Education and Professional Studies located in Black Hall 228. The Certification Office is open daily, Monday through Friday, from 8 a.m. to noon and 1 to 5 p.m. General inquiries and information regarding the fifth year program and teacher certification should be addressed to the Director of Certification. The telephone number is (509) 963-2661.

Renewal of Initial or Residency Certificate
Fifth Year of Study for Continuing or Professional Certificate
Endorsement-Only Program
Initial Principal’s Certificate
Continuing Principal’s Certificate
Initial Program Administrator
Continuing Program Administrator
Educational Staff Associate Certificate:
School Counselor
School Psychologist

Renewal of the Initial Teaching Certificate.
The Initial Teaching Certificate is valid for four years from the date of issuance and may be renewed once for a three-year period when the following requirements are met:
1. The individual completes an initial certificate renewal application which may be secured from the office of the Associate Dean 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 course work since last certificate was issued.

Renewal of Residency Certificate.
The Residency Teaching Certificate is valid for five years and may be renewed for two years with verification the applicant is enrolled in and making satisfactory progress in a Professional Teaching Certificate program. If an applicant has not been employed as a contracted teacher in Washington, the certificate may be renewed once for five years by completing 15 quarter hours (10 semester hours) of study since the issuance of the Residency Teaching certificate.

Continuing Certificate. Candidates for the continuing certificate must meet the following requirements:
1. Have a valid Initial Teaching Certificate
2. Verify at least one year of full time teaching experience.
3. Complete 45 credits of upper-division (300 level or higher) course work 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 inservice 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 (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 course work in issues of abuse.
To maintain the Professional Teaching Certificate, an individual must complete 150 clock hours of inservice training every 5 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 Initial, Residency, or Continuing Teaching Certificate and who wish to add a teaching endorsement to their certificate. Teachers interested in obtaining and endorsement from CWU should submit an application (available from the Associate Dean’s office) and official transcripts. A credit evaluation of the applicant’s records will be completed by the Associate Dean’s staff, routed to the endorsing department for approval, and then forwarded to the applicant.

School Administration Certificates. Central Washington University has been authorized by the State Board of Education to recommend issuance of initial 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 supervision and curriculum or special education. These programs of preparation include formal study and internship experiences. (See Master of Education, Administration, Special Education, or Supervision and Curriculum.)

Requirements for the Initial 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. Successful teaching experience of three years 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. Must have completed all requirements for Initial Certificate.

Persons seeking further information are invited to correspond with the School Administration Program Director, Department of Teacher Education Programs.

Special Certificates. Preparation for special certificates, authorized by the State Board of Education, is available at Central Washington University. Programs leading to the educational staff associate certificate are available in the following areas: 1) school counselor, and 2) school psychologist.

Programs leading to certification in specific vocational areas are available in: 1) business education; 2) marketing education; 3) diversified occupations; 4) family and consumer sciences; and 5) 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, 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.
**Accounting**

Graduate Faculty
Chair: J. D. Forsyth
Shaw-Smyser 338

Associate Professor:
Ronald R. Tidd

Assistant Professors:
Mary Anne Atkinson
Joseph Bradley
Mike Ruble

**Master of Professional Accountancy**

**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 four degree requirements:
   a. Bachelor’s degree in Accounting from an accredited university; or
   b. 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 2.7 grade point average.
      - ACCT 205, Cost Accounting
      - ACCT 346, Income Tax Accounting I
      - ACCT 350, Intermediate Accounting I
      - ACCT 351, Intermediate Accounting II
      - ACCT 460 shall be completed during the Master’s program as an elective.
   c. 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 2.7 grade point average.
      - BUS 241, Legal Environment of Business
      - ACCT 305, Cost Accounting
      - ACCT 346, Income Tax Accounting I
      - ACCT 350, Intermediate Accounting I
      - ACCT 351, Intermediate Accounting II
      - ACCT 460 and MGT 489 shall be completed during the Master’s program as the electives.
   d. Bachelor’s degree from an accredited university; or
      - Bachelor’s degree in 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 2.7 grade point average.
      - ACCT 251, Accounting I
      - ACCT 252, Accounting II
      - BUS 241, Legal Environment of Business
      - OMIS 221, Introductory Business Statistics
      - ECON 201, Principles of Economics Micro
      - ECON 202, Principles of Economics Macro
      - FIN 370, Introduction of Financial Management
      - MKT 360, Principles of Marketing
      - ACCT 305, Cost Accounting
      - ACCT 346, Income Tax Accounting I
      - ACCT 350, Intermediate Accounting I
      - ACCT 351, Intermediate Accounting II

   The following classes also shall be required to be completed during the Master’s program as the two electives:
      - ACCT 460, Auditing
      - MGT 489, Business Policy

2. If your native language is not English, you are required to submit a Test of English as a Foreign Language (TOEFL) computer-based score of 213 or above or paper-based score of 550 or above. You also are required to submit a Test of Spoken English (TSE) score of 50 or above. Communication generally effective–74th percentile.

3. Instead of providing Graduate Record Examination (GRE) scores, Graduate Management Admission Test (GMAT) scores are required. 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:

   \[ \text{Total Score} = 1,600 \times \frac{800}{\text{Graduate Management Admission Test}} \]

   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.

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Management Core</td>
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<tr>
<td>MGT 505, Customer Value/Leadership</td>
<td>5</td>
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<tr>
<td>MGT 525, Strategic Management/</td>
<td></td>
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<tr>
<td>Business Simulation</td>
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<tr>
<td>Accounting Core</td>
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<tr>
<td>ACCT 510, Information Systems Security,</td>
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<tr>
<td>Control and Audit</td>
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<tr>
<td>ACCT 520, Tax and Legal Strategies for</td>
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<tr>
<td>Business</td>
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<td>ACCT 530, Financial Statement Analysis</td>
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<tr>
<td>ACCT 585, Seminar in Professional</td>
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<tr>
<td>Accountancy</td>
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<tr>
<td>ACCT 700, Master’s Thesis, Project Study,</td>
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<tr>
<td>and/or Examination</td>
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**Elective Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ACCT 535, Database Management Systems (5)</td>
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<td>ACCT 540, Electronic Commerce (5)</td>
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<td>ACCT 550, Enterprise Business Modeling (5)</td>
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<tr>
<td>ACCT 560, Object Oriented Analysis and Design (5)</td>
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<td>ACCT 570, Foundations of Income Taxation (5)</td>
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<td>ACCT 580, Tax Planning for Entities (5)</td>
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<td>ACCT 590, Cooperative Education (5)</td>
<td></td>
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<tr>
<td>ACCT 596, Individual Study (5)</td>
<td></td>
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<tr>
<td>Approved Electives–400 Level or Above (5)</td>
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</tr>
</tbody>
</table>

**Program Total Credits** 46

**Graduate Courses in Accounting**


ACCT 535. Database Management Systems (5). Prerequisite, admission to the Master of Professional Accountancy program. Introduction to the design, implementation and use of relational database management systems. Design and implementation of an accounting system using database technology.
ACCT 540. Electronic Commerce (5). Prerequisites, admission to the Master of Professional Accountancy program or permission of the Accounting Department Chair. Introduction to the technical, cultural, ethical, managerial, and economic issues of electronic commerce development. Design and develop Web site to collect and distribute information.

ACCT 550. Enterprise Business Modeling (5). Prerequisites, admission to the Master of Professional Accountancy program or permission of the Accounting Department Chair. Identifying information requirements and configuration methods for ERP software. Examination of new technologies. Group presentation to professionals.

ACCT 560. Object Oriented Analysis and Design (5). Prerequisites, admission to the Master of Professional Accountancy program or permission of the Accounting Department Chair. Introduction to foundations of income taxation of corporations, partnerships, and individuals, with emphasis on tax compliance and computer-based tax research.


ACCT 585. Seminar in Professional Accountancy (5). Prerequisite, admission to the Master of Professional Accountancy program or permission of the Accounting Department Chair. Development and modification of event-driven systems. Examination of new technologies. Group presentation to professionals.

ACCT 570. Foundations of Income Taxation (5). Prerequisite, admission to the Master of Professional Accountancy program or permission of the Accounting Department Chair. Examination of new technologies. Group assignment involves a student learning professional analysis and decision-making 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. Grade will be S or U.

ACCT 596. Individual Study (1-6). Prerequisite, permission of instructor.

ACCT 598. Special Topics (1-6). Prerequisite, admission to MPA Program. Grade will be S or U.

ACCT 700. Master’s Thesis, Project Study, and/or Examination (1). Prerequisite, permission of Chair of student’s graduate faculty supervisory committee. Designed to credit and record supervised study for the Master’s thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U.

**ANTHROPOLOGY AND MUSEUM STUDIES**

Graduate Faculty
Chair: Anne S. Denman
Farrell Hall 309

Professor:
Anne S. Denman, Cultural Anthropology, Gender Roles, American Culture

Associate Professors:
Tracy J. Andrews, Sociocultural Anthropology, Native North America, Ethnicsity, Medical Anthropology, Ecological Anthropology, Gender
Loran E. Cutsinger, Cultural Anthropology, Informal Economy, Gender, Caribbean, Russia, Middle East
Steven Hackenberger, Cultural Ecology, Archaeology, Cultural Resource Management, Computer Simulation, North America and Caribbean

Assistant Professors:
Patrick Lubinski, Archaeology, Zooarchaeology, Cultural Resource Management, North America
Patrick McCutcheon, Archaeology, World Prehistory, Evolutionary Theory, Environmental Archaeology, Archaeometry

**General Departmental Information**

Anthropology jointly coordinates the Master of Science degree program in Resource Management with the Department of Geography and Land Studies. For further information, see Resource Management.

**Graduate Courses in Anthropology**

ANTH 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.

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 522. Historic Preservation (4). Prerequisite, permission of instructor. Theory and methods in the identification, evaluation, and protection of historic resources.

ANTH 596. Individual Study (1-6). Prerequisite, permission of Department Chair.

**ART**

Graduate Faculty
Chair: Michael Chinn
Randall 100

Professor
Michael S. Chinn, Wood Design

Associate Professors
Glen Bach, Computer Art
Keith Lewis, Jewelry and Metalsmithing
William Folkestad, Art History and Criticism

Assistant Professors
Stephen Chalmers, Photography
Patte Loper, Painting, Drawing
Shari Stoddard, Art Education
Ovidio Giberga, Ceramics
Lisa Hutton, Computer Art

**General Departmental Information**

The Department of Art 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 (M.A.) program offers students advanced study in the various studio areas and in art history. The M.A. 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 (M.F.A.) is a terminal degree program providing students with professional levels of competency and experience in studio art. The M.F.A. 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 Washington University:

- Ceramics
- Computer Art
- 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”.

ART 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.

ART 525. Advanced Studies in Photography (2-5). Prerequisite, ART 425 or equivalent. May be repeated for credit.

ART 541. Advanced Studies in Wood (2-5). Prerequisite, ART 441 or equivalent. May be repeated for credit.

ART 546. Advanced Studies in Jewelry and Metalsmithing (2-5). Prerequisite, ART 446 or equivalent. Independent, advanced exploration of jewelry or metalwork. Emphasis on conceptual strength, growth and technical mastery. May be repeated for credit.

ART 550. Advanced Studies in Drawing (3). Prerequisite, ART 450 or equivalent. May be repeated for credit.

ART 553. Art in the United States (4). Sculpture, painting and architecture from Colonial period to present, with emphasis on the period 1900-1945. International influences are identified and traced to their assimilation. Same as ART 453. Students may not receive credit for both.

ART 554. Art of China (4). Architecture, painting, sculpture and crafts from the Shang Dynasty through the Ch'ing Dynasty. Same as ART 354. Students may not receive credit for both.

ART 555. Art of Japan (4). Architecture, painting, sculpture and some of the significant crafts from the Archeological Age to the Tokugawa period. Same as ART 455. Students may not receive credit for both.

ART 556. History of Eastern Art (4). Prerequisite, permission of the instructor. A survey of the architecture, sculpture, painting, and the crafts of India, Indonesia, China, and Japan.

ART 557. African and Oceanic Art (4). The tribal arts of Africa and Oceania as represented by the cultures of Polynesia, Micronesia, Melanesia, and Australia from prehistoric times to the present. Same as ART 357. Students may not receive credit for both.

ART 560. Advanced Studies in Painting (2-5). Prerequisite, ART 460 or equivalent. May be repeated for credit.

ART 565. Advanced Studies in Ceramics (2-5). Prerequisite, ART 465 or equivalent. May be repeated for credit.

ART 579. Critique Seminar (2). A forum for the presentation and development of critical dialog about student work as well as for discussion of contemporary issues and practices in visual art.

ART 580. Advanced Studies in Sculpture (2-5). Prerequisite, ART 480 or equivalent. May be repeated for credit.


ART 595. Art Teaching Practicum (1-6). Prerequisite, permission of instructor. May be repeated for a total of 12 credits. Restricted to graduate students in the Master of Fine Arts program. Grade will be S or U.
ART 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated.

ART 598. Special Topics (1-6).

ART 599. Seminar (1-5). May be repeated.

ART 700. Master’s Thesis, Project Study and/or Examination (1-12), Prerequisite, permission of Chair of student’s graduate faculty supervisory committee. Designed to credit and record supervised study for the Master’s thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for credit not to exceed 6 credits for M.A. degree and 12 credits for M.F.A. degree.

Graduate Courses on Reserve:
The following courses are on reserve and may be offered subject to program needs. ART 585. Advanced Studies in Printmaking (2-5).

BIOLOGICAL SCIENCES

Graduate Faculty
Chair: David R. Hosford
Science Building 338A

Professors
David M. Darda, Evolutionary Vertebrate Morphology, Herpetology
David R. Hosford, Mycology and Algology
Paul W. James, Ecology and Fisheries Biology
Sheldon R. Johnson, Director Allied Health Sciences; Zoophysiology, Mammalogy
Robert E. Pacha, Microbiology (Emeritus)
Stamford D. Smith, Entomology and Aquatic Biology (Emeritus)

Associate Professors:
Daniel D. Beck, Physiological Ecology and Herpetology
Kristina A. Ernest, Terrestrial and Community Ecology

Assistant Professors:
*Louise M. Baxter, Science Education, Histology
Patrick J. Bryan, Invertebrate Zoology, Developmental Biology
Tom R. Cottrell, Plant Ecology
Philip W. Mattocks, Ornithology and Physiology
Holly C. Pinkart, Microbiology
Linda A. Raubeson, Plant Systematics
Lixing Sun, Behavioral Ecology and Evolution

*Phillip Mattocks, Ornithology
*Associate Graduate Faculty

Master of Science
Biology

Program Coordinator:
Daniel Beck
SCI 236G

Several objectives may be met through the completion of the Master of Science in Biology.

1. The degree will provide an expanded opportunity for students to prepare themselves for biological careers not normally open to students with only an undergraduate major in a biological science.

2. The program may prepare students for further graduate work leading to the Ph.D. degree. Students considering further graduate study should elect the thesis option for their Master’s program.

3. The program may be designed so that the student may meet the requirements for continuing certification in secondary education while concurrently earning a Master of Science degree in Biology.

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 then the specific requirements of the Department of Biological Sciences, which are:

1. An undergraduate degree in Biology or its equivalent. 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 Graduate Record Examination scores for both the general test and the biology subject test.

3. Students must arrange for a graduate faculty advisor in the Department of Biological Sciences to serve as their major professor.

Program. The coursework leading to the Master of Science in Biology 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. Thesis and non-thesis options are available. The non-thesis option requires a study project. The individual’s program coursework and thesis problem or project study will be developed in consultation with the student’s major professor and other members of the student’s graduate committee. Two quarters in residence are required.

Final Examination. Candidates must pass a final oral and/or written examination of all coursework offered for their degree, on their thesis or project, and on their area of specialization. Students electing a non-thesis option ideally should have a valid teaching certificate before entering the program and must have a valid teaching certificate before the Master’s degree will be granted.

Graduate Courses in Allied Health Sciences

AHSC 596. Individual Study (1-6). Prerequisite, permission of instructor.

AHSC 598. Special Topics (1-6).

AHSC 599. Seminar (1-5).

Graduate Courses in Biological Sciences

BIOL 500. Professional Development (1-5).

BIOL 520. Developments in Cellular Biology (3). Prerequisite, graduate standing or permission. Ways in which new information is being integrated with the basic concepts of cellular and molecular biology. Formerly BISC 513. Students may not receive credit for both.

BIOL 552. Aquatic Entomology (5). Prerequisite, BIOL 351 or permission. Biology and taxonomy of major groups of aquatic insects. Two lectures and six hours of laboratory a week. A field course. Formerly ZOOL 562. Student may not receive credit for both.

BIOL 565. Advanced Animal Behavior (5). Prerequisite, graduate student status. Advanced knowledge in the study of animal behavior. Three hours lecture, two hours laboratory, one hour independent study per week. Formerly BISC 565. Same as PSY 565. Students may not receive credit for both PSY 565 and either BIOL 465 or BIOL 565 or BISC 565.

BIOL 566. Conservation Biology (5). Prerequisite, BIOL 360 and graduate standing or permission of instructor. An introduction to the theory and practice of conservation biology, with emphasis on case studies. Two hours lecture, one hour discussion, and 4 hours lab or field study per week. Weekend field trips may be required. Students may not receive credit for both.

BIOL 567. Developments in Organismic Biology (3). Prerequisite, graduate standing or permission. Ways in which new information is being integrated with the basic concepts of evolutionary and systematic biology. Formerly BISC 511. Students may not receive credit for both.

BIOL 580. Research Methods and Techniques (4). An introduction to methods, techniques and procedures commonly used in biological research. Laboratory and field methods will be discussed as well as data collection and analysis techniques. Experimental design of research projects will be emphasized. Formerly BISC 513. Students may not receive credit for both.
BIOLOGICAL SCIENCES — BUSINESS ADMINISTRATION — CHEMISTRY

BIOLOGICAL SCIENCES

BIOL 593. Natural History Museum (1-6). Prerequisite, permission of instructor and Department Chair. Practicum in preparing, cataloging, and maintaining natural history museum specimens and displays and curating museum collections. May be repeated up to a total of five credits. Formerly BOT 593.

BIOL 595. Graduate Research (1-15). Prerequisite, permission of instructor. Organization or conduct of an approved laboratory and/or field research problem. May be repeated. Maximum of 10 credits may be included on Course of Study for the Master’s degree. Formerly BISC 595.

BIOL 596. Individual Study (1-6). Prerequisite, permission of instructor. Formerly BISC 596/BOT 596/ZOOL 596.

BIOL 598. Special Topics (1-6). Formerly BISC 598/BOT 596/ZOOL 598.

BIOL 700. Master’s Thesis, Project Study and/or Examination (1-6). Prerequisite, permission of Chair of student’s graduate faculty supervisory committee. Designed to credit and record supervised study for the Master’s thesis, non-thesis project, public presentation, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits. Formerly BISC 700/BOT 700/ZOOL 700.

Graduate Courses on Reserve

The following courses are on reserve and may be offered subject to program needs. BIOL 540. Laboratory Studies in Plant Physiology (3), BIOL 541. Field Botany (3), BIOL 550. Current Advancements in Human Physiology (3), BIOL 551. Field Zoology (3), BIOL 560. Ecological Diversity in Washington (3).

BUSINESS ADMINISTRATION

Office of the Chair
Hugh Spall, Ellensburg
Don R. Nixon, SeaTac
F. Lynn Richmond, Lynnwood

Professors
Edward S. Esbeck, Management and Organization
James L. Nimmricht, Human Resource Management, Organizational Management, Organizational Behavior

General Information

The Business Administration Department does not offer any graduate courses or graduate degrees.

Graduate Courses in Business Administration

The following course is on reserve and may be offered subject to program needs: BUS 515 Organization and Environment (5).

Graduate Courses in Management


CHEMISTRY

Graduate Faculty
Chair: Martha J. Kurtz
Science Building 302 F

Graduate Program Coordinator
Anthony Diaz

Professors
David G. Lygre, Biochemistry
JoAnn DeLuca, Physical, Organic

Associate Professors
Martha J. Kurtz, Science Education
Carin Thomas, Biochemistry, Organic

Assistant Professor
Anthony Diaz, Inorganic, Solid State

Associate Graduate Faculty
Eric Ballork, Physical
Anne Johansen, Environmental, Analytical

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. Additionally, the program provides a foundation for further graduate studies beyond the M.S. 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 computation capabilities. Furthermore, it operates a state certified environmental testing laboratory and maintains a radiochemistry laboratory.

Program Admission Requirements:

Incoming students are expected to meet the requirements set forth by the Graduate School, have earned an undergraduate degree in chemistry or a related field (equivalent to those offered at Central Washington University; see requirements for the B.S. and B.A. degrees in chemistry), and demonstrate a potential for superior scholarship. Applicants must provide Graduate Record Examination (GRE) scores for the General test. Scores from the Chemistry Subject Test may be requested in special cases. If a chemistry background deficiency exists at the time of student admission, it must be removed during the first year of graduate study without graduate credit. International students for whom English is a second language must provide TOEFL scores to demonstrate English proficiency.

Community College Transfer Program:

Community college transfer students with an appropriate background (an A.A. degree including essential chemistry, mathematics, and physics coursework) may earn B.S. or B.A. and then M.S. degrees over the course of approximately three years. A similar effort may be accomplished by CWU students. These degrees are achieved in an accelerated fashion and are individualized according to the specific background and focus of the student. For additional information, contact the Chemistry Graduate Program Coordinator.

Program Requirements: The M.S. 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 9 core credits in chemistry, enroll in CHEM 503, Introduction to Research, during the Fall quarter of 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. Candidates must also pass a final oral examination on their thesis project and coursework that is administered by candidate’s graduate thesis committee, and prepare a written thesis documenting their graduate research. Normal completion of the Master of Science requires two academic years and an intervening summer of study.

Electives: Fourteen credits of elective coursework at the 400 or 500 level are required for the M.S. degree in chemistry. Elective courses are selected with advising from the thesis committee and provide expertise in the fields of the individual student’s academic interests and research focus and complement professional goals. Elective topics offered by the Chemistry Department include biochemical toxicology, mechanistic organic chemistry, organic synthesis, environmental chemistry, solid-state chemistry, analytical instrumentation, graduate physical chemistry and chemistry education. Elective courses from other departments (Biology, Geology, Mathematics, Physics and Psychology among others) may be selected with graduate committee approval.

Graduate Committee: Before the end of the candidate’s second quarter in the program and after consultation with all 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 committee; two members of the committee must be from the Department of Chemistry.

Examination: Each candidate must pass a final oral examination on all phases of the student’s program. The review covering the student’s thesis and coursework consists of a seminar open to the public followed by queries from the thesis committee.

Required Courses: Credits
CHEM 503, Introduction to Research 1
CHEM 505, Current Topics in Chemistry 1
CHEM 589, Graduate Student Seminar 4
CHEM 595, Thesis Research 10
CHEM 700, Thesis 6
Nine credits in Chemistry 9
Electives to be selected by advisement 14
Program Total 45

Graduate Courses in Chemistry
CHEM 500. Professional Development (1-5). Development topics and issues for in service and continuing education of professionals. Not applicable to degrees not institutional requirements for endorsements or teaching certificates offered through the university.
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.
CHEM 505. Current Topics in Chemistry (1). Prerequisite, graduate status or permission of instructor. Restrictions, may be repeated for credit when subject matter differs to a maximum of 5 credits.
CHEM 510. Enzymology (3). Prerequisites, CHEM 432 or equivalent. Principles of enzyme purification, kinetics, reaction mechanisms, and regulation. Three lectures weekly.
CHEM 511. Advanced Biochemistry (3). Prerequisites, CHEM 362 and CHEM 432 or BIOL 320, and/or permission of instructor. A course in advanced biochemical concepts focusing on current topics in metabolism, membrane transport systems, electron transport, oxidative phosphorylation, and DNA using mitochondria as a model system.
CHEM 512. Biochemical Toxicology (3). Prerequisites, CHEM 362 and CHEM 431; CHEM 432 or BIOL 320 and/or permission of instructor. An introduction to the principles of toxicity followed by a survey of the biochemical mechanisms involved in cytotoxicity including reactive intermediates and their interaction with macromolecules. Same as CHEM 498, Biochemical Toxicology. may not receive credit for both.
CHEM 540. Survey of Chemical Education Research (3). This course is designed to give students basic understanding of the issues and concerns of current research in chemical education.
CHEM 541. Topics in Chemical and Science Education (3). This course is designed to lead students on a detailed explanation on one aspect of teaching or research in chemical/science education. May be repeated for credit with instructor permission.
CHEM 542. Teaching Chemistry at the 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). Prerequisite, CHEM 452. Statistics in chemical analysis; quality control and assurance methodologies; government certification protocols; sampling and preservation; contamination and loss; process analytical chemistry; chemometrics; current analytical methodologies.
CHEM 551. Atmospheric Chemistry (3). Prerequisite, CHEM 382. The chemistry of the stratosphere and troposphere; chemistry of the atmospheric aqueous; the meteorology of air pollution; cloud microphysics; mathematical chemical/transport modeling.
CHEM 552. The Chemistry of Natural Waters (3). Prerequisites, CHEM 251 and CHEM 382, or by permission of instructor. A study of the chemical reactions that lead to the steady state and/or equilibrium composition of natural waters.
CHEM 561. Organic Reaction Mechanisms (3). Prerequisites, CHEM 363 or the equivalent, CHEM 383 or permission of the instructor. An examination of several classes of organic reactions mechanisms, with an emphasis on the reaction intermediates, and on the methods used for studying reaction pathways.
CHEM 562. Physical Organic Chemistry (3). Prerequisites, CHEM 363 or the equivalent, CHEM 383 or permission of the instructor. An introduction to the modern study of organic structures and organic reaction pathways, with an emphasis on computational and physical methods.
CHEM 563. Advanced Synthetic Methods (3). Prerequisites, CHEM 363 or equivalent or permission of the instructor. A detailed survey of modern synthetic methods in organic chemistry, their application in multi-step transformations and development of synthetic rationale in extended total synthesis.
CHEM 564. Medicinal Organic Chemistry (3). Prerequisites, CHEM 363 and CHEM 431 or equivalent or permission of the instructor. A multi-component study of drugs and other biologically potent materials in terms of chemical synthesis, radiochemistry, biochemical evaluation and biological and receptor interactions.
CHEM 570. Advanced Inorganic Chemistry (3). Prerequisites, CHEM 350 and CHEM 363. An in depth review of the structure, bonding, spectroscopy and reactivity of inorganic compounds, with emphasis on those of the main group elements.
CHEM 581. Thermodynamics (3). Prerequisites, Mathematics through multivariable calculus; CHEM 383 or equivalent. Three lectures weekly. Principles of thermodynamics: basic theories, methods and applications.
CHEM 582. Chemical Kinetics (3). Prerequisites, Mathematics through multivariable calculus, CHEM 383 or equivalent. Three lectures weekly. Principles of chemical kinetics: basic theories, methods and applications.

CHEM 583. Quantum Chemistry (3). Prerequisites, Mathematics through multivariable calculus, CHEM 383 or equivalent. Three lectures weekly. Principles of quantum chemistry: basic theories, methods and applications.

CHEM 589. Graduate Student Seminar (2). May be repeated for credit. A one hour professional seminar encompassing a contemporary topic is provided to the department and campus community.

CHEM 590. Cooperative Education (1-5). Prerequisites, undergraduate degree and permission of graduate coordinator. Practical experience by employment in a chemistry-related industrial, governmental, or institutional setting.

CHEM 592. Laboratory Experience in Teaching Chemistry (2). Prerequisite, permission of instructor. Practical experience in teaching chemistry laboratories. An introduction to teaching, teaching philosophies, safety and hazardous waste management. May be repeated for credit for only 2 credits may be applied to the chemistry MS degree.

CHEM 595. Graduate Research (1-10). Prerequisite, permission of instructor. May be repeated for credit.

CHEM 596. Individual Study (1-5). Prerequisites, permission of instructor and thesis committee. May be repeated for credit.

CHEM 598. Special Topics (1-6). Prerequisite, may be repeated for credit under a separate title.

CHEM 599. Graduate Seminar (1-5). May be repeated.

COM 598. Special Topics (1-5).

COM 599. Seminar (1-5). May be repeated.

COMMUNICATION

Graduate Faculty
Chair: Corwin P. King
Bouillon 232

Professors
Philip M. Backlund, Speech Communication
Corwin P. King, Speech Communication
Public Relations

Associate Professor
Michael Ogden, Speech Communication

General Departmental Information
The Communication Department does not offer any graduate degrees.

Graduate Courses in Communication
COM 598. Special Topics (1-5).
COM 599. Seminar (1-5). May be repeated.

COMPUTER SCIENCE

Graduate Faculty
Chair: James Schwing
Hebeler 219

Professors
Boris Kovalerchuk, Artificial Intelligence, Simulation and Optimization, Computer Architecture

Associate Professor
Edward Gellenbeck, User Interface Design, Web Development, Software Engineering

General Departmental Information
The Computer Science Department does not offer any graduate degrees.

Graduate Courses in Computer Science
CS 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.

ECONOMICS

Co-Chairs: Robert Carbaugh and Koushik Ghosh

Professors
Donald J. Cocheba, Resource Economics and Regional Development
Richard S. Mack, Resource Economics and Regional Development

Associate Professor
Koushik Ghosh, Macroeconomics, Public Finance and Econometrics

General Departmental Information
The Economics Department does not offer any graduate degrees, but cooperates in offering Economics and Resource Management graduate courses.

Graduate Courses in Economics
ECON 552. Managerial Economics (5). Application of microeconomic theories to managerial decisions.

EDUCATION

General Information
The Master of Education 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 the program advisors. For advice regarding specializations, contact the appropriate 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 department 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 M.Ed. 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 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 Associate Vice President of Graduate Studies and Research.

**Master of Education**

**Master Teacher**

The Master Teacher is conceived as 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 diversified to allow students to select an area of emphasis within the three concentrations of elementary, middle school, or secondary teaching.

**Program.** The student will complete at least 45 credits as outlined in an approved Course of Study filed with the Office of Graduate Studies and Research. The development of a Course of Study most appropriate to the professional goals and purposes of each individual student is encouraged.

**Required Courses**

*Educational Foundations and Research Courses ................................. 9
EDBL, EDCS, EDEL, or EDF 700, Thesiss (or option) .............................. 6
Area of emphasis and related study (see guidelines following). . . . . . . . . 30
*See Required Foundations and Research Courses under General Information.

**Program Total 45**

**Elementary Teaching**

This concentration is designed for teachers in the elementary grades.

Students in consultation with an advisor will design a Course of Study appropriate to their professional goals, comprising the professional required Educational Foundation and Research courses, thesis or option, and 30 credits. Normally at least 15 credits (variable 12-18) from one of the following areas of emphasis:

1. Teaching strategies, curriculum, and materials (e.g., EDA 564, EDCS 424, 513, 539, 542, 545, 565, EDRD 421, 521, 526, 528, 592, 1, EDEL 531, 551, 562, EDSE 521, 522, TH 420, MATH 552, 560, SCED 422, EDEL 420);
2. Media (e.g., EDCS, 516, 550, 578)
3. Bilingual Ed. (e.g., EDF 507, EDBL 512, 518, 556 plus language arts option courses or special education option courses);
4. Contemporary trends (e.g., EDAD 583, EDCS 432, 571, EDF 401, 506, EDSE 512).

**Middle School Teaching**

This concentration is designed for teachers in middle and junior high schools comprising ages 11-14 (grades 5-8).

Normally 15 credits (variable 12-18) of related studies will be selected from an academic field or fields in which the student wishes to become more proficient. An exception may be made if the student has had appropriate previous advanced study (e.g., fifth year or other post-baccalaureate work). If related studies are not taken, then work in the areas of emphasis will be expanded accordingly.

Normally 15 credits (variable 12-18) of coursework selected from at least one of the following areas of emphasis:

1. Teaching strategies, curriculum, and materials (e.g., EDAD 563, EDCS 513, 539, 542, 545, 582, EDRD 526, 528, 592, 1, SOC 520);
2. Evaluation and counseling (e.g., EDA 560, 566, EDCS 487, 488, 505, 543, 544, EDF 504, PSY 552, 559, 569, 573);
3. Media (e.g., EDCS 516, 550, 578);
4. Contemporary trends (e.g., EDAD 583, 588, EDF 401, 506, EDSE 512).

**Secondary School Teaching**

This concentration is designed for teachers in high schools comprising ages 14-18 (grades 9-12). One of the student’s graduate committee members must be from the academic field.

Normally 15 credits (variable 12-18) of related studies will be selected from an academic field in which the student wishes to become more proficient. An exception may be made if the student has had appropriate previous advanced study (e.g., fifth year or other post-baccalaureate work). If related studies are not taken, then work in the areas of emphasis will be expanded accordingly.

1. Teaching strategies, curriculum, and materials (e.g., EDAD 564, EDCS 424, 513, 539, 545);
2. Evaluation and counseling (e.g., EDA 560, 566, EDCS 487, 489, 543, 544, EDF 504, 505, PSY 552, 559, 569, 573);
3. Media (e.g., EDCS 516, 550, 578);
4. Contemporary trends (e.g., EDAD 583, 588, EDF 401, 506, 567, EDSE 512, 571, EDSE 512).
Library Media–All Levels, Supporting Endorsement

This is a program to qualify students to become Library Media Specialists for K-12 schools in Washington State.

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDCS 450</td>
<td>Media Development</td>
<td>3</td>
</tr>
<tr>
<td>EDCS 516</td>
<td>Advanced Media Utilization</td>
<td>3</td>
</tr>
<tr>
<td>EDCS 578</td>
<td>Administration of Media/ Technology Programs</td>
<td>3</td>
</tr>
<tr>
<td>EDCS 596</td>
<td>Individual Study (practicum)</td>
<td>3</td>
</tr>
<tr>
<td>EDCS 526</td>
<td>Instructional Methods for Library Media Specialists</td>
<td>3</td>
</tr>
<tr>
<td>EDCS 536</td>
<td>Selecting Literature for Children and Young Adults</td>
<td>3</td>
</tr>
<tr>
<td>EDCS 548</td>
<td>Collection Development for Library Media Specialists</td>
<td>3</td>
</tr>
<tr>
<td>EDCS 558</td>
<td>Cataloging and Classification for Library Media Specialists</td>
<td>3</td>
</tr>
<tr>
<td>EDCS 568</td>
<td>Information Storage and Retrieval</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total** 27

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**TEACHER EDUCATION PROGRAMS**

**Faculty**

Chair: David Shorr, Ph.D.
Black 101

**Professors**

Minerva L. Caples, Ed.D., Elementary/Bilingual Education
James DePaepe, Ph.D., Special Education
Susan Donahoe, Ph.D., Reading/Language Arts
Dan Fennerty, Ed.D., Special Education
Gail Goss, Ed.D., Reading/Elementary Education
Nancy Jurenka, Ed.D., Elementary Education/Reading
David Majsterek, Ed.D., Special Education/Early Childhood Education
Jack McPherson, Ph.D., Administration
James G. Pappas, Ed.D., Administration
Debra Prigge, Ed.D., Special Education
David Shorr, Ph.D., Early Childhood Education
Alberta Thyfault, Ph.D., Special Education

**Associate Professors**

Carol Butterfield, Ph.D., Elementary Education/Reading/Bilingual Education/TESL
Christina Curran, Ph.D., Special Education
Cory Gann, Ph.D., Early Childhood Education
Connie Lambert, Ph.D., Special Education
Andrea Sledge, Ph.D., Reading

**Assistant Professors**

Tina Georgeson, Ed.D., Elementary Education/Early Childhood Education
Craig Hughes, Ph.D., Bilingual Education/TESL
Keith Salyer, Ph.D., Elementary Education
Gary Shelly, Ph.D., Administration
Leland Chapman, Ph.D., Administration

**Master of Education Administration**

**School Administration**

**Program:** This program prepares teachers for the initial principal's certificate. Two options are available: General school administration option and general school administration with a bilingual education specialization option. A student shall complete at least 54 credits in an approved Course of Study to be developed in consultation with the graduate advisor. Refer to the section on general Master’s degree regulations for general requirements.

The Master of Education School Administration program provides options for the various school levels, but does not necessarily qualify the student for the Initial Principal’s Certificate, which requires that an applicant complete an application and be accepted to the Administrator Certification Program and complete the 16 credit internship as described under EDAD 692 and 693.

Prerequisite: One year of successful teaching experience in a K-12 classroom setting is required for admission to the Master of Education in School Administration.

**General School Administration Option**

The General School Administration program prepares individuals who can provide appropriate leadership and direction to the school professional staff and to the community by (1) developing a unified system for managing human resources; (2) developing long-range plans, policies and goals; and (3) executing the policies developed by the district.

Prerequisite: One year of successful teaching experience in a K-12 classroom setting is required for admission to the General School Administration Option.

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 507</td>
<td>Studies and Problems in Intercultural Education</td>
<td>3</td>
</tr>
<tr>
<td>EDCS 561</td>
<td>School Supervision</td>
<td>3</td>
</tr>
<tr>
<td>EDCS 580</td>
<td>Educational Administration.</td>
<td>5</td>
</tr>
<tr>
<td>EDCS 581</td>
<td>Public School Finance: Introduction OR</td>
<td>5</td>
</tr>
<tr>
<td>EDCS 587</td>
<td>Educational Grants Management and Budget</td>
<td>3</td>
</tr>
<tr>
<td>EDCS 583</td>
<td>School and Community</td>
<td>3</td>
</tr>
<tr>
<td>EDCS 586</td>
<td>The Principalship</td>
<td>5</td>
</tr>
<tr>
<td>EDCS 594</td>
<td>School Law</td>
<td>3</td>
</tr>
<tr>
<td>EDCS 700</td>
<td>Thesis or option</td>
<td>6</td>
</tr>
</tbody>
</table>

*Select one from the following:* 5

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**Program Total** 54

*Students will not be allowed to register for EDAD courses until they have been fully admitted into either the Masters’s Degree Program or the Administrator Certificate Program

*Required only for candidates who lack (3) hours of coursework in both special education and multicultural education in their last 90 hours of baccalaureate or post-baccalaureate studies.

**General School Administration with a Bilingual Education Specialization**

This program prepares school principals to serve in schools with large numbers of limited English proficient students. Completion of the specialization requires appropriate field activities and a graduate level core of bilingual education coursework.

**Prerequisites:** The student must have an endorsement in Bilingual Education, English as a Second Language or designated world (foreign) language.

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 503</td>
<td>School Supervision</td>
<td>3</td>
</tr>
<tr>
<td>EDF 506</td>
<td>Legal Rights of the Limited</td>
<td>3</td>
</tr>
<tr>
<td>EDF 507</td>
<td>Studies and Problems in Intercultural Education</td>
<td>3</td>
</tr>
<tr>
<td>EDCS 561</td>
<td>School Supervision</td>
<td>3</td>
</tr>
<tr>
<td>EDCS 580</td>
<td>Educational Administration.</td>
<td>5</td>
</tr>
<tr>
<td>EDCS 581</td>
<td>Public School Finance: Introduction OR</td>
<td>5</td>
</tr>
<tr>
<td>EDCS 587</td>
<td>Educational Grants Management and Budget</td>
<td>3</td>
</tr>
<tr>
<td>EDCS 583</td>
<td>School and Community</td>
<td>3</td>
</tr>
<tr>
<td>EDCS 586</td>
<td>The Principalship</td>
<td>5</td>
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<tr>
<td>EDCS 594</td>
<td>School Law</td>
<td>3</td>
</tr>
<tr>
<td>EDCS 700</td>
<td>Thesis or option</td>
<td>6</td>
</tr>
</tbody>
</table>

*Select one from the following:* 6

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**Program Total** 55

**Administrative Certificates in Education**

**The Initial Principal’s Certificate**

This certification program is available to individuals who already possess a Master’s degree or who are currently working on a M.Ed. in school administration or supervision and curriculum. Three years of successful teaching experience in a K-12 educational setting within the most recent five years is required before certification can be awarded.
Candidates must, in addition to a Master's degree in either Special Education, or a related field, complete the following courses:

**Required Courses: Credits**
- EDAD 561, School Supervision.................... 3
- EDAD 562, Elementary/Middle School Curriculum(5) (if elementary) OR ............ 5
- EDAD 564, High School/Middle School Curriculum (if secondary) ................ 5
- EDAD 580, Educational Administration........... 5
- EDAD 587, Ed. Grants Management & Budget ................... 3
- EDSE 512, Educational Rights of Individuals with Disabilities ................... 3
- EDSE 585, Administration & Supervision of Program for Students with Disabilities 3
- EDSE 682 and 683, Internship in Special Education School Admin................... 16

**Program Total 33**

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

**Master of Education**

**Reading Specialist**

The following college-level courses should be taken prior to enrollment in the specialization courses and may not be counted as part of the required credits in the reading specialist program:
- Basic Reading Course
- Basic Language Arts Course
- Basic Children's Literature Course

**Program.**

Prerequisite. A minimum of one year of teaching experience prior to completion of the program is required. 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.

**Required Courses: Credits**
- EDSE 585, Administration & Supervision of Education School Admin................... 3
- EDSE 597, Graduate Research in Special Education................................... 6
- EDEL 531, Teaching Elementary School Language Arts, Advanced (3)
- EDRD 532, Organization and Administration of Reading Programs (3)
- EDAD 561, School Supervision (3)
- EDRD 599, Seminar (1-5)
- EDBL 440, Reading English as a Second Language (3)

**Program Total 45**

*If this course is completed prior to admission to the graduate program, see an advisor for an appropriate course substitution.

**Master of Education**

**Special Education**

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.

**Prerequisites:** Students must have an institutional endorsement in Special Education or a minimum of one year teaching experience in a special education classroom as a certified teacher. Students without an institutional endorsement will be required to take appropriate background courses. One year of successful teaching prior to taking the final 15 credits of coursework is also required. Students must submit documented evidence of teaching experience to their program advisor.

**Program.** Students will complete at least 45 credits of approved graduate level coursework. The Course of Study will be developed in consultation with their major advisor from special education and filed with the Office of Graduate Studies and Research.

**Required Courses: Credits**
- Education Foundation and Research Courses............................... 9
- EDSE 700, Thesis (or option)......................... 6
- EDEL 501, Orientation, Foundation, and Issues ..................... 2
- EDSE 503, High Prevalence Categories of Exceptionality................... 3
- EDSE 512, Educational Rights of Individuals with Disabilities ........... 3
- EDSE 521, Functional Assessment............................ 3
- EDSE 522, Collaborative Consultation.............................. 3
- EDSE 523, Curriculum for Students with Special Needs ................... 3
- EDSE 585, Administration and Supervision of Programs for Students with Disabilities 3
- EDEL 684, Internship in Professional Affiliated Disciplines................. 4
- Area of Concentration (by Advisement).......................... 4
- EDSE 597, Graduate Research in Special Education................. 4
- EDSE 583, Seminar: Graduate Research Issues in Special Education......... 2

**Program Total 45**
Master of Education Supervision and Curriculum

Program. A student shall complete at least 54 credits as outlined in an approved Course of Study filed with the Office of Graduate Studies and Research. The development of a Course of Study most appropriate to the professional goals and purposes of each individual student is encouraged.

Prerequisite: One year of successful teaching experience in a K-12 classroom setting is required for admission to the Master of Education Supervision and Curriculum.

**Required Courses**

**Credits**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational Foundations and Research</td>
<td></td>
</tr>
<tr>
<td>EDAD 561, School Supervision</td>
<td>3</td>
</tr>
<tr>
<td>EDAD 562, Elementary Middle School Curriculum</td>
<td>5</td>
</tr>
<tr>
<td>EDAD 564, High School/Middle School Curriculum</td>
<td></td>
</tr>
<tr>
<td>EDAD 580, Educational Administration</td>
<td>5</td>
</tr>
<tr>
<td>EDAD 581, Public School Finance: Introduction</td>
<td></td>
</tr>
<tr>
<td>OR EDAD 587, Educational Management and Budget</td>
<td></td>
</tr>
<tr>
<td>EDAD 583, School and Community</td>
<td>3</td>
</tr>
<tr>
<td>EDAD 594, School Law</td>
<td>3</td>
</tr>
<tr>
<td>EDAD 700, Thesis (or Option)</td>
<td>6</td>
</tr>
<tr>
<td>*EDF 507, Studies and Problems in Intercultural Education</td>
<td>3</td>
</tr>
</tbody>
</table>

*Select one of the following:* 3

EDSE 512, Educational Rights of Individuals with Disabilities
EDSE 585, Administration and Supervision of Programs for Students with Disabilities
**Advisor approved graduate or upper division elective courses in subject or specialization area:** 6-12

Program Total 54

*Required only for candidates who lack three (3) hours of coursework in both special education and multicultural education in their last 90 hours of baccalaureate or post-baccalaureate studies.

**One quarter (4 credits) of EDAD 694, Internship in Improvement of Instruction and Curriculum Development, may be taken in the M.Ed. program as part of the elective requirement.

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 could be applied to the completion of endorsement requirements at Central Washington University.

**Required Courses**

**Credits**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>EDBL 514, Introduction to Linguistic Diversity in Education</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 530, Sheltering in Mainstream I: Methods.</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 531, Sheltering in Mainstream II: Assessment and Resources.</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 440, Reading English as a second Language.</td>
<td>3</td>
</tr>
</tbody>
</table>

Total 12

Center for Teaching and Learning Courses

ECTL 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.

ECTL 601, Professional Certificate: Pre-Assessment Seminar (4). Candidates attending the seminar will submit a portfolio of evidence to the Professional Growth Team. If the portfolio meets all requirements, the team will recommend the candidate for Professional Certification.

ECTL 609, Professional Certificate: Culminating Seminar (2). For those students enrolled in the M.Ed. in administration or the administrator certification program. Formerly ED 581, students may not receive credit for both.

Professional Development Courses

EDCE 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. Formerly ED/EDAD/EDBL/EDEC/EDEL/EDRD/EDSE 500.

Graduate Courses in Education Administration

EDAD 580, Teacher Evaluation (3). Evaluation of classroom instruction including observations, pre-conferences, interview skills, and feedback techniques. Formerly ED 560, students may not receive credit for both.

EDAD 581, School Supervision (3). Prerequisites or corequisites, EDAD 580. For those students enrolled in either the M.Ed. program in administration or the administrator certification program. Development of observation skills, assessment skills, and the ability to work with teachers for the improvement of instruction. Formerly ED 581, students may not receive credit for both.

EDAD 562, Elementary/Middle School Curriculum (5). Prerequisite or corequisite EDAD 580. For those students enrolled in either the M.Ed. in administration or the administrator certification program. Formerly ED 562, students may not receive credit for both.

EDAD 563, Middle School Curriculum (4). Formerly ED 563, students may not receive credit for both.

EDAD 564, High School/Middle School Curriculum (5). Prerequisite or corequisite EDAD 580, or permission of instructor. For those students enrolled in either the M.Ed. in administration or the administrator certification program. Formerly ED 564, students may not receive credit for both.

EDAD 566, Evaluation of the School Program (3). Formerly ED 566, students may not receive credit for both.

EDAD 580, Educational Administration (5).

For those students enrolled in either the M.Ed. in administration or the administrator certification program. Formerly ED 580, students may not receive credit for both.

EDAD 581, Public School Finance: Introduction (3). Prerequisite or corequisite, EDAD 580. For those students enrolled in either the M.Ed. in administration or the administrator certification program. Formerly ED 581, students may not receive credit for both.

EDAD 583, School and Community (3). For classroom teachers, principals, administrators and lay leaders. An examination of the relationship between the school and community. Formerly ED 583 students may not receive credit for both.

EDAD 584, Personnel Relations in School (3). For school administrators. Formerly ED 584, students may not receive credit for both.

EDAD 585, Public School Finance-Advanced (3). This course provides an in-depth study of revenue sources, tax theory, and distribution formulas. A comparative review of methods of apportioning funds is included to provide a basis for analyzing the Washington problem. Program planning and budgeting systems are emphasized. The current press for accountability, cost effectiveness, and systems for assessing quality of performance are considered.
EDAD 586. The Principalship (5). The administration of elementary, middle, junior high and high schools. Covers common elements and those peculiar to specific levels. Formerly ED 586, students may not receive credit for both.

EDAD 587. Educational Grants Management and Budget (3). Formerly ED 587, students may not receive credit for both.

EDAD 588. Politics of Education (3). Formerly ED 588, students may not receive credit for both.

EDAD 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. Grade will be S or U. Formerly ED 590, students may not receive credit for both.

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. Formerly ED 591.

EDAD 593. Systems Approach to School Administration (3). General overview, definitions, and understanding of administrative and budgeting systems. Formerly ED 593, students may not receive credit for both.

EDAD 594. School Law (3). Prerequisite or corequisite, EDAD 580. For those students enrolled in either the M.Ed. in administration or the administrator certification program. An introduction to U.S. constitutional, legislative and regulatory 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. Formerly ED 594, students may not receive credit for both.

EDAD 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED SPED 596.

EDAD 597. Graduate Research (1-10). Individual student research under the direction of a faculty member. May be repeated for credit. Maximum of 10 credits may be included on Course of Study for the Master’s degree. Formerly ED 597.

EDAD 598. Special Topics (1-6). Formerly ED/SPED 598.

EDAD 599. Seminar (1-5). May be repeated. Formerly ED/SPED 599.

EDAD 692. Pre Autumn Internship in School Administration (4). Prerequisites, minimum of three years of successful teaching experience, EDAD 580 and 586. Emphasis on the principal’s responsibilities prior to and during the opening of the school year. Permission to register only after approval of Department Chair. Combines with EDAD 693 for 16 total credits in administrative internship. Grade will be S or U. Formerly ED 692, students may not receive credit for both.

EDAD 693. Internship in School Administration (4-16). Prerequisites, minimum of three years of successful teaching experience, EDAD 580 and 586. (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 Department Chair. Grade will be S or U. Credits earned in an administrative internship may not exceed a total of 16. Not more than four credits are applicable to credit requirements for the Master’s degree. Combines with EDAD 692 for 16 total credits in administrative internship. Formerly ED 693, students may not receive credit for both.

EDAD 694. Internship in Improvement of Instruction and Curriculum Development (4-16). (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 to register only after approval of the Department Chair. Grade will be S or U. Credits earned in an administrative internship may not exceed a total of 16. Not more than four credits are applicable to credit requirements for the Master’s degree. Formerly ED 694, students may not receive credit for both.

EDAD 700. Master’s Thesis, Project Study and/or Examination (1-8). Prerequisite, EDBL 510 and permission of Chair of student’s graduate faculty supervisory committee. Designed to credit and record supervised study for the Master’s thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits. Formerly ED 700.

Graduate Courses in Bilingual Education

EDBL 512. Legal Rights of the Limited English Proficient (2). Historical developments and legal foundations in bilingual education with particular attention to Washington state law and federal legislation. Formerly EDBL 512, students may not receive credit for both.

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. Studies and Problems in Educational Linguistics (2). Prerequisites, EDBL 433 or English as a Second Language (ESL) methods course, or equivalent, and classroom experience. Identification and study of problems related to educational linguistics and second language instruction. Formerly ED 518, students may not receive credit for both.

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 556. Bilingual Education Curriculum (3). Prerequisite, EDBL 435 or permission of instructor. Planning, implementation and evaluation of the bilingual education program curriculum for the elementary school. Formerly ED 556, students may not receive credit for both.

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. Prior approval is required. Grade will be S or U. Formerly ED 590, students may not receive credit for both.

EDBL 591. Workshop (1-6). No more than two workshops for a combined maximum of 8 credits can be applied towards a Master’s program. Formerly ED 591.

EDBL 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED SPED 596.

EDBL 597. Graduate Research (1-10). Individual student research under the direction of a faculty member. May be repeated for credit. Maximum of 10 credits may be included on Course of Study for the Master’s degree. Formerly ED 597.

EDBL 598. Special Topics (1-6). Formerly ED/SPED 598.

EDBL 599. Seminar (1-5). May be repeated. Formerly ED/SPED 599.

EDBL 692. Pre Autumn Internship in School Administration (4). Prerequisites, minimum of three years of successful teaching experience, EDAD 580 and 586. Emphasis on the principal’s responsibilities prior to and during the opening of the school year. Permission to register only after approval of Department Chair. Combines with EDAD 693 for 16 total credits in administrative internship. Grade will be S or U. Formerly ED 692, students may not receive credit for both.

EDBL 693. Internship in School Administration (4-16). Prerequisites, minimum of three years of successful teaching experience, EDAD 580 and 586. (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 Department Chair. Grade will be S or U. Credits earned in an administrative internship may not exceed a total of 16. Not more than four credits are applicable to credit requirements for the Master’s degree. Combines with EDAD 692 for 16 total credits in administrative internship. Formerly ED 693, students may not receive credit for both.

EDBL 694. Internship in Improvement of Instruction and Curriculum Development (4-16). (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 to register only after approval of the Department Chair. Grade will be S or U. Credits earned in an administrative internship may not exceed a total of 16. Not more than four credits are applicable to credit requirements for the Master’s degree. Formerly ED 694, students may not receive credit for both.

EDBL 700. Master’s Thesis, Project Study and/or Examination (1-8). Prerequisite, EDBL 510 and permission of Chair of student’s graduate faculty supervisory committee. Designed to credit and record supervised study for the Master’s thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits. Formerly ED 700.

Graduate Courses in Bilingual Education

EDBL 512. Legal Rights of the Limited English Proficient (2). Historical developments and legal foundations in bilingual education with particular attention to Washington state law and federal legislation. Formerly EDBL 512, students may not receive credit for both.

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. Studies and Problems in Educational Linguistics (2). Prerequisites, EDBL 433 or English as a Second Language (ESL) methods course, or equivalent, and classroom experience. Identification and study of problems related to educational linguistics and second language instruction. Formerly ED 518, students may not receive credit for both.

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 556. Bilingual Education Curriculum (3). Prerequisite, EDBL 435 or permission of instructor. Planning, implementation and evaluation of the bilingual education program curriculum for the elementary school. Formerly ED 556, students may not receive credit for both.

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. Prior approval is required. Grade will be S or U. Formerly ED 590, students may not receive credit for both.

EDBL 591. Workshop (1-6). No more than two workshops for a combined maximum of 8 credits can be applied towards a Master’s program. Formerly ED 591.

EDBL 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED SPED 596.

EDBL 597. Graduate Research (1-10). Individual student research under the direction of a faculty member. May be repeated for credit. Maximum of 10 credits may be included on Course of Study for the Master’s degree. Formerly ED 597.

EDBL 598. Special Topics (1-6). Formerly ED/SPED 598.

EDBL 599. Seminar (1-5). May be repeated. Formerly ED/SPED 599.
study for the Master’s thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits. Formerly ED 700.

Graduate Courses in Education-Curriculum and Supervision

EDCS 509. Service Learning (3). Student will use program of study content knowledge to improve a community situation. Same as FCGS 509. May be repeated for credit.

EDCS 513. Creative Teaching (3). Prerequisite, teaching experience. 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. Formerly ED 513, students may not receive credit for both.

EDCS 516. Advanced Media Utilization (3). Prerequisite, EDCS 316. Explores recent research, experimental programs and new developments in the utilization of media. Formerly ED 516, students may not receive credit for both.

EDCS 526. Instructional Methods for Library Media Specialists (3). Survey and learn instructional filled by Library Media Specialists and the instructional methods they employ: storytelling, creative drama, authoring software, effective presentation, literature appreciation, reading motivation, puppetry, library skills, independent learning skills, and information literacy skills.

EDCS 536. Selecting Literature for Children and Young Adults (3). Prospective school Library Media Specialists will learn how to develop children and young adult literature collections and programs.

EDCS 539. Educational Games (3). Prerequisite, graduate standing or one year of teaching experience. 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. Formerly ED 539, students may not receive credit for both.

EDCS 542. Individualizing Instruction (3). Prerequisite, EDSE 311 or equivalent. Basic techniques appropriate to elementary and secondary schools.

EDCS 543. Teacher Counseling (3). Theory and techniques interviewing, advising and counseling; school personnel services, community and state special services.

EDCS 545. Classroom Teaching Problems (3). Prerequisite, teaching experience. Open to experienced teachers. Formerly ED 545, students may not receive credit for both.

EDCS 546. Advanced Laboratory Experience (2-5). Consult Chair of Department of Curriculum and Supervision for permission to register for this course. Formerly ED 546, students may not receive credit for both.

EDCS 548. Collection Development for Library Media Specialists (3). Explore the methods used and the issues and solutions involved in developing a collection in a school Library Media Center.

EDCS 550. Instructional Media Production II (5). Advanced instruction in the production of instructional materials including still and motion pictures. Emphasizes design as well as production skills. Formerly ED 550, students may not receive credit for both.

EDCS 558. Cataloging and Classification for Library Media Specialists (3). Cataloging and classification of library media materials with an emphasis on MARC records.

EDCS 559. Program of Curriculum Improvement (3). Formerly EDCS 569, students may not receive credit for both.

EDCS 559. Information Storage and Retrieval (3). Reference collection development and utilization with print, electronic, and on-line resources.

EDCS 578. Administration of Media/Technology Programs (3). Develop skills and expertise needed to manage media/technology programs at school building, school district, college and university, and private sector levels.

EDCS 582. The Middle School (3). Middle School background, goals, programs, organizational patterns, staffing, facilities, and trends. Formerly ED 582, students may not receive credit for both.

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. Prior approval is required. Grade will be S or U. Formerly ED 590, students may not receive credit for both.

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. Formerly ED 591.

EDCS 595. The Community Junior College (3). Formerly ED 595, students may not receive credit for both.

EDCS 595.2. Community College Instructional Problems (3). An analysis of the type of teaching applicable to the community college with an open door policy with special reference to lectures, assignments, uses of textbooks, programmed materials, newer media, student reports, quiz techniques, panel discussions, and preparations of instructional objectives, syllabi, and bibliography. Formerly ED 595.2, students may not receive credit for both.

EDCS 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED, SPED 596.

EDCS 597. Graduate Research (1-10). Individual student research under the direction of a faculty member. May be repeated for credit. Maximum of 10 credits may be included on Course of Study for the Master’s degree. Formerly ED 597.

EDCS 598. Special Topics (1-6). Formerly ED/SPED 598.

EDCS 599. Seminar (1-5). May be repeated. Formerly ED/SPED 599.

EDCS 693A. Internship in Teaching-Guided Observation (4). Prerequisites, completion of a baccalaureate degree and admission to teacher education Introductory field experience.

EDCS 693B. Internship in Teaching-Guided Participation (3). Prerequisites, completion of a baccalaureate degree and admission to teacher education. This internship represents the second phase in the developmental growth for practicing teacher interns.

EDCS 693C. Internship in Teaching-Guided Practice (3). Prerequisites, completion of a baccalaureate degree and admission to teacher education. This internship course represents the third phase of the guided practice clinical field experience.

EDCS 693D. Internship in Teaching-Practice (3). Prerequisites, completion of a baccalaureate degree and admission to teacher education. This internship course represents the final experience component for certification.

EDCS 700. Master’s Thesis, Project Study and/or Examination (1-6). Prerequisite, EDF 510 and permission of Chair of student’s graduate faculty supervisory committee. Designed to credit and record supervised study for the Master’s thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits. Formerly ED 700.

Graduate Courses in Elementary Education

EDEL 531. Teaching Elementary School Language Arts, Advanced (3). Prerequisite,
EDRD 420 or equivalent or permission of instructor. The current aspects of the elementary school language arts curriculum except reading. Formerly ED 531, students may not receive credit for both.

EDEL 551. Teaching Elementary School Mathematics, Advanced (3). Prerequisite, EDEL 323 or equivalent or permission of instructor. Research findings in mathematics education, number abilities needed by children, designing number experiences; desirable teaching procedures, selection and use of materials. Course content and experiences are designed for the experienced teacher or graduate level student. Formerly ED 551, students may not receive credit for both.

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. Prior approval is required. Grade will be S or U. Formerly ED 590, students may not receive credit for both.

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. Formerly ED 591.

EDEL 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED/SPED 596.

EDEL 597. Graduate Research (1-10). Individual student research under the direction of a faculty member. May be repeated for credit. Maximum of 10 credits may be included on Course of Study for the Master’s degree. Formerly ED 597.

EDEL 598. Special Topics (1-6). Formerly ED/SPED 598.

EDEL 599. Seminar (1-5). May be repeated. Formerly ED/SPED 599.

EDEL 700. Master’s Thesis, Project Study and/or Examination (1-6). Prerequisite, EDF 510 and permission of Chair of student’s graduate faculty supervisory committee. Designed to credit and record supervised study for the Master’s thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits. Formerly ED 700.

Graduate Courses in Education Foundations

EDF 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. Formerly ED 500.

EDF 501. Educational Foundations (3). Provides a background in selected areas of sociological, historical, and philosophical foundations of education. Also considers current and emerging problems of education. Formerly ED 501, students may not receive credit for both.

EDF 502. History of Education (3). Background: historical development in America. Formerly ED 502, students may not receive credit for both.

EDF 503. Philosophy of Education (3). Various philosophic positions which lead to an understanding of the methods of educational enterprise. Same as PHIL 503, formerly ED 503, students may not receive credit for both. Student may not receive credit for both EDF/PHIL 503.

EDF 504. Advanced Educational Statistics (4). Use and interpretation of complex statistical principles. Formerly ED 504, 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. Formerly ED 505, students may not receive credit for both.

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. Formerly ED 506, students may not receive credit for both.

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. Formerly ED 507, students may not receive credit for both.

EDF 508. Comparative Education (3). A comparative look at national systems of education. Formerly ED 508, students may not receive credit for both.

EDF 509. Seminar (1-5). May be repeated. Formerly EDF 509.

EDF 700. Master’s Thesis, Project Study and/or Examination (1-6). Prerequisite, EDF 510 and permission of Chair of student’s graduate faculty supervisory committee. Designed to credit and record supervised study for the Master’s thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits. Formerly ED 700.

Graduate Courses in Reading Education

EDRD 520. Advanced Teaching of Reading: Methods and Materials (3). Prerequisites, a reading methods course at the undergraduate level and teaching experience. An in-depth research-based analysis of reading methods and materials used in elementary and secondary settings. Formerly ED 520, students may not receive credit for both.

EDRD 521. Reading in the Elementary School (4). Prerequisites, a basic undergraduate reading course and classroom experience, or permission. Contemporary influences in
reading instruction in American elementary schools. Formerly ED 521, students may not receive credit for both.

EDRD 522. Middle School Reading (3). Prerequisites, a basic undergraduate reading course and classroom experience. An advanced course on the teaching of reading designed for middle school teachers. Formerly ED 522, students may not receive credit for both.

EDRD 523. Survey of Research in Reading (3). Prerequisites, reading methods course and teaching experience. Identification and in-depth study of problems related to reading instruction. Recent reading research is pursued with emphasis on classroom application. Formerly ED 523, students may not receive credit for both.

EDRD 525. Psychology of Reading (3). Prerequisites, a reading methods course, a basic psychology of learning course, or permission of instructor. Principles of learning and readiness, perception, psychological and physiological aspects of reading. Same as PSY 525, formerly ED 525, students may not receive credit for both.

EDRD 526. Diagnosis of Reading Difficulties (3). Prerequisites, an undergraduate reading methods course and teaching experience. Designed to inform practicing teachers about materials and procedures for diagnosing and interpreting reading problems of students. Formerly ED 526, students may not receive credit for both.

EDRD 527. Whole Language Approach to Teaching Reading (3). Oral language development as a bridge to reading. Specific techniques and materials that use the whole language of the child will be developed into a reading program. Formerly ED 527, students may not receive credit for both.

EDRD 528. Remediation of Reading Difficulties (3). Prerequisite, EDRD 526. Techniques and materials for remediating children’s reading difficulties. Should be taken concurrently with EDRD 592.1. Formerly ED 528, students may not receive credit for both.

EDRD 532. Organization and Administration of Reading Programs (3). Prerequisites, EDRD 528 and 592.1 and permission of the instructor. Designed for administrators, coordinators, consultants, and reading specialists. Program operations, new techniques and materials, grant writing, supervisory skills, and inservice presentations. Student may not receive credit for both ED 524 and EDRD 532. Formerly ED 532, students may not receive credit for both.

EDRD 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. Grade will be S or U. Formerly ED 590, students may not receive credit for both.

EDRD 591. Workshop (1-6). No more than two workshops for a combined maximum of 8 credits can be applied toward a Master’s program. Formerly ED 591.

EDRD 592. Practicum: Diagnosis and Remediation of Reading Difficulties (3). Prerequisite, EDRD 526. Supervised experience working with one or more students. Includes the preparation of a case study. Grade will be S or U. Should be taken concurrently with EDRD 528. Formerly ED 592.1, students may not receive credit for both.

EDRD 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED 596.

EDRD 597. Graduate Research (1-10). Individual student research under the direction of a faculty member. May be repeated for credit. Maximum of 10 credits may be included on Course of Study for the Master’s degree. Formerly ED 597.

EDRD 598. Special Topics (1-6). Formerly ED 598.

EDRD 599. Seminar (1-5). May be repeated. Formerly ED 599.

EDRD 700. Master’s Thesis, Project Study and/or Examination (1-6). Prerequisite, EDF 510 and permission of Chair of student’s graduate faculty supervisory committee. Designed to credit and record supervised study for the Master’s thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits. Formerly ED 700.

Graduate Courses in Special Education

EDSE 501. Orientation, Foundations, and Issues (2). Prerequisite, teaching experience or permission of instructor. 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. Formerly SPED 501, students may not receive credit for both.

EDSE 503. High Prevalence Categories of Exceptionality (3). Prerequisite, EDSE 501 or permission of instructor. Etiology, social issues and management strategies for students with mental retardation, learning disabilities, and behavioral disorders. Formerly SPED 503, students may not receive credit for both.


EDSE 583. Seminar: Research Special Education (2). Prerequisites, EDF 510 and EDSE 597. Advanced study of an approved special education issue or topic, under the guidance of a professor, including original research. Exchanging results by informal lectures, reports, and discussions. May be repeated for credit under different topics. Formerly SPED 583 A-F.

EDSE 585. Administration and Supervision of Programs for Individuals with Disabilities (3). Prerequisites, EDSE 501, teaching experience or permission of instructor. 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. Formerly SPED 585, students may not receive credit for both.

EDSE 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. Prior approval is required. Grade will be S or U. Formerly ED 590, students may not receive credit for both.

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. Formerly ED 591.

EDSE 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED, SPED 596.

EDSE 597. Graduate Research in Special Education (4). Prerequisites, EDSE 501, EDSE 503, EDF 510 and permission of instructor. Specialty area research and research report preparation. Formerly SPED 597, students may not receive credit for both.

EDSE 598. Special Topics (1-6). Formerly ED, SPED 598.

EDSE 599. Seminar (1-5). May be repeated. Formerly ED, SPED 599.

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. Grade will be S or U. Credits earned in an administrative internship will not exceed a total of 16. Not more than 4 credits are applicable to the credit requirements for the Master’s degree. Formerly SPED 682, students may not receive credit for both.

EDSE 683. Pre-Autumn Internship In Special Education School Administration (4). Prerequisite, permission of the director of the administrator preparation board. Emphasis is on the responsibilities of special education prior to and during the opening of the school year. Combines with EDSE 682 for 16 total credits in administrative internship. Grade will be S or U. Formerly SPED 683, students may not receive credit for both.

EDSE 684. Internship In Professional Affiliated Disciplines (2-4). Prerequisites, EDSE 501, EDSE 503, EDF 510, permission of graduate committee Chair, and experience with individuals with disabilities. Formerly SPED 684, students may not receive credit for both.

EDSE 700. Master’s Thesis, Project Study and/or Examination (1-6). Prerequisite, EDF 510 and permission of Chair of student’s graduate faculty supervisory committee. Designed to credit and record supervised study for the Master’s thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits. Formerly ED 700.

Graduate Courses on Reserve

The following courses are on reserve and may be offered subject to program needs:
- EDCS 544. Parent-Teacher Conferences; EDCS 571. Continuous Progress School; EDCS 577. Inservice Programs.

ENGLISH

Graduate Faculty
Chair: Patsy Callaghan
Language and Literature 423

Professors
Lianha K. Armstrong, American Literature, Popular Culture Film
Patricia Callaghan, Rhetoric, World Literature, English Education
Bobby Cummings, Rhetoric, Teacher Education, Writing on Computers
Philip B. Garrison, Non-fiction Prose, Poetry
Toni Culjak, World and Multicultural Literature
Steven Olson, American Literature
Joseph Powell, Creative Writing, Modern Poetry

Associate Professors
Toni Culjak, World and Multicultural Literature
Paulus Pimomo, British Literature, Post-Colonial Studies
Charles Xiangzhong Li, Linguistics, TESOL, Linguistic Approaches to Literature

Assistant Professors
Laila Abdalla, English Medieval and Renaissance Literature
George Drake, 18th Century and Romantic British Literature, English Novel

Emeritus Professors
Robert M. Benton, American Literature

General Departmental Information

The Department offers two options for the Master of Arts degree: Master of Arts, English (Literature) and Master of Arts, English (TESL/TEFL—Teaching English as a Second Language / Teaching English as a Foreign Language).

Master of Arts English (Literature)

The M.A. in literature offers a rigorous, individualized program of advanced study of literature written in English. Students choose from an array of courses and select a thesis or non-thesis option. Although allowed flexibility in their course of study, students are also required to pass an examination over a select number of literary works widely recognized in the field of English. Students enter our program for a variety of reasons: to further their understanding of literature, to strengthen their teaching qualifications, or to prepare for doctoral work.

General Requirements of the Program. Students who decide to write a thesis take a minimum of 45 credits; those who choose the non-thesis option, a minimum of 47 credits. Students in both options must take ENG 512: Introduction to English Graduate Study and ENG 518: Advanced Literary and Critical Theory. Regardless of which option is chosen, at least 30 credits must be at the graduate level in English, and at least 20 credits will be in literature in the English department. Up to 10 credits may be taken in approved courses offered outside of the English department. All degree candidates must pass a written comprehensive examination over works on a standard reading list.

Thesis or Non-Thesis Option. A student who chooses the thesis option takes 6 thesis credits (ENG 700), writes a thesis which fulfills the requirements of the student’s thesis committee, and takes an oral examination over the thesis. A student selecting the non-thesis option takes 8 graduate credits in English instead of the 6 thesis credits and has a research paper accepted by a committee of graduate faculty.

Final Examination. All students must pass a written Master’s comprehensive examination over the department’s approved reading list.
**English as a Foreign Language - TESL/TEFL**

The TESL/TEFL program fosters the awareness, understanding, and skills necessary for effective teaching of English as a second or foreign language. It prepares educators to work with adult language learners both in the United States and abroad by study in the three general areas of language, pedagogy, and culture. Graduates from this program would be qualified to work in American colleges and universities, private ESL institutes, and programs and schools abroad that provide instruction in English. Those students who are already certified to teach in Washington public schools may also receive endorsement in ESL, with some additional work.

**General Requirements of the Program**

In addition to the requirements listed below, requisites to completion of the program include the following: an introductory linguistics course, a course in methods and materials of teaching a foreign or second language, and high-intermediate proficiency in a foreign language. Students can be admitted to the program without this background, but they will be required to gain this background while enrolled in the program.

The program consists of 55 credits, as outlined below, and offers both a thesis and a non-thesis option.

<table>
<thead>
<tr>
<th>Thesis or Non-Thesis Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>The thesis option requires candidates to write a thesis and sit for a one-hour oral examination over the thesis. If the non-thesis option is selected, the student's educational achievement will be formally assessed at the end of the program by means of a portfolio; the materials included in the portfolio are derived from the student's engagement with works on a reading list. The contents of the portfolio and the reading list will be developed in consultation with the student's committee. The reading list will be equivalent to about 24 book-length studies. In addition, students choosing the non-thesis option who have English literature majors will take six credits in language or linguistics courses while candidates with majors other than English literature will take six credits in literature courses.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Required Courses</strong></th>
<th><strong>Credits</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Language</strong></td>
<td></td>
</tr>
<tr>
<td>ENG 512, Introduction to English</td>
<td>5</td>
</tr>
<tr>
<td>Graduate Study</td>
<td></td>
</tr>
<tr>
<td><strong>Language</strong></td>
<td></td>
</tr>
<tr>
<td>ENG 586, Advanced Grammar</td>
<td>4</td>
</tr>
<tr>
<td>ENG 516, Advanced Studies in English</td>
<td>4</td>
</tr>
<tr>
<td>Language: Phonetics and Phonology</td>
<td>4</td>
</tr>
<tr>
<td>ENG 599, Seminar: Language in Society</td>
<td>4</td>
</tr>
<tr>
<td>ENG 599, Seminar: TESL/TEFL</td>
<td>4</td>
</tr>
<tr>
<td><strong>Pedagogy</strong></td>
<td></td>
</tr>
<tr>
<td>ENG 516, Advanced Studies in English Language: Second</td>
<td>4</td>
</tr>
<tr>
<td>Language Acquisition</td>
<td>4</td>
</tr>
<tr>
<td>ENG 531, TESL/TEFL Methods and Materials</td>
<td>4</td>
</tr>
<tr>
<td>ENG 592, Practicum</td>
<td>4</td>
</tr>
<tr>
<td>Department-approved Electives</td>
<td>4</td>
</tr>
<tr>
<td>Electives in language, thought, or culture by advisement</td>
<td></td>
</tr>
<tr>
<td>One course in literature required.</td>
<td></td>
</tr>
<tr>
<td>Thesis or Non-Thesis Option</td>
<td></td>
</tr>
<tr>
<td>ENG 700, Thesis or Approved courses</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>55</td>
</tr>
</tbody>
</table>

**Graduate Courses in English**

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.

ENG 510. Practical Application in Composition (2). Prerequisite, permission of instructor. The study and practice of the teaching of composition. Associated classroom experience as a teaching assistant or other experience as approved by the Department. May be repeated. Does not count toward the M.A. degree. Grade will be S or U.

ENG 512. Introduction to English Graduate Study (5). The philosophy of literature; research methods. Required of all Master of Arts candidates.

ENG 513. Teaching English Composition (4). Focuses on research, theories, and practical issues relevant to the teaching of composition.

ENG 514. Advanced Studies in English Literature (4). Prerequisite ENG 512. Course content identified by title in the university class schedule. May be repeated for credit under different titles.

ENG 515. Advanced Studies in American Literature (4). Prerequisite ENG 512. Course content identified by title in the university class schedule. May be repeated for credit under different titles.

ENG 516. Advanced Studies in English Language (4). Prerequisite, ENG 512. Course content identified by title in the university class schedule. May be repeated for credit under different titles.

ENG 517. Advanced Studies in Major World Writers (4). Prerequisite, ENG 512. Specific course content identified by title in the University Class Schedule. May be repeated for credit under different titles.


ENG 531. TESL/TEFL Methods and Materials (4). Research in language, language acquisition and second language learning; selected approaches to teaching listening, speaking, reading and writing of English to non-native-speaking adult learners.

ENG 581. CWWP I: Writing Pedagogy (8). Prerequisite, permission of CWWP Director. 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 ENG 582.

ENG 582. CWWP II: Applied Writing Research (4). Prerequisite, permission of CWWP Director. CWWP follow-up course in which teachers design, implement, document and present the results of classroom-based research projects. Participants must register concurrently for ENG 581.

ENG 586. Advanced Grammar (4). English syntax, especially modern grammar and their role in teaching basic reading and writing.

ENG 591. Workshop (1-6). No more than two workshops for a combined maximum of 8 credits can be applied towards a Master's degree.

ENG 592. Practicum (1-5). Supervised field experience in literacy education or teaching English as a second language/foreign language. May be repeated with consent of instructor. Grade will be S or U.

ENG 595. Graduate Research (2-10). Prerequisite, ENG 512 and permission of Department Chair. For students doing advanced research, writing, and study. Students using faculty time and departmental resources for thesis work must be registered for ENG 595 or 700. May be repeated for credit. May not be included in the Course of Study for the Master's degree. Grade will be S or U.

ENG 596. Individual Study (1-6). Prerequisite, permission of instructor.

ENG 598. Special Topics (1-6).

ENG 599. Seminar (1-5). Course content identified by title in the university class schedule. May be repeated for credit under different titles.

ENG 700. Master's Thesis, Project Study and/or Examination (1-6). Prerequisite, permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits.
CONSUMER SCIENCES

Graduate Faculty
Chair: Jan Bowers
Michaelson 100

Professors
Ethan A. Bergman, Food Science and Nutrition
Jan Bowers, Family and Consumer Sciences Education
David L. Gee, Food Science and Nutrition
Carolyn Schadtler, Apparel Design

Associate Professors
Jan Amby, Family Studies
Marla Wyatt, Family and Consumer Sciences Education

Assistant Professors
Nancy Buergel, Food Science and Nutrition
Shawn Christiansen, Family Studies
Vicki Shaffer-White, Fashion Merchandising

General Departmental Information
The graduate program in family and consumer sciences is flexible and facilitates advanced study in apparel design, family studies, nutrition, and family and consumer sciences education. Application to graduate study is made through the Office of Admissions. Interested students are urged to contact the Department Chair for information and guidance.

Master of Science
Family and Consumer Sciences
Program Coordinator:
Jan Bowers
Michaelson 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 nutrition, welfare, or other 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 three specializations. Each student will complete a set of core courses plus coursework specific for each specialization. The three specializations include family studies, nutrition, and family and consumer sciences 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 six thesis credits, based upon an independent research project, will be included in the student's program.

Admission Requirements. Students applying to the Nutrition Specialization are required to submit Graduate Record Examination (GRE) results with their application.

Core Courses. The following core of courses will be included in all programs:

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department-Approved Statistics courses</td>
<td>3-4</td>
</tr>
<tr>
<td>FCSG 530, Research Design</td>
<td>4</td>
</tr>
<tr>
<td>FCSG 700, Master's Thesis</td>
<td>6</td>
</tr>
<tr>
<td>FCSG 599, Seminar</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Core Credits: 14-15

Nutrition Specialization

Required Courses: 45

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCSN 540, Nutrition Education</td>
<td>3</td>
</tr>
<tr>
<td>FCSN 541, Applications in Dietetics</td>
<td>5</td>
</tr>
<tr>
<td>FCSG 542, Nutritional Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>FCSG 543, Advanced Nutrition and Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>FCSN 545, Advanced Studies in Developmental Nutrition</td>
<td>4</td>
</tr>
<tr>
<td>FCSG 547, Nutrition Update</td>
<td>3</td>
</tr>
<tr>
<td>Approved Electives</td>
<td>9-10</td>
</tr>
<tr>
<td>Core Credits</td>
<td>14-15</td>
</tr>
</tbody>
</table>

Total: 45

Family and Consumer Sciences Education Specialization

Required Courses: 45

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCSN 552, Family Science</td>
<td>3</td>
</tr>
<tr>
<td>FCSG 562, Parent Education</td>
<td>4</td>
</tr>
<tr>
<td>Approved Electives</td>
<td>12-13</td>
</tr>
<tr>
<td>Core Credits</td>
<td>14-15</td>
</tr>
</tbody>
</table>

Total: 45

Graduate Courses in Family and Consumer Sciences Education

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCSE 512</td>
<td>Transition to Family and Consumer Sciences Education (4). Familiarize students with FCS discipline and provide resources and information for achieving Family and Consumer Sciences teacher licensure. Grade will be S or U.</td>
</tr>
<tr>
<td>FCSE 520</td>
<td>Supervision in Vocational Family and Consumer Sciences Education (3). Explore recent trends and issues in home economics education; identify and analyze professional competencies for beginning home and family life teachers and explore strategies for helping student teachers to develop needed competencies.</td>
</tr>
<tr>
<td>FCSE 521</td>
<td>Curriculum Development in Family and Consumer Sciences Education (3). Employ steps of curriculum development in total home economics programs or in a specific area and allows teachers and administrators to plan for program needs in the school or school district.</td>
</tr>
<tr>
<td>FCSE 522</td>
<td>Survey of Research in Family and Consumer Sciences Education (3). Current issues and historical perspective in vocational home and family life education to serve as a basis for curriculum change, program development and professional growth.</td>
</tr>
</tbody>
</table>

Graduate Courses in Family Studies

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCSE 531</td>
<td>Conceptual Frameworks in Family Analysis (3). Sociological, psychological and developmental theories relating to study of family patterns and practices.</td>
</tr>
<tr>
<td>FCSE 532</td>
<td>Family Interaction (4). Prerequisite, 8 credits of upper division coursework in family studies or the behavioral sciences. Analysis of relevant literature associated with establishing and maintaining interpersonal and family relationships.</td>
</tr>
<tr>
<td>FCSE 536</td>
<td>Parent Education (4). Principles, methods and materials for parent education with special attention given to program development, implementation, and evaluation.</td>
</tr>
</tbody>
</table>

Graduate Courses in Food and Nutrition

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCSN 540</td>
<td>Nutrition Education (3). Principles and procedures in nutrition education for public and private agencies. Program and curriculum planning and evaluation. Emphasis on current research in the field.</td>
</tr>
<tr>
<td>FCSN 541</td>
<td>Applications in Dietetics (5). Concepts in clinical and community</td>
</tr>
</tbody>
</table>
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.


FCSN 547. Nutrition Update (3). Prerequisite, FCSN 245 or permission. Recent advances in nutrition research. Advanced study of selected nutrition problems. With permission, may repeat every other year.

Graduate Courses in Clothing and Textiles

FCSA 550. Advanced Apparel Techniques (3). Permission of instructor. Six hours laboratory per week.


FCSA 554. Men’s Tailoring (3). Prerequisite, permission of instructor. Custom tailoring techniques specifically designed for the construction of a man’s suit. This will include trousers, vest and lined suit coat. Six hours laboratory per week.

Graduate Courses in Housing and Interiors

FCSH 565. History of Housing and Furnishing (3).

FCSH 566. Advanced Home Furnishing (5). Two hours lecture and six hours laboratory per week.

Graduate Courses in Family and Consumer Sciences

FCSG 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.

FCSG 509. Service Learning (3). Student will use program of study content knowledge to improve a community situation. Same as EDCS 509. May be repeated for credit.

FCSG 595. Graduate Research (1-10). Prerequisite, permission of major advisor. 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. Grade will be S or U.

FCSG 596. Individual Study (1-6). May be repeated.

FCSG 598. Special Topics (1-6).

FCSG 599. Seminar (1-5). May be repeated.

FCSG 700. Master’s Thesis, Project Study and/or Examination (1-6). Prerequisite, permission of Chair of student’s graduate faculty supervisory committee. Designed to credit and record supervised study for the Master’s thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be S or U. May be repeated for up to 6 credits.

FOREIGN LANGUAGES

Graduate Faculty
Chair: Morris L. Uebelacker
Lind 119

Professors
John A. Alwin, Human Geography, Environment and Behavior, Pacific Rim Resources, Western North America
James L. Huckabay, Energy Resources, Biogeography, Air Photo Interpretation
Robert Hickey, GIS, Remote Sensing, Environmental Impacts, Coastal Zones, Australia
Robert Kuhlken, Cultural Ecology, Environmental Planning, Oceania, Historical Geography
Karl Lillquist, Physical Geography, Soils, Air Photo Interpretation, Yakima River Basin

Associate Professors
Anthony Gabriel, Biogeography, Environmental Studies, Coastal Zone Management, Pacific Northwest
Morris L. Uebelacker, GIS, Economic, Urban, Automated Cartography
Nancy Hultquist, GIS, Economic, Urban, Automated Cartography
Morriss L. Uebelacker, Human Geography, Field Methods, Planning, Air Photo Interpretation, Yakima River Basin

Assistant Professor
Christopher Kent, Physical Geography, Water Resources, Watershed Planning, North America
Christopher Kent, Physical Geography, Water Resources, Watershed Planning, North America

General Departmental Information
Geography and Land Studies jointly coordinates the Master of Science degree program in Resource Management with the Department of Anthropology. For further information see Resource Management.

Graduate Courses in Geography
GEOG 596. Individual Study (1-6). Prerequisite, permission of Department Chair.

GEOG 599. Seminar (1-5). May be repeated.
GEOLOGICAL SCIENCES

Graduate Faculty
Chair: Charles M. Rubin
Hebeler 109

Professors
Robert Bentley, Structural Geology, Igneous and Metamorphic Petrology, Regional Geography of the Pacific Northwest
James R. Hinthorne, Mineralogy, Geochemistry, Spatial Information Systems
M. Meghan Miller, Crustal deformation, Active Tectonics, GPS, Geodesy, Remote Sensing
Charles M. Rubin, Paleoseismology, Earthquake Hazards, Active Tectonics

Wendy A. Bohrson, Volcanology, Isotope Geochemistry, Spatial Information Systems

Adjunct Assistant Professors, (Research)
Dan J. Johnson, Geodesy, Gravity, Volcanology

Associate Professors
Lisa L. Ely, Geomorphology, Paleohydrology, Global Climate Change, Quaternary Geology
Jeffrey Lee, Active and Regional Tectonics, Structural Geology

Timothy I. Melbourne, Seismology, Continental Dynamics

Adjunct Assistant Professors, (Research)

Dan J. Johnson, Geodesy, Gravity, Volcanology

Adjunct Lecturers
Steven Lundblad, Sedimentary Geology, Isotope Geochemistry
Jack Powell, Field Geology, Mineral Resources, Pacific Northwest Geology
Nick Zentner, Scientific Instructional Technician Supervisor

Master of Science

Geology

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 M.S. level. It is also designed 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 M.S. 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 Geology 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.

Program Deadlines and Supporting Materials: Applications and all supporting materials are due by Feb. 15 for fall quarter entrance. Applications will include a statement of your background and purpose, official transcripts, general Graduate Record Examination scores, and three letters of recommendation.

Program Requirements: The Department offers an M.S. degree that requires a minimum of 45 credits of graduate study and a thesis. Thirty-nine credits are earned from coursework and research (25 credits at the 500 level or above) and six credits are allowed for thesis work. All graduate students must register for GEOL 501, Current Topics in Geology, during the fall quarter of their first year, GEOL 502, Regional Geology of the Pacific Northwest, and GEOL 503, Introductory Graduate Research Methods. 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, geochemistry, geology, geomorphology and Quaternary geology, paleohydrology, environmental geochemistry, and volcanology. The Department is a participating member of the Southern California Earthquake Center, a NSF-sponsored Science and Technology Center. The department houses the data analysis center for PANGA, a network of continuously operating GPS receivers distributed throughout the Pacific Northwest in the United States and Canada. In addition, the Department has strong ties with the Jet Propulsion Laboratory (JPL), administered by Caltech for 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 WinSAR consortium and 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 central in Washington provide ideal opportunities to study a wide variety of geologic problems.

Equipment and Computer Facilities: The Department of Geological Sciences has excellent research computer facilities. We currently support numerous Sun Microsystems workstations and servers. ERMapper, PCIworks, MatLab, Islandworks, and Arcinfo/Arcview are available for image processing and analyzing remotely sensed images and DEMs. In addition, the department has access to the Spatial Information Systems Laboratory.

The Geodesy Laboratory houses the data processing center for the Pacific Northwest Geodetic Array (PANGA). The laboratory analyzes continuous data from the permanent GPS array in the Pacific Northwest. The Geodesy Laboratory has a pool of Trimble SSI and 4700 receivers for geodetic experiments.

The department is equipped with digital surveying equipment (Leica Total Stations and Trimble kinematic GPS) and recently acquired ground penetrating radar equipment. The department has Nikon and Leica petrographic microscopes, research polarizing reflected and transmitting light microscopes, with CCD-video camera displays.

The department is currently expanding its geochemistry facilities. With National Science Foundation support, the department has sample preparation facilities, a small geochemistry laboratory and an automated Philips PW 3400 Powder X-Ray Diffractometer. Recently, a stable isotope laboratory, equipped with a general purpose extraction line for analysis of waters, carbonates, and soils was added. A modern geochemistry laboratory, equipped for isotonic, major-element, and trace-element analysis of earth materials, will be on line in Fall, 2001.

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

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

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 501, Current Topics in Geology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 502, Regional Field Geology of the Pacific Northwest</td>
<td>2</td>
</tr>
</tbody>
</table>

Military law and natural resources and hazard planning. The Department encourages an integrative, multi-disciplinary approach.
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 503. Introductory Graduate Research Methods (3). Prerequisites, GEOL 501 and 502, or permission of instructor. Discussion and exploration of research methods in geology, including library and Internet resources, thesis project selection and design, and literature review. 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 be either S or U.

GEOL 515. Earthquake Geology and Neotectonics (5). Prerequisites, GEOL 145 or 150 and 145.1, and permission of instructor. Geomorphology, stratigraphy, and structural geology applied to the study of active faults and folds in a variety of tectonic settings. Relation of seismicity and geologic measurements to geologic structure and active tectonic processes. Three hours of lecture per week and four hours of laboratory per week. Same as GEOL 415. Students may not receive credit for both.

GEOL 520. Tectonic Evolution of Western North America (4). Prerequisite, GEOL 145 or 150 and 145.1, 200, and 360. Overview of the tectonic, structural, and stratigraphic evolution of western North America Cordillera, from the Proterozoic to the present day. Four lectures per week. Same as GEOL 420. Students may not receive credit for both.

GEOL 525. Environmental Geochemistry (5). Prerequisite, CHEM 181, 181.1, 182 and 182.1, or permission of instructor. 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 3-hour lab per week. Same as GEOL 425. Students may not receive credit for both.

GEOL 530. Remote Sensing (5). Prerequisites, GEOG 410 or GEOL 210, or permission of instructor. 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. Same as GEOL 430 and GEOG 430. Students may not receive credit for more than one course.

GEOL 532. Field Geodetic Techniques (3). Training in field geodetic techniques, including scientific application of two or more precision measuring instruments: geodetic GPS, differential GPS, and electronic distance meter. Three hours a week and field project, or one-week field course.

GEOL 540. Sedimentary Basins (4). Prerequisite, GEOL 370. Study of clastic and carbonate depositional systems and sedimentary environments in the context of regional tectonic and oceanographic setting. Four hours lecture per week.

GEOL 545. Hydrogeology (5). Prerequisites, GEOL 145 or GEOL 150 and GEOL 145.1 and MATH 163.2, or permission of instructor. 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. Same as GEOL 445. Students may not receive credit for both.

GEOL 553. Seismology (5). Prerequisites MATH 172.2 or permission of instructor. Elasticity theory, the wave equation, ray theory, diffraction, waveform modeling, travel time inversion. Data analysis. Three hours lecture per week plus 4 hours of scientific computing lab. Offered alternate years. Same as GEOL 453. Students may not receive credit for both.

GEOL 554. Introduction to Scientific Computing (5). Introduction to numerical computation and simulation of problems relevant to Earth science. Three hours of lecture and three hours of lab. No prior Unix experience necessary. Same as GEOL 454. Student may not receive credit for both.

GEOL 555. Applied Geophysics (4). Prerequisites, MATH 172.1 and PHYS 181. Background, principles, and techniques of geophysics as applied to geologic, environmental, and exploration problems. Three hours lecture plus two hours of laboratory or field work per week. Required field trips. Same as GEOL 455. Students may not receive credit for both.

GEOL 561. Advanced Structural Geology (4). Prerequisites, GEOL 360 and permission of instructor. Concepts and theory of rock deformation with application to structural geology, rock mechanics and tectonophysics. Four lectures per week.

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.

GEOL 570. Fluvial Geomorphology (4). Prerequisite, GEOL 386. Advanced course covering hydrologic and geomorphic processes in rivers. Exploration of current geomorphic research, practical experience in field techniques and geomorphic models.

GEOL 574. Quaternary Geology (4). Prerequisite, GEOL 386 or permission of instructor. Study of geological processes affecting Earth's most recent history. Course emphasizes global Quaternary environmental change, glacial epochs, paleoclimatic methods, and dating techniques. Same as GEOL 474. Student may not receive credit for both.

GEOL 575. Petrography and Petrogenesis (5). Prerequisites, consent of instructor. Petrogenetic, hand specimen and thin section study of igneous, metamorphic or sedimentary rocks. Three hours lecture and four hours laboratory or field work per week plus required field trips. Same as GEOL 475. Students may not receive credit for both. Offered in alternate years.

GEOL 576. Sedimentary Petrography (5). Prerequisite, GEOL 200 and 346. Analysis and interpretation of depositional systems. Study of classic and carbonate rocks in hand sample, thin section, and in the field. Three hours lecture and 4 hours laboratory per week. Same as GEOL 476. Students may not receive credit for both. Offered in alternate years.

GEOL 578. Volcanology (5). Prerequisites, consent of instructor. Study of volcanoes and associated deposits, styles of eruption, physical and chemical controls on eruption mechanisms and volcanic hazards and hazard mitigation. Three hours lecture and four hours laboratory per week plus required field trips. Same as GEOL 478. Students may not receive credit for both. Offered in alternate years.

GEOL 581. Advanced Mineralogy (4). Prerequisites, GEOL 346 and CHEM 182, or permission of instructor. Crystal chemistry of rock-forming minerals. Theory and practice of determinative techniques such as the polarizing microscope, X-ray diffraction, and electron microprobe. Three hours lecture and three hours lab per week. Offered in alternative years. Same as GEOL 481. Student may not receive credit for both. Offered in alternate years.

GEOL 583. Isotopes as Tracers of Geological Processes (5). Prerequisites CHEM 182, CHEM 182.1 and MATH 163.2, or permission of instructor. Covers principles of isotope geochemistry and applications to studies of
geological processes such as hydrologic cycling, volcanic petrogenesis and climate change. Three hours lecture per week plus required laboratory work and field trips. Same as GEOL 463. Students may not receive credit for both. Offered in alternate years.

GEOL 592. Application in GIS (2-4). Prerequisite, permission of instructor, Basic principles and practice with Geographic Information Systems technology including data formats, database acquisition and import, map layer analysis and map output as applied to geologic topics. Individual project required. One hour lecture and two hours lab per week for each two credits. May be repeated up to a total of six credits with different project focus.

GEOL 595. Graduate Research (1-10). Prerequisite, permission of instructor. May be repeated for credit.

GEOL 596. Individual Study (1-5). Prerequisite, permission of instructor. May be repeated for credit.

GEOL 598. Special Topics (1-6). Prerequisite, permission of instructor. May be repeated for credit under separate title.

GEOL 599. Seminar (1-5). Prerequisite, permission of instructor. May be repeated for credit under a separate title.

GEOL 700. Master’s Thesis, Project Study and/or Examination (1-6). Prerequisite, permission of Chair of student’s graduate faculty supervisory committee. Designed to credit and record supervised study for the Master’s thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits.

HEALTH, HUMAN PERFORMANCE AND RECREATION

Graduate Faculty
Chair: Robert W. McGowan

Professors
Leo D’Acquisto, Exercise Science
Stephen Jeffries, Physical Education-Pedagogy
Andrew Jenkins, Health Education-Community Health, Health Promotion
Robert McGowan, Exercise Science, Sport Psychology
Vincent M. Nethery, Exercise Science

Associate Professors
Melody Madlem, Health Education-Community Health Promotion
Barbara Masberg, Leisure Services-Tourism Management
Kirk E. Mathias, Physical Education, Pedagogy

Assistant Professors
Tim Burnham, Exercise Science
Harry Papadopoulos, Exercise Science

Lecturers
Mark Perez
Theres Young

Master of Science in Health, Human Performance and Recreation

Program Director:
Leo D’Acquisto

PE 104

The Master of Science degree in Physical Education, Health, and Leisure Services prepares the student to function as a professional in the areas of human performance, health and physical education teaching. In addition to general university requirements for admission to the graduate school, full admission to the graduate program in physical education, health and leisure services requires an undergraduate degree with a major in physical education, health, or leisure services; or a major closely related to the student’s desired area of emphasis. The Miller Analogies Test is required for selected areas. Conditional or probational admission may be granted to applicants not meeting all of the admissions criteria.

Program. The following areas of emphasis are offered within the Department:

Exercise Science

Physical Education Teaching
The student shall complete at least forty-five (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 graduate program director and department. It will include a required core of fifteen (15) credits, and appropriate courses in the student’s area of emphasis. Additionally, no undergraduate courses will count toward the completion of the Master of Science degree nor be included on the official course of study. Further, no more than two workshop courses with a maximum of 6 credits, three individual studies with a maximum of 9 credits, or one internship with a maximum of 6 credits can be included on the Course of Study.

Required Courses Credits
HHPR 556. Statistical Applications in P.E. Health Education and Leisure Services . . 4
HHPR 700. Thesis, Project, Examination ........................................ 6
Electives in area of concentration (Physical Education, Health, or Leisure Services) ........................................ 14-24
Electives in related disciplines. ........................................ 5-18

Total 45

*HHPR 556, Statistical Applications in P.E., Health and Leisure, (or approved equivalent) required prior to enrolling in HHPR 557.

Graduate Courses in Physical Education

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.

PE 521. Advanced Football Coaching (3).

PE 523. Advanced Basketball Coaching (3).

PE 524. Advanced Track Coaching (3).

PE 525. Advanced Baseball Coaching (3).

PE 530. Gender in Sport (3). Role of women and men in sport and analysis of gender discrimination with models for change.

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 542. Greek and Roman Concepts of Sport (3). Major influences and characteristics of sport and systematic exercise in early civilizations including the Myceanaeans, Minoans, Greeks, Etruscans and Romans.

PE 548. Advanced Athletic Training (3). Prerequisite, PE 348 or permission of instructor. Identification and analysis of problems. Designed for practicing coaches.


PE 553. Laboratory Techniques in Stress Physiology (5). Prerequisites, PE 551 and PE 552 or permission of instructor. Techniques for the assessment of human physiological characteristics during rest and exercise stress. Two hours lecture and two hours lab per week.

PE 554. Perceived Exertion and Exercise (3). Prerequisites, PE 551, PE 552 or permission of instructor. Physiological and psychological bases for perceived exertion during exercise. Influence of training on perceived exertion.

PE 555. Environmental Stress and Human Performance (3). Prerequisites, PE 551, PE 552 or permission of instructor. Influence of
a variety of environmental factors on human performance. Adaptations to environmental stressors through constant exposure.

**PE 556. Ergogenic Aids and Human Performance (3).** Prerequisites, PE 551, PE 552 or permission of instructor. Use of physical, physiological, pharmacological and psychological aids to improve human performance.

**PE 559. Applied Kinesiology (3).** Prerequisite, PE 356. Advanced kinesiological analysis of exercise programs, sport skills and skills for daily living.

**PE 560. Systematic Analysis of Teaching Physical Education (3).**

**PE 561. Curricular Trends in Physical Education (3).** Prerequisite, PE 300 or previous K-12 teaching experience. Investigation of current trends in Physical Education curriculum design.

**PE 562. Clinical Exercise Physiology (3).** Prerequisites: PE 551 or 552 or by permission of the instructor. This course introduces students to exercise principles and applications as they relate to individuals with chronic diseases and disabilities.

**PE 563. Clinical Exercise Testing and Prescription (4).** Prerequisites: PE 562. The purpose of this course is to introduce students to applications of clinical testing and prescription for high risk populations.

**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. Prior approval is required. Grade will be S or U.

**PE 591. Workshop (1-6).**

**PE 596. Individual Study (1-6).** Prerequisite, permission of instructor. May be repeated.

**PE 598. Special Topics (1-6).**

**PE 599. Seminar (1-5).** May be repeated for credit under different titles.

### Graduate Courses in Health, Human Performance and Recreation


**HHPR 551. Physical activity for Wellbeing: Role in the Physical Education Curriculum (3).** Identification of fitness components that relate to wellness. Rationale for incorporating the wellness concept as the basis for physical education. Formerly PEHL 551.

**HHPR 552. 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. Formerly PEHL 552.

**HHPR 556. Statistical Applications in P.E. Health and Leisure (4).** Application of statistics to research in physical education, health, and leisure. Analysis of data sets drawn from research in these disciplines. Formerly PEHL 556.

**HHPR 557. Research Methods (3).** Prerequisite, satisfactory completion of a basic statistics course. Introduction to the process of planning and understanding research. Formerly PEHL 557.

**HHPR 558. Research Design and Critique (3).** Prerequisite, HHPR 557. Selection and definition of a specific research problem, review of literature for proposed research, design techniques, and critical analysis of research proposals. Formerly PEHL 558.

**HHPR 570. Liability/Risk Management in Health, Physical Education, Recreation and Athletics (3).** Formerly PEHL 570.

**HHPR 571. Grant Writing in Health, Leisure and Sport Programs (3).** Overview of the grant writing process including sources, process, application, and administration. Formerly PEHL 571. Same as LES 582. May not receive credit for both.

**HHPR 575. Principles of Administration in Health, Leisure, and Sport Programs (3).** Formerly PEHL 575.

**HHPR 577. Physical Education Curriculum Design (3).** Design and creation of a physical education curriculum that meets state and national standards. Formerly PEHL 577.

**HHPR 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. Formerly PEHL 578.

**HHPR 579. Supervision of Student Teachers in Physical Education (3).** Introduction to the history of supervision, a bremenn of the process and opportunities to practice supervision conferencing. Formerly PEHL 579.

**HHPR 580. Physical 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. Formerly PEHL 580.

**HHPR 581. Technological Applications in HHPR (3).** Prerequisite, acceptance into HHPR graduate program or instructor permission. Introduction to technological applications in HHPR and strategies for delivery of CWU online M.S. degree program in HHPR. Formerly PEHL 581.

**HHPR 595. Graduate Research (1-6).** Prerequisite, permission of major advisor. 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. Formerly PEHL 595.

**HHPR 598. Special Topics (1-5).** Formerly PEHL 598.

**HHPR 599. Seminar (1-5).** May be repeated for credit. Formerly PEHL 599.

**HHPR 700. Master’s Thesis, Project Study and/or Examination (1-6).** Prerequisite, permission of Chair of student’s graduate faculty supervisory committee. Designed to credit and record supervised study for the Master’s thesis, non-thesis project, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits. Formerly PEHL 700.

### Graduate Courses in Health Education

**HED 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.

**HED 510. Substance Abuse and Teens: Education and Intervention (3).** Analysis of substance abuse among teenagers. Emphasis is placed on identification and intervention processes.

**HED 511. Principles of Administration, Ethics, and Professionalism in Addictionology (3).** Course will focus on organizational design, management and personnel policy of organizational cultures, also ethically sound attitudes and behaviors related to the profession will be discussed.

**HED 512. Advanced Prevention Program Development (3).** A study of prevention theories and practices for reducing the harmful effects of addictions.

**HED 513. History and Context of Addictive Disorders (3).** This course addresses the historical, social, cultural trends and epidemiology of addictive disorders among all populations.

**HED 514. Neural Chemical Basis of Addictive Behaviors (3).** This course addresses the phenomena of various addictive processes and their relationship with the central nervous system.

**HED 515. Survey of Addictions I (3).** The study of theoretical, empirical and clinical frameworks from various perspectives and disciplines focusing on substance abuse and eating disorders.

**HED 516. Survey of Addiction II (3).** The study of theoretical, empirical and clinical frameworks from various perspectives and disciplines focusing on chemically addicted, mentally impaired (CAMI) and mentally impaired chemical abuses (MICA).

**HED 517. Survey of Addiction III (3).** The study of theoretical, empirical and clinical frameworks from various perspectives and disciplines focusing on sexual addiction, gambling addiction and related obsessive-compulsive disorders.
HED 518. Public Policy in Addictions (3). The course focuses on how public and private entities influence legislative, economic, and societal responses to addictions from a systems perspective.

HED 519. Addictionology and the Family (3). A systematic perspective of family dynamics, as it relates to various forms of addictions, treatment, and recovery.

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. Prior approval is required. Grade will be S or U.

HED 591. Workshop (1-6).

HED 596. Individual Study (1-6). May be repeated.

LES 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.

LES 501. Planning and Implementation of Outdoor Education Programs (3). Designed for teachers and school officials. Outdoor education values, organizational skills, program conduct, leadership recruitment and training.

LES 509. Maintenance Management I (2). Planning and design; systems scheduling; general maintenance management techniques in parks, recreation and leisure services operations.

LES 510. Maintenance Management II (2). Prerequisite, LES 509. Advanced maintenance management procedures. Emphasis on public relations, staff assessment, computer applications, innovative maintenance techniques, contract management, risk management and effective personnel management skills.

LES 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. Prior approval is required. Grade will be S or U.

LES 591. Workshop (1-6).

LES 596. Individual Study (1-6). May be repeated.

LES 598. Special Topics (1-6). May be repeated for credit under different titles.

LES 599. Seminar (1-5). May be repeated for credit under different titles.

HISTORY
Graduate Faculty
Chair: Karen J. Blair
Coordinator: Daniel Herman
Language and Literature 100

Professors
Karen J. Blair, 20th Century U.S., Women’s History
Beverly A. Heckart, Germany, Social and Economic History

Associate Professor
Thomas Welloch, Contemporary U.S., Environmental, American West

Assistant Professors
James Cook, East Asia
Roxanne Easley, Russia, Eastern Europe
Daniel Herman, U.S. Pre 1877
Merle Kunz, Pacific Northwest

Admission Requirements
In addition to general regulations for admission to Master’s programs, students with insufficient preparation who desire admission to programs in history may be required to take additional work before being admitted to graduate programs. Students admitted are required to demonstrate an ability to discover and interpret historical evidence and to write cogently and lucidly.

Master of Arts
History (Thesis Option)
This option is intended primarily for those students intending to pursue additional graduate work.

Required Courses Credits
HIST 511, Historiography ....................... 5
HIST 512, History Graduate Reading Seminar AND
HIST 515.1, 515.2, History Graduate Research Seminar (15) OR
HIST 515.1, 515.2, 515.3, History Graduate Research Seminar (15) ......... 15
HIST 700, Thesis ............................... 6
Department-Approved Electives from 400 or 500 level courses ............. 19

Total 45

Thesis. A thesis is required. A thesis prospectus must be approved and filed with Graduate Studies and Research. The final thesis copy must be in a form according to graduate school requirements.

Language Requirement. Reading knowledge of a foreign language acceptable to the history graduate committee is required. The examination will be conducted within the History Department. A research tool necessary for the student’s area of specialization may be substituted for the language requirement with permission of the graduate committee. This requirement must be met before the student is admitted to candidacy.
Final Examination. Passing an oral examination in defense of the thesis, including the general field of the thesis.

Master of Arts
History (Teaching Options)

There are two options directed mainly toward those intending careers in secondary teaching or non-academic fields. These options are not ordinarily intended for the student planning to pursue a Ph.D.

Project Option

Required Courses Credits
HIST 511, Historiography .................. 5
HIST 515.1 and 515.2, History Graduate Research Seminar (10) OR
HIST 512, History Graduate Readings Seminar and HIST 515.1, History Graduate Research Seminar (10) .......................... 10
HIST 700, Project Study .......................... 6
Department-Approved Electives from 500 level courses in History ........................... 15
Department-Approved Electives from 400 or 500 level courses in History OR other approved fields. ............... 9

Total 45

The courses selected must be pertinent to the student's project.

Project Study. The completion of a satisfactory project either within the History Department or another approved field is required. The primary emphasis of the project shall be historical rather than pedagogical research. A project prospectus must be approved and filed with Graduate Studies and Research.

Final Examination. The student must pass an oral examination in defense of the project, including the general field of the project.

Examination Option

Required Courses Credits
HIST 511, Historiography ................. 5
HIST 515.1 and 515.2, History Graduate Research Seminar (10) AND
HIST 512, History Graduate Readings Seminar OR HIST 515.3, History Graduate Research Seminar (5) ........................ 15
HIST 700, Project Study ......................... 6
Department-Approved Electives from 500 level courses in History .......... 19

Total 45

Written and Oral Examination. Students electing to take the exam option will take an eight-hour written and two-hour oral exam in two fields approved by the department's graduate committee. This exam is normally taken in the last quarter of their coursework.

The examination fields are selected from the student’s course of study. The student will use the six credits of History 700 to prepare for the exam by working with faculty to prepare a reading list and discuss appropriate themes.

Portfolio. The student’s educational achievement will be formally assessed at the end of the program by means of a portfolio. The materials in the portfolio will be derived from the student’s written work in his courses and evaluated by the department’s graduate committee.

Graduate Courses in History

HIST 511. Historiography (5).
HIST 512. History Graduate Readings Seminar (5).
HIST 515.1, 515.2, 515.3. History Graduate Research Seminar (5).
HIST 525. Renaissance and Reformation (5). Same as HIST 425. Students may not receive credit for both.
HIST 528. Modern Latin America (5). Analyzes the history of Latin America in the past two centuries, from the Wars of Independence until the present day. Same as HIST 328. Students may not receive credit for both.
HIST 529. The Tropics and the Modern World (5). Analyzes the history of the modern world through the history of tropical commodities. Cross listed with HIST 329. Students may not receive credit for both.
HIST 530.1. Tudor-Stuart England (3-5). Same as HIST 430.1. Students may not receive credit for both.
HIST 531. Africa: The Crisis of Nation Building (5). An in-depth multi-disciplinary approach to the present political and socio-economic issues, problems and tensions in selected areas of Africa. Same as HIST 431. Students may not receive credit for both.
HIST 533. Selected Topics in African History (5). Specific matter will vary but emphasis will be on the social and cultural development of African states since pre-colonial times. Same as HIST 433. Students may not receive credit for both.
HIST 538. Conquests and Compromises: Indians and Europeans in North America since 1492 (5). Discussion and lecture course on interactions between American Indians and Europeans since the arrival of Columbus. Corresponds to HIST 338 but requires additional reading, research, and writing assignments. Credit given for only one course.
HIST 540. The American Revolution (5). Causes and consequences of the American Revolution, 1688-1789. Corresponds to HIST 340 and HIST 440; credit given for only one course.
HIST 543. The West in American History (3-5). Exploration, territorial acquisition, patterns of settlement, economic development, and the influence of the frontier on American institutions. Same as HIST 443. Students may not receive credit for both.
HIST 544. Sectionalism, Civil War and Reconstruction (3-5). Slavery, the Old South, sectionalism, the breakdown of the Union, and secession. A military, political, social history of North and South during the Civil War, and the aftermath of the war. Same as HIST 444. Students may not receive credit for both.
HIST 546. Women in American History (5). A survey of the role of women, their treatment and response, in American society from colonial times to the present. Corresponds to HIST 346 and 446, credit given for only one.
HIST 549. History of Women and the West (5). Women in the western United States, with emphasis on the nineteenth and twentieth centuries; myths and stereotypes; women’s work; community roles; class and racial/ethnic differences. Same as HIST 449. Students may not receive credit for both.
HIST 550. Exploring U.S. Cultural History (5). Thematic approach to nineteenth-century cultural transformations in U.S. Selected topics: mesmerism, utopias, true womanhood, women’s rights, slave spirituals, confidence men, gold rushes. Same as History 450. Students may not receive credit for both.
HIST 552. 20th Century U.S. 1919-1945 (3-5). Prosperity and depression; the New Deal and its implications; World War II, origins and conclusion. Same as HIST 452. Students may not receive credit for both.
HIST 553. 20th Century U.S. 1945 to the Present (3-5). Cold War, sedentary 50s, rebellious 60s, the Watergate era. Same as HIST 453. Students may not receive credit for both.
HIST 554. American Environmental History (5). Environmental values and practices of the diverse populations of America. Corresponds to HIST 354 and 454. Credit given for only one of three courses.
HIST 563.2. History of American Foreign Relations Since 1941 (3-5). From Pearl Harbor to the present. Same as HIST 463.2. 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. Same as HIST 485. Students may not receive credit for both.
HIST 570. Medieval European History (5). Survey of Western European history from late antiquity to the sixteenth century; political, economic, social and religious thought and institutions. Corresponds to HIST 370, credit given to only one.

HIST 571. German History, 1815-1918 (3-5). A political, diplomatic, socio-economic, and intellectual study of Germany from the end of the Napoleonic Era through World War I. Emphasis on German unification and the socio-economic background to World War I. Same as HIST 471. Students may not receive credit for both.

HIST 572. German History, 1918 to the Present (3-5). A political, socio-economic, and intellectual study of Germany with special attention to the causes, progress, and aftermath of the National Socialist State. Same as HIST 472. Students may not receive credit for both.

HIST 573. Russia to 1881 (3-5). The political, social, economic and cultural development of Russia from ancient times to the assassination of Alexander II. Same as HIST 473. Students may not receive credit for both.

HIST 574. Russia Since 1881 (3-5). The political, economic, social and cultural history of Russia and the Soviet Union since 1881. Same as HIST 474. Students may not receive credit for both.

HIST 579. Europe in the 20th Century (3-5). Events and movements which led to two wars; change in governmental structure in the cycles of war and peace. Same as HIST 479. Students may not receive credit for both.

HIST 580. Modern East Asia (5). A survey of the modern histories of China, Japan, and Korea from 1600 to the present. Imperialism, nationalism, and the rise of communism are covered. Corresponds to HIST 380, credit given for only one.

HIST 582. Revolutionary China (3). The causes, course, and effects of the 20th century Chinese Revolution 1911-present. Same as HIST 482. Students may not receive credit for both.

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. Same as HIST 483. Students may not receive credit for both.

HIST 584. Modern Japan (3-5). The recent historical development of Japan beginning with the collapse of the Tokugawa Shogunate and the resumption of foreign contacts in the mid-19th century. Emphasis is given to the modernization process with its concomitant political, social, economic, and intellectual changes. Same as HIST 484. Students may not receive credit for both.

HIST 587. The Russian Revolutionary Movement (3-5). Origins and development of Russian radicalism through the Bolshevik Revolution of 1917. Same as HIST 487. Students may not receive credit for both.

HIST 588. Mexico in the Modern Era (5). The modernization and nationalization of Mexico, with emphasis on the social history of Mexico’s frontiers. Same as HIST 488. Students may not receive credit for both.

HIST 589. Cuba and the Caribbean (5). Foreign intervention and the domestic social structure of Caribbean America. Same as HIST 489. 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. Prior approval required. May be repeated. Grade will be S or U. Same as HIST 490. Students may not receive credit for both.

HIST 591. Workshop (1-6). Same as HIST 491. Students may not receive credit for both.

HIST 595. Graduate Research (1-10). Prerequisite, permission of instructor. For students doing preliminary or ongoing thesis/project research. May be repeated for credit. May not be included in the Course of Study for the Master's degree. Grade will be S or U.

HIST 596. Individual Study (1-6). Prerequisite, permission of the instructor. For students who wish to do directed readings and study in secondary literature on specific topics that are not offered as existing courses. May be repeated for credit.

HIST 598. Special Topics (1-6).

HIST 599. Seminar (1-5). May be repeated.

HIST 700. Master’s Thesis, Project Study and/or Examination (1-6). Prerequisite, permission of Chair of student’s graduate faculty supervisory committee. Designed to credit and record supervised study for the Master’s thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits.

INDIVIDUAL STUDIES PROGRAM

Program Coordinator:
Wayne S. Quirk, Associate Vice President for Graduate Studies, Research and Continuing Education
Barge 305

Master of Arts
Master of Education
Master of Science

Purpose. The purpose of the Individual Studies (IS) Program is to afford qualified applicants the opportunity to create sound master’s degree programs of an interdisciplinary nature or focus on unique subject areas when the curricula of regular graduate degree programs do not meet the individuals’ career objectives and/or needs. The approval of such programs is dependent upon:

• the qualifications of the applicant;
• the institution’s ability to provide a sufficient number of relevant graduate level courses;
• a sufficient number of faculty qualified and willing to work with the student;
• adequate scholarly and/or creative resources.

CWU will offer IS programs only in fields where appropriate expertise and other resources exist as determined by the Associate Vice President of Graduate Studies and Research in consultation with the Graduate Council.

Each IS 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. Approved IS programs are administered by an interdisciplinary committee appointed by, and with oversight from, the Associate Vice President of Graduate Studies and Research. IS programs may be created under the Master of Arts, Master of Education, and Master of Science degree titles.

Application Process. Anyone contemplating the creation of an IS program should first meet with the Associate Vice President of Graduate Studies and Research before initiating the application process to discuss possible program options. The responsibility for creating an acceptable IS rests entirely with the applicant. If admitted, a graduate student in this program is expected to be highly motivated. He or she must work closely with the program advisor(s) and provide the Associate Vice President of Graduate Studies and Research with semi-annual program status reports. An applicant to an IS master’s degree program must be able to meet the minimum
requirements for admission to graduate study at CWU, including a minimum of a 3.0 grade point average in the last 90 quarter or 60 semester credit hours elected. The applicant must complete and submit a formal application, in accordance with the instructions in the application packet, including a non-refundable $35 applicant fee. The Graduate Record Examination may be required at the discretion of the Associate Vice President of Graduate Studies and Research.

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. Materials submitted in support of an application cannot be returned nor will they be released for other purposes.

Program Description. In addition to the documents and materials required for the admissions process, each IS applicant must include a description of the IS program he or she wishes to create. The applicant should include a detailed explanation of the rationale for this program and explain why her or his goals cannot be met by means of an established master’s degree at CWU. The applicant should indicate how the proposed program would meet her or his educational objectives and professional aims.

Learner outcomes are critical to the success of CWU degree programs. As a result, each IS master’s 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.

Program of Study. A comprehensive, proposed course of study is also required. The requisite form for detailing this may be obtained from the Graduate School. A justification for the selection of each election proposed should be included in the course of study. Please note that general graduate school regulations appearing in the CWU catalog must be observed, and all IS programs must include a master’s thesis. In the process of designing the curriculum, applicants are expected to consult the publications of universities nation-wide to identify any programs similar in content and design to the one sought. Such information may provide useful information in constructing the program of study.

Number of Credit Hours. For an IS program of study to be approved by the Associate Vice President of Graduate Studies and Research, it must include a minimum of 45 quarter hours of graduate level credit, of which at least 25 credits must be numbered 501 or higher. In some cases more than the minimum of 45 credits will be required. The course of study must include 6 credits of 700 (Thesis) and may not normally include more than 10 credits of independent study. Prerequisite courses may be included.

Graduate Committee. Each applicant seeking an IS program, must propose a Graduate Committee to the Associate Vice President of Graduate Studies and Research. Each committee member must be at least an associate member of the graduate faculty and the person whom the applicant wishes to chair the Advisory Committee must be a regular member of the graduate faculty. The applicant must work with these faculty to develop the proposed program of study. The proposed Graduate Committee members will meet with the Associate Vice President of Graduate Studies and Research to discuss the applicant’s program of study and may be asked to meet with the Graduate Council as well.

All proposed Graduate Committee members are expected to discuss their participation on this committee with their respective department chairs. Department chairs must agree to allowing their faculty members to participate on the IS committee and all proposed committee members must certify their willingness to serve. The committee constitution will be reviewed by the Associate Vice President of Graduate Studies and Research in consultation with the Graduate Council. Following any needed discussions, the Associate Vice President of Graduate Studies and Research, in consultation with the Graduate Council, will determine the applicant’s admissibility, along with the viability of the Graduate Committee, and communicate the decision to the applicant as quickly as possible.

Examinations and Assessment. An oral final examination is required on work completed in partial fulfillment of the IS master’s degree requirements. This examination must include a defense of the thesis and an examination of studies completed. 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 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:
- April 1 for Summer and Fall 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.

Graduate Courses in Individual Studies

IS 590. Cooperative Education (1-6 credits). 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. Prior approval is required. The grade will 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). Prerequisite, permission of chair of the student’s graduate faculty supervisory committee. Designated to credit and record supervised study for the master’s thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to six credits.

INDUSTRIAL AND ENGINEERING TECHNOLOGY

Program Coordinator
Walter R. Kaminski

Graduate Faculty
Professors
Bill Bender, Construction Management
D. Ken Callahan, Woods, Design
Dave Carns, Construction Management
Craig Johnson, Mechanical Engineering Technology
Walter R. Kaminski, Mechanical Engineering Technology
T. Q. Yang, Electronics
Tim Youtheimer, Electronics

Adjunct Professor
Juan Robertson

Program Objectives and Description
The Industrial and Engineering Technology Department offers a Master of Science Degree in Engineering Technology (MSET) having the specific purpose of broadening the techno-
logical background of persons holding Bachelor of Science degrees in the Engineering Technologies (ET), Industrial Technologies (IT), and similar or related degrees. The BS degree programs provide the graduate with hands-on, practical knowledge which can be immediately utilized in industry. However, technology is advancing so rapidly that it is necessary to expose the engineering technologist to some of the latest advances, that is, to update their knowledge base. Corporate downsizing, global market pressures, and rapidly expanding technology require a new type of engineering technologist, one that can function comfortably on a changing career path. This requirement produces the need of the technologist to be a lifelong learner. The tools for life long learning and research are the crux of the MSET program. The MSET program is multidisciplinary, giving the graduate student sufficient choices to fit diverse needs.

**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. All students entering the MSET program are expected to have a background equivalent to that required for the Bachelor of Science Degree in the Engineering Technologies at CWU. This requires that the candidate have a bachelor’s degree from a recognized institution and have at least two quarters of calculus and three quarters of a combination of general physics and chemistry. If English is a secondary language, students must score 550 or more on the TOEFL examination. Deficiencies in the student’s undergraduate training as determined by the IET department at the time of matriculation must be removed without graduate credit during the first year of graduate study. Transfer students will be considered using the same criteria, with consideration for equivalent graduate course work completed elsewhere.

**Application Deadlines and Supporting Materials:**

Applications and all supporting materials are due by April 1 for Fall quarter entrance. Applications will include a statement of background and reason for wishing enrollment into the MSET program, official transcripts, and three letters of recommendation. The applicant must have maintained at least a 3.0 average in all course work attempted during the last 90 quarter hours (60 semester hours) of study. Students having a GPA of less than 3.0 may be admitted conditionally at the discretion of the Associate Vice President of Graduate Studies, Research and Continuing Education.

**Program Requirements**

The IET Department offers a Master’s degree that requires a minimum of 45 credit hours of graduate study and a thesis. A total of 30 credit hours of required coursework is required of all students. The student is then required to select at least 15 credit hours from a list of technical electives which will then total 45 credit hours. The student must take at least 25 credit hours of course work at the 500 level. Only 9 quarter credit hours may be transferred before being admitted into the master’s 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 MSET will require two academic years of full-time study. The student that is enrolled on a part-time basis will require more than two academic years, the total time required will be a function of course load.

**Graduate Committee**

The student must have a three member graduate committee, selected in consultation with the advisor. Two members must be from the Industrial and Engineering Technology Department.

**Master of Science in Engineering Technology (3000)**

<table>
<thead>
<tr>
<th>General Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IET 521, Product Design and Development</td>
<td>4</td>
</tr>
<tr>
<td>IET 522, PLC Applications</td>
<td>4</td>
</tr>
<tr>
<td>IET 525, Systems Analysis and Simulation</td>
<td>4</td>
</tr>
<tr>
<td>IET 530, Fundamentals of Lasers</td>
<td>4</td>
</tr>
<tr>
<td>IET 560, Finite Element Analysis</td>
<td>4</td>
</tr>
<tr>
<td>IET 577, Robotics</td>
<td>4</td>
</tr>
<tr>
<td>*IET 700, Thesis or Option</td>
<td>6</td>
</tr>
</tbody>
</table>

**Required Course Total** = 30

Note: * Students electing to do a written examination will select 6 credits of approved coursework in lieu of IET 700.

**Department-Approved Technical Electives**

The student must select 15 credits from the following list to complete a total program of 45 credit hours.

| IET 512, Alternative Energy Systems | 4 |
| IET 523, Emerging Technologies | 4 |
| IET 524, Quality Control | 4 |
| IET 526, Engineering Project Cost Analysis | 4 |
| IET 532, Generation and Transmission of Electrical Power | 4 |
| IET 555, Engineering Project Management | 3 |
| IET 562, Plastics and Composites | 4 |
| IET 583, Ceramics and Composition | 4 |
| IET 585, Ergonomics | 4 |
| IET 592, Field Studies | 4 |
| IET 595, Graduate Research (1-6) | 4 |
| IET 596, Individual Studies (3) | 4 |
| IET 599, Seminar (1) | 4 |
| MET 423, Computer Aided Design and Manufacturing | 4 |
| GEOG 443, Energy Policy | 5 |

**CMGT 442, Building Service Systems** | 4 |
| **ECON 462, Economics of Energy Resources and Environment** | 5 |

**Elective Total** = 15

**Program Total** = 45

**Graduate Courses in Industrial and Engineering Technology**

**IET 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.


Prerequisite, permission of instructor. 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).

Prerequisites, MET 419 (or equivalent) or permission of instructor. 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.

**IET 522. Programmable Logic Controller (PLC) Applications** (4).

Prerequisite, permission of instructor. A study of programmable logic controller concepts, components, systems, programming, and applications. Lecture and laboratory. Similar to EET 373. Credit for both granted only by department chair.

**IET 523. Emerging Technologies** (4).

Prerequisites, permission of instructor. A comprehensive examination of recent technological innovations in materials, manufacturing, electronics, and instrumentation, with emphasis on design and application case studies.

**IET 524. Quality Control** (4).

Prerequisite, OMIS 221 or permission of instructor. 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.

**IET 525. Systems Analysis and Simulation** (4).

Prerequisite MET 327 (or equivalent) or permission of instructor. 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.


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). Prerequisite, PHYS 113 or permission of instructor. Overview of Laser technology with emphasis on characteristics, safety and application. Four hours lecture per week.

IET 532. Generation and Transmission of Electrical Power (4). Prerequisite, EET 332 or equivalent. A study of the generation and transmission of electrical energy. Similar to EET 432. Credit for both granted only by department chair.

IET 538. Readings in Industrial Education (3). Prerequisite, student must be a graduate. A study of the economic, social, political and philosophical factors that have motivated and influenced the development of industrial education. Leaders, agencies and movements shall also be investigated.

IET 555. Engineering Project Management (3). Fundamental tools of engineering project management. Topics: contract management, scheduling and estimating cost, cost control, conflict management, team building, negotiating, and personal time management.

IET 560. Finite Element Analysis (4). Prerequisites, IET 160, MET 426, or permission of instructor. Computerized modeling of structural, vibrational, and thermal design problems. Lecture and laboratory. Similar to MET 420. Credit for both granted only by department chair.

IET 577. Robotics (4). Prerequisites, EET 375 and EET 342 or permission of instructor. Microprocessor applications in robotics, automated systems, and digital control. Lecture and laboratory. Similar to EET 477. Credit for both granted only by department chair.

IET 582. Plastics and Composites (4). Prerequisites, CHEM 181 or CHEM 111 or permission of the instructor. 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.

IET 583. Ceramics and Composites (4). Prerequisites, CHEM 181 or CHEM 111 or permission of the instructor. 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.

IET 585. Ergonomics (4). Study of human characteristics for the appropriate design of the work environments, promoting safety and work efficiency. Similar to SHM 483. Credit for both granted only by department chair.

IET 592. Field Studies (1-10). Prerequisite, faculty advisor and department approval. No more than 10 credits may be taken toward the Master degree.

IET 595. Graduate Research (11-6). Prerequisite, permission of advisor. Conduct research or use for program evaluation activity. Maximum of 6 credits may be included on the Course of Study for the Master’s degree.

IET 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated.

IET 598. Special Topics (1-6).

IET 599. Seminar (1-5). May be repeated.

IET 700. Thesis or Option (6). Prerequisite, permission of Chair of student’s graduate faculty supervisory committee. Designed to credit and record supervised study for the Master’s thesis, non-thesis project, or examination. Grade will be either S or U. May be repeated for up to 6 credits.

INFORMATION TECHNOLOGY AND ADMINISTRATIVE MANAGEMENT

The Information Technology and Administrative Management department does not offer any graduate degrees at this time.

Graduate Programs and Courses in Administrative Management on Reserve

Master of Education in Business and Marketing Education.

ADMG 510. Supervisory Skills (3), BSED 512. Total Quality Learning (2); BSED 520. Tests and Measurements in Business Education (3); BSED 524. Business Education Program Design (3); BSED 525. Business and Marketing Education Issues (3); BSED 526. Improvement of Instruction in Business Education (3); BSED 528. Improvement of Instruction in Keyboarding and Computer Applications (3); BSED 529. Improvement of Instruction in Accounting (3); BSED 531. Web-Based Design for Distance Learning (3); BSED 546. Office Internship (1-6); BSED 592. Practicum (3-12); BSED 594. Research Practicum (3); BSED 595. Research (3); BSED 700. Master’s Thesis, Project Study and/or Examination (1-6); ME 512. Total Quality Learning (2); ME 521. Marketing Education Model Program (3); ME 525. Business and Marketing Education Issues (3); ME 531. Improvement of Instruction in Marketing and Distribution (3); ME 561. Program Development in Marketing Education (3); ME 562. Curriculum Design in Marketing Education (3); ME 592. Practicum (3-12); ME 594. Research Practicum (3); ME 595. Research (3); ME 700. Master’s Thesis, Project Study and/or Examination (1-6).

Graduate Courses in Business Education

BSED 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.

BSED 591. Workshop (1-6). No more than two workshops for a combined maximum of 8 credits can be applied toward a Master’s degree.

BSED 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated.

BSED 598. Special Topics (1-6).

BSED 599. Seminar (1-5). May be repeated.

Graduate Courses in Marketing Education

ME 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.

ME 591. Workshop (1-6). No more than two workshops for a combined maximum of 8 credits can be applied toward a Master’s degree.

ME 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated.

ME 598. Special Topics (1-6). May be repeated.

ME 599. Seminar (1-5). May be repeated.

LAW AND JUSTICE

Web Site http://www.cwu.edu/~lahome/

Faculty

Interim Chair: Warren Street, Ph.D.

Psychology Building 463

Professor

Charles Reasons, LL.B, Ph.D., Criminology, Criminal Justice, and Pre-Law

Associate Professors

J. Michael Olivo, Ph.D., M.S.W., Corrections, Criminology, Research Methods, Criminal Justice

James B. Roberts, J.D., M.S.W., Legal Research, Correctional Law, Correctional Counseling, Paralegal Studies and Criminal Justice
Assistant Professors
Mark DeForrest, J.D., Pre-Law/Paralegal
Rodrigo Murataya, M.P.A., Police Personnel
Administration, Administration of Justice, Criminal Investigation, Intro to Criminal Law, Police Community Relations, Research Methods (Yakima Center Director)
Mary Ellen Reimund, M.A., J.D., LL.M., Criminal Law, Civil Law, Alternative Dispute Resolution (SeaTac Center Director)
Key Sun, LL.B., M.A., M.S.W., Ph.D., Methodology, Correctional Counseling, Criminal Justice, Psychology (Steilacoom Center Director)
Lecturer
Robert Pattison, M.A., Corrections (Lynnwood Center Director)

Law and Justice Graduate Programs and Courses on Reserve
Master of Science in Law and Justice; LAJ 511, Theory and Practice (5); LAJ 515, Personnel Issues in Criminal Justice (5); LAJ 525, Race, Class, Gender and the Administration of Justice (5); LAJ 535, Research Methods (5); LAJ 540, Law and Social Control (5); LAJ 545, Ethical Issues (5); LAJ 575, Legal Liability of Criminal Justice Professionals (5); LAJ 580, History of Criminal Justice (5); LAJ 590, Constitutional Issues in Criminal Justice (5); LAJ 596, Individual Study (1–6); LAJ 598, Special Topics (1–5); LAJ 690, Internship (1–6); LAJ 700, Master’s Thesis, Project Study and/or Examination (1–5).

Mathematics
Graduate Faculty
Chair: Scott M. Lewis
Bouillon 107F

Professors
Alla Ditta Choudary, Algebraic Topology
James D. Harper, Harmonic Analysis
Scott M. Lewis, Math Education, History of Mathematics
Cen-Tsong Lin, Probability and Mathematical Statistics

Associate Professors
Stuart F. Boersma, Differential Geometry, General Relativity
Stephen P. Glasby, Computational Algebra, Representation Theory
Mark Oursland, Mathematics Education

Assistant Professors
Yvonne Chueh, Actuarial Science, Statistics
Tim Englund, Algebra
Jonathon Fassett, Topology, Dynamical Systems
Michael Lundin, Mathematics Education
Aaron Montgomery, Topology, Algebra

Master of Science
Mathematics
The M.S. degree program in Mathematics is currently on reserve.

Master of Arts for Teachers
Mathematics
Program Coordinator: Mark D. Oursland
Bouillon 107D

The Master of Arts for Teachers, Mathematics, program has been structured mainly for junior and senior high school mathematics teachers. It is also may to 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 Department of Mathematics. 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 45 credits as outlined in an approved Course of Study filed with Graduate Studies and Research.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 522, Modern Programs in Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 524.1, Math Methods for Jr. High School</td>
<td>3</td>
</tr>
<tr>
<td>MATH 524.2, Math Methods for High School</td>
<td>3</td>
</tr>
<tr>
<td>MATH 550, Transformational Geometry</td>
<td>3</td>
</tr>
<tr>
<td>MATH 562, Modern Algebra for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>MATH 570, Calculus for Secondary Teachers</td>
<td>3</td>
</tr>
<tr>
<td>MATH 572, Elementary Real Analysis</td>
<td>3</td>
</tr>
<tr>
<td>Educational Foundations and Research Courses</td>
<td>3-6</td>
</tr>
<tr>
<td>MATH 700, Thesis or Non-Thesis Option Project</td>
<td>3-6</td>
</tr>
<tr>
<td>Committee approved electives</td>
<td>9-12</td>
</tr>
</tbody>
</table>

Total 45

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.

Graduate Courses in Mathematics

MATH 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.

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 summers only.

MATH 515. Probability and Statistics for Elementary School Teachers (2). Concepts and methods of probability and statistics as used in the elementary classroom. Offered summers only.

MATH 522. Modern Programs in Mathematics (3). Prerequisite, one year of teaching experience in mathematics or permission. Contemporary programs in secondary school mathematics. Offered summers only.

MATH 524.1. Math Methods for Jr. High School (3). Prerequisite, one year of teaching experience in mathematics. Problems and methods associated with the teaching of mathematics in the junior high or middle school. Offered summers only.

MATH 524.2. Math Methods for High School (3). Prerequisite, one year of teaching experience in mathematics. Problems and methods associated with the teaching of mathematics in high school. Offered summers only.

MATH 530. Mathematical Recreations (3). An examination of selected examples of puzzles, paradoxes, brain teasers, and parlor games and a brief investigation of the mathematical principles on which they are based. Primarily for the experienced junior and senior high school mathematics teacher seeking motivational materials. Offered summers only.

MATH 535. Adventures Among the Numbers (3). Prerequisite, MATH 430 or permission. Tricks, puzzles, games and patterns involving the ordinary whole numbers of arithmetic; suitable for stimulating interest in the basic properties of numbers and the operations of arithmetic. Intended primarily for teachers in the higher elementary grades as well as secondary school teachers. Offered summers only.

MATH 550. Transformational Geometry (3). Prerequisite, MATH 455.1 or permission. A study of the group of transformations of the plane: reflections, rotations, translations, glide reflections. As time permits the properties of dilations and affinities also will be discussed. Offered summers only.
MATH 552. Experiences in Geometry for Elementary Teachers (3). An informal introduction to, or a reacquaintance with, those geometric concepts traditionally introduced in grades K-6. Content oriented, classes are centered around problem-solving activities. Prerequisite: one year of successful teaching at the elementary level. Offered summers only.

MATH 553. Intuitive Geometry for Teachers of Grades K-6 (3). Prerequisite, one year of teaching experience.

MATH 554. Fractal Geometry (3). Introduction to the development and applications of fractal geometry. Prerequisite, MATH 360 or equivalent, or instructor's permission. (Offered summers only). Computer generations of fractals as well as the mathematics behind it.

MATH 560. Mathematical Experiences for Elementary Teachers (3). Open-ended laboratory activities that emphasize both the construction and uses of motivational aids in problem solving, grades K-6. Prerequisite: At least one year of successful teaching at the elementary level. Offered summers only.

MATH 562. Modern Algebra for Teachers (3). Prerequisites, MATH 360 or equivalent and one year of teaching experience. Examination of the fundamental algebraic structures: groups, rings, integral domains and fields, with examples and applications. Offered summers only. Previously MATH 460. Student may not receive credit for both.

MATH 566. Matrices and Their Applications (3). Prerequisite, MATH 163.1 or equivalent. Matrix algebra including finite Markov chains with applications to business, psychology, genetics, and learning models. Sociometric applications to conflict and dominance. Offered summers only.

MATH 570. Calculus for Secondary Teachers (3). Prerequisite, MATH 172.2 or equivalent and one year of teaching experience. A re-examination of the processes of differentiation and integration emphasizing their application to the natural, behavioral, social and managerial sciences. Offered summers only. Previously MATH 370. Student may not receive credit for both.

MATH 572. Elementary Real Analysis (3). Prerequisite MATH 172.2 or equivalent and one year of teaching experience. Examines fundamental concepts of sets, sequences, limits, series, functions, continuity and differentiability. Offered summers only. Previously MATH 470. Student may not receive credit for both.

MATH 591. Workshop (1-6). No more than two workshops for a combined maximum of 8 credits can be applied toward a Master's program.

MATH 595. Graduate Research (1-10). Prerequisite, permission of advisor. Grade will be S or U. May be repeated for credit. A maximum of 5 credits may count toward degree requirements.

MATH 596. Individual Study (1-6). Prerequisite, permission of instructor.

MATH 598. Special Topics (1-6).

MATH 599. Seminar (1-5). Prerequisite, permission of instructor. May be repeated for credit.

MATH 700. Master's Thesis, Project Study and/or Examination (1-6). Prerequisite, permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits.

MUSIC

Graduate Faculty
Chair: Peter Gries
Hertz Hall 101

Associate Chair: Karyl Carlson

Professors
Joseph Brooks, Clarinet, Saxophone, Woodwind Methods
Larry D. Gookin, Bands, Low Brass, Music Education, Conducting
Mark Gries, Piano, Theory, Counterpoint, Analysis
Linda Marra, Voice, Opera, Diction, Literature, Pedagogy
Mark Polishook, Composition, Theory, Orchestration, Electronic/Computer Music
Carrie B. Rehkopf-Michel, Violin, Viola, Fundamentals

Sociometric applications to conflict and dominance. Offered summers only.

Associate Professors
Chris Bruya, Jazz Studies, Theory
Karyl Carlson, Choir, Music Education, Conducting
Vijay Singh, Jazz Studies, Choir, Voice, Music Business

Assistant Professors
Mark Babbitt, Trombone, Symphonic Band, Theory
Mark Goodenberger, Percussion
John Harbaugh, Trumpet, Jazz Studies
Diane Reich, Voice, Opera
Linda Woody, Music Education

Piano Technician
Harry Whetaker

Instructors
David Aspin, Composition
Sarah Bahouddin, Oboe
Shirley Diamond, Saxophone, Woodwind Methods

Jim Durkee, Guitar
Alan Futterman, Bassoon
Margret Gries, Upper Strings Class Methods, Music History, Piano, Organ, Harpsichord, Aesthetics
Jon Hamer, String Bass
Sid Nesselroad, Voice
Barbara Pickett, Piano, Class Piano

Artist in Residence:
Paul-Elliott Cobbs, Orchestra Conductor

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 shall 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 a) composition; b) conducting; c) performance; d) performance-pedagogy; e) 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 ensemble and three credits of MUS 521 (Methods of Musical Research); 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. Students are expected to plan their program with a graduate advisor and committee.

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 the first quarter of graduate study. 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 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. 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. It is the candidate's responsibility to demonstrate the successful satisfaction of any deficiency. No Master of Music degree will be awarded until these appraisals have been passed. The Department of Music
candidates will work under the direct supervision of one of the three conductors of the major performance ensembles (Orchestra, Wind Ensemble, Choir) during each quarter in residence. The students will be encouraged to work in all three areas whenever possible.

3. Courses in the major field: select from MUS 440, 441, 540, 541, 585, 599, 615.
4. Other studies in music should include a minimum of 3 credits in history or literature and 3 credits in theory.
5. As a thesis (MUS 700, 6 credits) the student will conduct a public performance and submit a covering paper. Normally this paper will be based on the works conducted.

C. Performance
1. 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.
2. Courses in the major field: a minimum of 10 credits of major applied instruction, MUS 664, in addition to the 6 credits of thesis study. Vocal performance majors must also have MUS 536 plus one year each of college level French and German. Other selections: MUS 551, 561, 592, 614.
3. Other studies in music should include a minimum of 3 credits in history or literature and 3 credits in theory.
4. As a thesis (MUS 700, 6 credits) 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.

D. Performance-Pedagogy
1. 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.
2. Courses in the major field: a minimum of 6 credits of individual instruction, MUS 664, in addition to the 6 credits of thesis study; 3 credits in MUS 425. Additional requirements for vocal majors as in the performance major.
3. Other studies in music should include a minimum of 3 credits in history or literature and 3 credits in theory.
4. As a thesis (MUS 700, 6 credits) the student will present either:
   a) a research thesis.
   b) a demonstration, analytical or creative project and a covering paper based on the project.
   OR
   c) a research paper and one-half of a public recital.

E. Music Education
1. Admission to this program will be based upon:
   a) evaluation of an undergraduate paper in the field of music education.
   b) 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).
   c) 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 should include those that enable students to understand and evaluate research in music education; select from MUS 425, 520, 582, 583, 599, 611.
3. Other studies in music should include a minimum of 3 credits in history or literature and 3 credits in theory.
4. As a thesis (MUS 700, 6 credits), the student will present either
   a) a research thesis.
   OR
   b) a demonstration, analytical or creative project and a covering paper based on the project.

Final Examination
All students must pass a comprehensive final examination, oral, written and oral, based on their coursework and the thesis. Before the Final Examination can be scheduled, students must have:
1. satisfied any recommendations made to correct deficiencies revealed by the diagnostic exams.
2. completed and submitted the written portion of the thesis.

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 in the Music Office (Hertz 101).
Graduate Courses in Music

Performance activities are designated by the following code:

A. Piano
B. Voice
C. Strings
D. Woodwinds
E. Brass
F. Organ
G. Percussion
H. Guitar
I. Recorder
K. Harpsichord
L. Mixed

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.

MUS 510. Vocal Jazz Choir (1).
By permission of instructor. May be repeated for credit. For graduate students. See MUS 210 for description.

MUS 512. Big Band Drumming (1).
Prerequisite, permission of instructor. Designed to give Jazz Music Educators knowledge of Big Band drumset playing technique and the ability to coach student drummers in various styles of drumming.

MUS 513. Flute Choir (1).
Prerequisites, previous experience in flute performance and permission of instructor. May be repeated for credit. Two hours of rehearsal per week plus all scheduled rehearsals and performances. For graduate students.

MUS 514. Brass Choir (1).
By permission of instructor. May be repeated for credit. For graduate students. See MUS 214 for description.

MUS 515. Chamber Orchestra (1).
By permission of instructor. May be repeated for credit. For graduate students. See MUS 215 for description.

MUS 516. Rhythm Sections for Jazz Educators (1).
Prerequisite, permission of the instructor. Designed to acquaint Jazz Music Educators with performance techniques and stylistic characteristics of the three instruments of a standard jazz rhythm section: Bass, Piano and Drumset.

MUS 517. Chamber Music Ensemble (1).
By permission of instructor. May be repeated for credit. One hour coaching plus two hours rehearsal per week plus all scheduled rehearsals and performances. Instruction available in performance areas A-E, G-I, L.

MUS 518. Sound Reinforcement I (1).
Prerequisite, permission of the instructor. Designed to give Jazz Music Educators practical knowledge of the components of a sound system and how to operate them as part of normal jazz ensemble performance practice.

MUS 519. Sound Reinforcement II (1).
Prerequisites, MUS 518 or permission of the instructor. Designed to give Jazz Music Educators further knowledge of sound systems, system design and basic repair and maintenance and more refined operation.

MUS 520. Methods of Teaching Theory (3).
Prerequisite, permission of instructor.

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).
Prerequisite, MUS 422 or permission of instructor. May be repeated for credit. Study of various scores and treatises. Individual projects.

MUS 523. Advanced Composition (3).
Prerequisite, MUS 420.3. May be repeated for credit. Selected topics in composition.

MUS 525. Pedagogical Techniques for Instrumental Directors (3).
Philosophy and psychology of music education through methods and materials; observation of teachers in the rehearsal, individual research.

MUS 526. Keyboard Harmony and Improvisation (3).
Keyboard experience; formal and free harmonization of melodies, pianistic style and four-part vocal style.

MUS 527. The General Music Program (3).
Prerequisites, MUS 321, 424, EDCS 442 or permission of instructor. A review of teaching general music in the public schools.

MUS 529. Percussion Ensemble (1).
By permission of instructor. May be repeated for credit. For graduate students. See MUS 229 for description.

MUS 531. Keyboard Music Since 1750 (3).
Prerequisite, permission of instructor.

MUS 532. Stage Band (1).
By permission of instructor. May be repeated for credit. For graduate students. Two hours of rehearsal per week plus all scheduled rehearsals and performances.

MUS 533. Laboratory Choir (1).
By permission of instructor. May be repeated for credit. For graduate students. Two hours of rehearsal per week plus all scheduled rehearsals and performances.

MUS 536. Diction in Singing Foreign Languages (3).
Prerequisite, permission of instructor. Italian, French, and German.

MUS 540. Choral Interpretation and Techniques (3).
For choral directors of all levels in the public schools and churches. New materials, voice production, intonation, interpretation, conducting techniques, diction.

MUS 541. Advanced Conducting (3).
Prerequisite, MUS 342 or equivalent. Emphasis upon the conducting of advanced literature in the major performance media. May be repeated for credit.

MUS 545. Modern Counterpoint (3).

MUS 546. Vocal Jazz Arranging (1).
Prerequisite, permission of the instructor. Techniques of arranging for jazz choirs: including examination of voice ranges, harmonic language, voicings of different ensembles and jazz textures, melodic structures, and rhythms.

MUS 547. Electronic Music Composition (3).
Prerequisite, MUS 347. Studies in electronic music with emphasis on compositional technique.

MUS 548. Instrumental Jazz Arranging (1).
Prerequisite, permission of the instructor. Survey of large jazz ensemble (Big Band) arranging techniques, including modular construction, basic melody writing, voicings and idiomatic characteristics of the instruments in a big band.

MUS 553. Musical Direction of Broadway Musicals (3).
Prerequisites, permission of instructor and MUS 246 or equivalent. Techniques and methods of musical direction of Broadway musicals for the secondary school teacher. Choosing a work, preparing rehearsals, making a schedule, working with singers.

MUS 554 C, D, E, G. Advanced Techniques Class (1).
For advanced study on secondary instruments. Prerequisite, one section of MUS 254 C, D, E, G or equivalent.

MUS 555. Teaching Instrumental Jazz Improvisation (1).
Prerequisite, permission of the instructor. Basic theory and pedagogy of jazz improvisation instruction, including chord/scale relationships, progression simplification and a survey of tunes appropriate for various levels of skill.

MUS 556. Teaching Vocal Jazz Improvisation (1).
Prerequisite, permission of the instructor. Designed to give public school choral directors knowledge of the techniques, styles and pedagogical approaches to improvisation in a vocal jazz idiom.

MUS 557. Vocal Jazz Styles (1).
Prerequisite, permission of the instructor. Designed to give Jazz Music Educators a knowledge of the styles currently used in jazz choirs and teaching strategies for directing jazz choirs in public schools.

MUS 558. Survey of Solo Vocal Literature (3).
Prerequisite, permission of instructor. All periods, performance or listening. Background, stylistic traits and performance concepts of the Art Song.

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. May be repeated for credit. By permission of instructor.

MUS 562. Opera Production (1-2). A class leading to performance of a complete opera. May be repeated for credit. By permission of instructor. Same as MUS 462.

MUS 564. Major Applied Study (1, 2, 4). By permission of instructor. May be repeated for credit. 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.

MUS 565. Reading Big Band (1). Prerequisite, permission of the instructor. Designed to give Jazz Music Educators experience playing in a big band and acquaintance with big band arrangements, composers, and arrangements of various levels of difficulty.

MUS 566. Wind Ensemble (1-2). May be repeated for credit. 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.

MUS 567. University Choir (1-2). May be repeated for credit. For graduate students. 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.

MUS 568. Chamber Choir (2). May be repeated for credit. See MUS 268 for complete description.

MUS 569. Reading Vocal Jazz Choir (1). Prerequisites, permission of the instructor. Designed to give Jazz Music Educators experience singing in a jazz choir, acquaintance with arrangers, composers, repertoire and rehearsal techniques.

MUS 571. History of Orchestral Music (3). Forms and styles from the 17th to 20th centuries.

MUS 572. Music in the Twentieth Century (3). Forms and styles relevant to 20th century music.

MUS 573. History of Opera (3).

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). May be repeated for credit. 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.

MUS 579. Aesthetics of Music (3). Examination of various perspectives in the meaning and value of music.

MUS 582. Instrumental Administration Techniques (3). How to administer, organize and evaluate the instrumental music program. To include testing, recruitment, grading and evaluation, handling equipment-materials-supplies, budgets and purchases, scheduling and public relations. For students who have had at least one year of teaching experience.

MUS 583. Supervision of Public School Music (3). Prerequisite, B.A. degree with major in music education.

MUS 584. Choral Composition and Arranging I (3).

MUS 585. Band Arranging II (3). Prerequisite, MUS 484.

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. May be repeated for credit. For graduate students.

MUS 589. Harmonic Analysis (3). Prerequisites, MUS 246, 282. Survey of all harmonic forms, analysis of harmonic content.

MUS 592. Accompanying Practicum (1-3). May be repeated for credit. By assignment of instructor. Minimum 3 hours rehearsal weekly per credit plus performances. For graduate students.

MUS 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated.

MUS 598. Special Topics (1-6).

MUS 599. Seminar (1-5). May be repeated.

MUS 610. Graduate Seminar in Music: Composer (1-3). Prerequisite, Graduate standing and permission of instructor. Study of a particular composer's life and works. Offered according to needs of students and faculty availability.

MUS 611. Graduate Seminar in Music: Education (1-3). Prerequisites, Graduate standing and permission of instructor. Seminar in Music Education, offered according to needs of students and faculty availability.

MUS 612. Graduate Seminar in Music: History/Literature (1-3). Prerequisites, Graduate standing and permission of instructor. Seminar in Music History and Literature, offered according to needs of students and faculty availability.

MUS 613. Graduate Seminar in Music: Music Theory/Composition (1-3). Prerequisites, Graduate standing and permission of instructor. Seminar in Music Theory and/or Composition, offered according to needs of students and faculty availability.

MUS 614. Graduate Seminar in Music: Performance (1-3). Prerequisites, Graduate standing and permission of instructor. Seminar in Performance Studies, offered according to needs of students and faculty availability. May not be substituted for applied study.

MUS 615. Graduate Seminar in Music: Conducting (1-3). Prerequisites, Graduate standing and permission of instructor. Seminar in Conducting, offered according to needs of students and faculty availability.

MUS 664. Major Applied Area (Individual Instruction) (1, 2, 4). By permission of instructor. May be repeated for credit. 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 performance will register for the weekly recital hour. Instruction available in performance areas A-I. Intended for Performance and Performance-Pedagogy majors.

MUS 700. Master's Thesis, Project Study and/or Examination (1-6). Prerequisite, permission of Chair of student’s graduate faculty supervisory committee. Designed to credit and record supervised study for the Master’s thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits.

Graduate Courses on Reserve

The following courses are on reserve and may be offered subject to program needs:

MUS 530. Keyboard Music Through 1750 (3); MUS 551. Accompaniment and Song (2); MUS 534. Central Swingers (1); MUS 570. History of Vocal Art (3).


**OCCUPATIONAL EDUCATION**

Faculty

Jan Bowers, Family and Consumer Science
Bob Wieking, Industrial Education Technology
Robert Lupton, Administrative Management and Business Education

Graduate Courses in Occupational Education

OCED 500. Professional Development (1-5).
Development topics and issues for inservice and continuing education of professionals.

OCED 540. Advanced Total Quality Learning (3). Prerequisite, OCED 440. In-depth theory and philosophy of TQL concepts. Statistical process control tools, integrated project analysis, resource matrix chart, systems analysis, profound knowledge and brain theory.

OCED 551. Principles of Occupational Education (3). Formerly BSED 551. Students may not receive credit for both.

OCED 561. Administration of Occupational Education (3). The study of occupational needs, survey federal laws, state plans, finance, advisory committees, organization of programs and staffing. BSED/FCSE/IET 561 are the same course. Student may receive credit for one.

OCED 562. Vocational Finance (3).

OCED 563. Partnerships and Advisory Committees (3).

**ORGANIZATION DEVELOPMENT**

Program Director:

Anthony J. Stahelski
Professor of Psychology
Psychology Building 453

Professors

Stephen B. Schepman, Professor of Business Administration and Psychology, Organization Development, Organizational Behavior, Human Resource Management
Anthony J. Stahelski, Professor of Psychology, Organization Development, Social Psychology, Small Group Interaction

General Departmental Information

The objective of the Master of Science, Organization Development (MSOD) program is to prepare students for improving productivity and quality of work life in a variety of public and private sector organizational settings. The MSOD program is based in the Psychology Department with interdisciplinary connections to the College of Business. The program is designed for working adults. The program is offered on the main campus in Ellensburg. Most students come from management positions in many types of public and private sector organizations across Washington and the Northwest. Required courses are scheduled across 24 weekends spread over two academic years. A “weekend” is defined as Friday evening, all day Saturday and all day Sunday. In addition to the courses taken during the two academic years, students take a course during the summer, in between the first and second years. Students arrange additional time on campus as required. Students using faculty time, supplies, and/or equipment for research either during the academic year or during the summer, must be registered for OD 595 or OD 700. Success in the second year of the MSOD program is dependent on the knowledge and skills gained in the first year MSOD classes. Therefore students need to remove any incompleted they receive in first year courses before enrolling in second year courses.

Admission Requirements

In addition to the university’s general regulations for admission to Master’s programs, admission to the MSOD program will be recommended upon the evaluation of the applicant’s prior scholastic record, GRE or GMAT scores, three recommendations from previous instructors or employers, and a statement of professional objectives. An interview is part of the admission process. Since this program is heavily oriented toward the application of theory to practical affairs, most applicants submit a letter of endorsement from an organization willing to sponsor them. The sponsor is asked to participate in the learning process by providing a site for the student to practice course knowledge and skills, and to conduct thesis or project research. This letter is submitted to the Office of Admissions with other application materials.

For additional information about the MSOD program, please refer to our Web site, http://www.cwu.edu/~msod/

**Master of Science**

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>OD 515, Organizations</td>
<td>3</td>
</tr>
<tr>
<td>OD 520, Organization Change and Development</td>
<td>4</td>
</tr>
<tr>
<td>OD 531, Organizational Behavior Analysis</td>
<td>5</td>
</tr>
<tr>
<td>OD 560, Models of Planned Change</td>
<td>4</td>
</tr>
<tr>
<td>OD 562, Consulting in Organizations</td>
<td>4</td>
</tr>
<tr>
<td>OD 566, Organization Research and Assessment</td>
<td>5</td>
</tr>
<tr>
<td>OD 570, Organizational Planning and Strategy Simulation</td>
<td>5</td>
</tr>
<tr>
<td>OD 575, Process Control Methods</td>
<td>4</td>
</tr>
<tr>
<td>OD 590, Supervised Field Experience in Organization Development</td>
<td>6-12</td>
</tr>
<tr>
<td>OD 700, Thesis, Project and/or Examination</td>
<td>6</td>
</tr>
<tr>
<td>PSY 510, Group Process and Team Building</td>
<td>5</td>
</tr>
<tr>
<td>PSY 540, Psychology Applied to Work</td>
<td>5</td>
</tr>
</tbody>
</table>

Total 58-64

**Graduate Courses in Organization Development**

OD 515. Organizations (5). Modern theories of organization in the context of organization/ environment interaction and adaptation.

OD 520. Organization Change and Development (4). An introduction to and overview of the field of organization development.

OD 551. Organizational Behavior Analysis (5). Applications of the principles and methods of behavior analysis to the work environment.

OD 560. Models of Planned Change (4). Examination of classical and contemporary change theories as they relate to the phases of planned change in representative organizations; development of individual models of organizational improvement.

OD 562. Consulting in Organizations (4). Attainment of competence in the role of an external consultant to an organization.

OD 566. Organization Research and Assessment (5). Principles of scientific research, methodology and their application to the analysis of organizations.

OD 570. Organizational Planning and Strategy Simulation (5). The application of management and organization development skills to a variety of organizational problems in a computer simulation.

OD 575. Process Control Methods (4). Apply logical and statistical process control and other numerical tools to the identification of and solution to organizational problems.

OD 580. Current Issues in Organization Development (3).

OD 590. Supervised Field Experience in Organization Development (3). Application of theories and concepts of OD to actual organizations. May be repeated for credit. Grade will be S or U.

OD 595, Graduate Research (1-10). Design and conduct an approved organization research project. Normally, the research will be non-thesis related. However, students using faculty time, supplies and/or equipment for thesis work beyond the maximum allotted six credits of OD 700 must be enrolled for at least three credits of OD 595. A maximum of 10 credits of OD 595 may be included on the student’s Master’s degree Course of Study.

OD 596. Individual Study (1-6). Prerequisite, permission of instructor. Contracted learning under the supervision of faculty.

OD 598. Special Topics (1-6). Student and faculty initiated courses. Topics are published in the quarterly class schedule.
OD 684. Internship in Organization Development (3-9). Prerequisite, permission of MSOD program director. Application of theories and concepts of OD to actual organizations. Grade will be S or U. May be repeated for credit.

OD 700. Thesis, Project and/or Examination (1-6). Prerequisite, permission of Chair of student’s graduate faculty supervisory committee. Designed to credit and record supervised study for the Master’s project or thesis. Grade will be either S or U. May be repeated for up to 6 credits.

PHILOSOPHY

Graduate Faculty
Chair: Chenyang Li
Language & Literature 337

Professors
Peter M. Burkholder, Ethics, Epistemology, Modern Philosophy
Webster F. Hood, Existentialism, Applied Logic, Philosophy of Technology
Chenyang Li, Asian Philosophy, Comparative Philosophy, Ethics, and Philosophy of Language

Assistant Professors

Emeritus Professors
Jay E. Bachrach
Raeburne S. Heimbeck

General Departmental Information
The Philosophy Department does not offer any graduate degrees.

Graduate Courses in Philosophy

PHIL 503. Philosophy of Education (3). Various philosophical positions which lead to an understanding of the educational enterprise. Same as EDF 503. Student may not receive credit for both.

PHIL 596. Individual Studies (1-6). Prerequisite: Graduate students or seniors, GPA of 3.0 in philosophy and a cumulative GPA of 3.0 plus approval of the instructor and Chair of the Department.

PHIL 598. Special Topics (1-6).

RELS 596. Individual Studies (1-6). Prerequisite: Graduate students or seniors, GPA of 3.0 in philosophy and a cumulative GPA of 3.0 plus approval of the instructor and Chair of the Department.

PHYSICS

Graduate Faculty
Chair: Bruce Palmquist
Lind Hall 201A

Associate Professor
Bruce C. Palmquist, Physics and Science Education

General Departmental Information
The Physics Department does not offer any graduate degrees.

Graduate Courses in Physics

PHYS 595. Directed Research (1-5). Prerequisite, permission of instructor.

POLITICAL SCIENCE

Graduate Faculty
Chair: James E. Brown, Jr.
Psychology Building 414

Professors
Robert C. Jacobs, Public Law and Government, American Politics, Constitutional Law, American Presidency
Rex Wirth, Public Administration and Public Policy, International Politics, Western Europe
Michael A. Launius, Comparative Politics, Asian Politics, International Political Economy, Pacific Rim Studies

General Departmental Information
The Political Science Department does not offer any graduate courses or graduate degrees.

PSYCHOLOGY

Graduate Faculty
Chair: Warren R. Street
Psychology 421

Professors
Terry L. DeVietti, Physiological Psychology, Experimental
James L. Eubanks, Organization Development, Performance Management and Training, General Experimental
Roger S. Fouts, General Experimental, Language Acquisition, Primate Behavior, Comparative Psychology
Eugene R. Johnson, School Psychology, Psychological and Educational Evaluation, Exceptional Children

Susan D. Lonborg, Counseling Psychology, Psychotherapy Research, Psychology of Women, Substance Abuse, Sports Psychology
Stephen B. Schepman, Organization Development, Work Motivation, Personality Theories
John L. Silva, Emeritus, Clinical, Counseling, Testing
Anthony J. Stahelski, Organization Development, Social Psychology, Small Group Interaction
Stephanie Stein, School Psychology, Behavior Disorders in Children, Lifespan Development, Psychopathology
Elizabeth M. Street, Educational Psychology, Learning Theory, Exceptional Children, Behavior Analysis
Warren R. Street, Social Psychology, History of Psychology, General Experimental, Computer Methods
Philip Tolin, Sensation and Perception, Human Factors, Experimental
Lisa L. Weyandt, School Psychology, Developmental Neuropsychology, Attention Deficit Hyperactivity Disorder

Associate Professors
W. Owen Dugmore, Counseling, Psychology of Adjustment
Terrence J. Schwartz, Educational Psychology, Counseling Psychology
Wendy A. Williams, General Experimental, Operant Conditioning, Animal Behavior

Assistant Professors
Neal A. Bowen, Multicultural Counseling, Treatment of Trauma, Migration Issues
J. Phillip Diaz, School Psychology, Educational Psychology, Pediatric Neuropsychology
Andrew M. Downs, Counseling Psychology, Disorders of Childhood
Marte Fallshore, Human Learning and Memory; Development of Expertise, Statistics, Cognition, Humor
Sally Kennedy, Counseling Psychology, Identity Development, Attitudes and Values
Megan D. Matheson, General Experimental, Primate Behavior, and Comparative Psychology
Jeffrey M. Penick, Counseling Psychology, Health Psychology, Adult Development

General Departmental Information
The Department of Psychology offers courses of study leading to the Master of Science degree in Experimental Psychology, Counseling Psychology, and Organization Development (see separate program listing) and to the Master of Education Degree in School Counseling and School Psychology. For students already holding the Master’s degree, certification-only programs are offered in
Admission Requirements

Admission to these programs is based on evaluation of the student’s prior scholastic record; verbal and quantitative scores on the Graduate Record Examination; 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.

By the end of the second quarter in residence, each student is expected to file a Course of Study form 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 Chair. The student is expected to complete at least 30 credits after full admission to the program. Not more than six (6) credits from 400-level courses may apply toward the Master’s degree.

Students who wish to use faculty time or departmental resources for completion of thesis work must register for at least two (2) credits 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 Counseling, School Counseling, or School Psychology programs will be required to have on file a completed, current FBI 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.

Practicum 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/U.

Final Examination. Candidates for the Master’s 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.

Master of Science Specialization: Experimental Psychology

Program Coordinator: Philip Tolin
Psychology 421

The Experimental Psychology specialization reflects our commitment to provide students with a generalized background in experimental psychology while allowing them to concentrate in areas of study adequately represented among the faculty. These areas currently include Industrial/Organizational Psychology, Primate Behavior, Educational Psychology, and Animal Behavior. It may also be possible to develop curricular tracks in other areas of psychology and/or interdisciplinary programs; however, to be sure that a curriculum can be developed that meets the student’s needs, it should be planned in consultation with a faculty advisor prior to enrollment in the program.

Upon enrolling, students will meet with their faculty advisors to discuss objectives and to establish a research plan. Collaborative research is encouraged, beginning with a first-year research project developed in conjunction with the advisor. This research project may lead to the student’s Master’s thesis in the second year.

Prerequisites: PSY 301, 362, 363, 444, 461 (or approved equivalents). Prerequisite courses may be taken concurrently with certain program courses.

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PSY 362</td>
<td>Experimental Psychology</td>
<td>4</td>
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<tr>
<td>PSY 555</td>
<td>Design and Analysis for Applied</td>
<td>4</td>
</tr>
<tr>
<td>Research</td>
<td></td>
<td></td>
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<tr>
<td>PSY 558</td>
<td>Advanced Statistics</td>
<td>5</td>
</tr>
<tr>
<td>PSY 562</td>
<td>Issues in Learning and Memory</td>
<td>5</td>
</tr>
<tr>
<td>PSY 576</td>
<td>Comparative Psychology</td>
<td>4</td>
</tr>
<tr>
<td>PSY 588</td>
<td>Physiological Psychology</td>
<td>4</td>
</tr>
<tr>
<td>PSY 700</td>
<td>Thesis</td>
<td>6</td>
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<tr>
<td></td>
<td><strong>Subtotal</strong></td>
<td><strong>32</strong></td>
</tr>
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</table>

Choose by advisement one of the following:

General Experimental Emphasis

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 551</td>
<td>Behavior Analysis</td>
<td>4</td>
</tr>
<tr>
<td>PSY 580</td>
<td>Current Issues in Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 595</td>
<td>Graduate Research</td>
<td>3-10</td>
</tr>
<tr>
<td>Approved electives (1-18)</td>
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OR

Industrial/Organizational Emphasis

<table>
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>PSY 510</td>
<td>Social Psychology of Small Group</td>
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<tr>
<td>Behavior</td>
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<tr>
<td>PSY 540</td>
<td>Psychology Applied to Work</td>
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<tr>
<td></td>
<td><strong>Subtotal</strong></td>
<td><strong>32</strong></td>
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</table>

PSYCHOLOGY 233

School Counseling and School Psychology.
More information about our graduate program is available on our Web site, www.cwu.edu/~psych.
Master of Education and/or Certification in School Counseling and School Psychology

Specialization: School Counseling

Program Coordinator: Jeffrey M. Penick

Psychology 461

The M.Ed. and certification programs in School Counseling train specialists to provide individual and group counseling in the schools and to consult with parents and teachers concerning the social, educational, and developmental tasks of children and youth. The State Board of Education’s standards for certification of school counselors require that the candidate complete an approved graduate program in counseling which has been developed in consort with school and professional organizations. Central Washington University is affiliated with an Educational Staff Associate (ESA) Professional Education Advisory Board for the preparation of school counselors. The program emphasizes supervised practicum and field experiences. Upon completion of the program, the individual will be qualified for the initial level certificate as a school counselor in the State of Washington.

Candidates for initial certification generally follow the two-year program leading to the Master of Education degree in School Counseling. It is possible to obtain certification without becoming a candidate for the M.Ed. degree. The latter is recommended for those persons who have earned or are earning Master’s or Doctoral degrees in such allied disciplines as Education, Special Education, Counseling, Speech Pathology and Sociology. For those candidates seeking the degree in School Counseling, the courses listed are required. Those who desire to meet certification requirements in School Counseling and who already hold a Master’s degree, must complete the courses listed below (or equivalents) with the exception of the thesis. The certification program also requires satisfactory completion of a comprehensive examination.

Prerequisites: PSY 362, 363 (or approved equivalents) may be taken concurrently with certain program courses. Please note the background check and liability insurance requirements described in the general departmental information section.

Required Courses Credits
PSY 501, The School Psychologist and School Counselor 3
PSY 544, Tests and Measurements 4
PSY 551, Behavior Analysis 4
PSY 552, Human Growth and Development, Advanced 3
PSY 555, Design and Analysis for Applied Research (in lieu of EDF 510) 4
PSY 559, Advanced Educational Psychology 4
*PSY 560, Introduction to Counseling 4
PSY 561, Group Counseling 3
PSY 567, Counseling Strategies for Children and Adolescents 3
PSY 571, Counseling for Relationships and Families 4
PSY 573, Career Development 3
PSY 574, Multicultural Counseling 3
PSY 584, Behavior Disorders and Psychopathology 4
PSY 585, Counseling Assessment Techniques 5
*PSY 593.A, Introductory Practicum in Counseling 4
PSY 593.B, Practicum in Counseling - Goal Setting and Treatment Planning 3
PSY 593.C, Advanced Practicum in Counseling I 3
PSY 593.D, Advanced Practicum in Counseling II 3
PSY 593.E, Group Counseling Practicum 3
PSY 684.2, School Counseling Internship 15
PSY 700, Thesis 6

Total 88

*PSY 560 and 593.A are taken concurrently. Successful completion of both is required for final admission to the School Counseling program.

Specialization: School Psychology

Program Coordinator: Eugene R. Johnson

Psychology 118

The School Psychology preparation program consists of two interrelated components: (1) Master’s degree and (2) remaining certification requirements. 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 consort 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 for both components of the program except the thesis.) Successful completion of both portions of the preparation program at Central Washington University leads to eligibility for initial certification as an educational staff associate-school psychologist and national certification through the National Association of School Psychologists.

Prerequisites: PSY 301, 362, 363, 444, 453, (or approved equivalents) may be taken concurrently with certain program courses.

Master’s Degree Requirements

The Master of Education degree in School Psychology is granted to the candidate upon completion of a minimum of 49 quarter hours of coursework including thesis. The following courses (or approved equivalents) are required:

Required Courses Credits
EDF 507, Studies & Problems in Intercultural Education 3
PSY 552, Human Growth and Development, Advanced 3
PSY 555, Design Analysis for Applied Research (in lieu of EDF 510) 4
PSY 501, The School Psychologist and School Counselor 4
*PSY 560, Introduction to Counseling 4
PSY 561, Group Counseling 3
PSY 567, Counseling Strategies for Children and Adolescents 3
PSY 571, Counseling for Relationships and Families 4
PSY 573, Career Development 3
PSY 574, Multicultural Counseling 3
PSY 584, Behavior Disorders and Psychopathology 4
PSY 585, Counseling Assessment Techniques 5
*PSY 593.A, Introductory Practicum in Counseling 4
PSY 593.B, Practicum in Counseling - Goal Setting and Treatment Planning 3
PSY 593.C, Advanced Practicum in Counseling I 3
PSY 593.D, Advanced Practicum in Counseling II 3
PSY 593.E, Group Counseling Practicum 3
PSY 684.2, School Counseling Internship 15
PSY 700, Thesis 6

Total 88

*PSY 560 and 593.A are taken concurrently. Successful completion of both is required for final admission to the School Psychology program.
 Remaining Requirements for School Psychology Certification

In addition to completing the Master's degree requirements, the candidate must complete all remaining certification requirements before being recommended to the State Board of Education for certification as a School Psychologist. These courses may be taken concurrently with the Master's degree requirements. The following courses (or approved equivalents) are required:

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PSY 500</td>
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<td>PSY 525</td>
<td>Group Counseling</td>
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<td>PSY 537</td>
<td>Career Development</td>
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<td>PSY 557</td>
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<td>PSY 558</td>
<td>Physiological Psychology</td>
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<td>Advanced Educational Psychology</td>
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<td>PSY 561</td>
<td>Evolutionary Psychology</td>
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<td>PSY 562</td>
<td>Issues in Learning and Memory</td>
<td>3</td>
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<tr>
<td>PSY 573</td>
<td>Career Development</td>
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<td>PSY 575</td>
<td>Consultation and Psychopathology</td>
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<td>PSY 576</td>
<td>Comparative Psychology</td>
<td>3</td>
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<tr>
<td>PSY 579</td>
<td>Human Factors</td>
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<td>PSY 584</td>
<td>Behavior Disorders and</td>
<td>3</td>
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<td></td>
<td>Psychopathology</td>
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<tr>
<td>PSY 585</td>
<td>Counseling Assessment Techniques</td>
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<tr>
<td>PSY 588</td>
<td>Psychological Assessment Techniques</td>
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<td>PSY 592</td>
<td>Practicum in School Psychology</td>
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<td>PSY 592.2</td>
<td>Practicum in School Psychology</td>
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<td>PSY 593</td>
<td>School Psychology Internship</td>
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<td>PSY 596</td>
<td>Consultation and Psychopathology</td>
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<td>PSY 597</td>
<td>Counseling Assessment Techniques</td>
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<td>PSY 599</td>
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<tr>
<td>PSY 683</td>
<td>School Psychology Internship</td>
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</table>

**Total Additional Credits for Certification** 50

**Total Credits for M.Ed and Certification** 99

Graduate Courses in Psychology

**PSY 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.

**PSY 501. The School Psychologist and School Counselor** (3).

Prerequisite, admission to the school psychology or school counseling program or permission of instructor. An introduction to the activities of school psychologists and the conditions under which they function.

**PSY 510. Group Processes and Team Building** (5).

Exploration of small group behavior with an emphasis on how groups work as teams.

**PSY 525. Psychology of Reading** (3).

Prerequisites, a reading methods course, a basic psychology of learning course, or permission of the instructor. Principles of learning and readiness, perception, psychological, and physiological aspects of reading. Same as ED 525. Students may not receive credit for both.

**PSY 540. Psychology Applied to Work** (5).

Application of psychological principles to organizational issues.

**PSY 542. Evolutionary Psychology** (4).

Application of the principles of evolution by natural selection to the understanding of human and nonhuman behavior and cognition. Same as PSY 442 with additional assignments for graduate students. Students may not receive credit for both PSY 442 and PSY 542.

**PSY 543. Tests and Measurements** (4).

Prerequisites, PSY 315 or PSY 362. Psychological and educational tests, theory and practice. Same as PSY 443. Students may not receive credit for both.

**PSY 550. Research in Natural Environments** (4). A seminar in describing behavior, developing questions, designing procedures and analyzing data that address applied and naturalistic research situations.

**PSY 551. Behavior Analysis** (4).

Techniques in applying behavioral principles to human performance.

**PSY 552. Human Growth and Development, Advanced** (3).

Prerequisite, PSY 313, 314, or permission of instructor. Developmental theories, multicultural differences, exceptionality, related research, and implications for education and guidance.


Prerequisite, PSY 365 or equivalent. Design and analysis of experimental and quasi-experimental research, with an emphasis on applied settings.

**PSY 556. Advanced Evaluative Techniques** (5).

Prerequisite, PSY 444 and admission to the school psychology program. Evaluation procedures and assessment devices for use with children and adolescents, emphasizing variables affecting test performance, interpretation and report writing.

**PSY 558. Advanced Statistics** (5).

Prerequisite, PSY 555. Advanced topics in analysis of variance and introduction to multiple regression, factor analysis and MANOVA.

**PSY 559. Advanced Educational Psychology** (4).

Prerequisite, PSY 315 or permission of instructor. Investigation of principles of learning and behavior as it relates to educational situations, including major theories of learning and development and assessment/evaluation procedures.

**PSY 560. Introduction to Counseling** (4).

Prerequisite, admission to the graduate programs in Counseling Psychology, School Counseling, or School Psychology. To be taken concurrently with PSY 593.A. Introduction to counseling theories and practice.

**PSY 561. Group Counseling** (3).

Prerequisite, PSY 360. Theoretical approaches to group counseling, and introductory laboratory/demonstration experience.

**PSY 562. Issues in Learning and Memory** (5).

Prerequisite, PSY 301 or permission of instructor.

**PSY 564. Intellectual Assessment** (5).

Prerequisite, PSY 444 and admission to the school psychology program. Administration of intellectual assessment instruments, early childhood through adult. Variables affecting test performance, interpretation and report writing are emphasized.

**PSY 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. Same as BIOL 567. Students may not receive credit for both PSY 565 and either BIOL 567 and BIOL 467.

**PSY 566. Personality Assessment** (5).

Prerequisite, PSY 444 and admission to the school psychology program. Attainment of competencies in the use of personality assessment instruments, childhood through adult.

**PSY 567. Counseling Strategies for Children and Adolescents** (3).

Prerequisites, PSY 500 and PSY 593.A. Basic counseling treatment strategies for common problems presented by child and adolescent clients.

**PSY 568. Counseling Strategies for Adults** (3).

Prerequisite, PSY 560 and PSY 593.A. Basic counseling treatment strategies for common problems by adult clients.

**PSY 571. Counseling for Children and Families** (4).

Prerequisites, PSY 560 or permission of instructor. Major theoretical approaches to counseling with couples and families.

**PSY 573. Career Assessment** (3).

Prerequisite, admission to the graduate programs in Counseling Psychology, School Counseling, or School Psychology. Major theoretical and research, training, and practice.

**PSY 576. Comparative Psychology** (4).

Prerequisite, permission of instructor. Invertebrates and vertebrates; laboratory and field observation.

**PSY 579. Human Factors** (4).

Psychological principles in the design of equipment and environments.

**PSY 580. Current Issues in Psychology** (3).

May be repeated.

**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).

Prerequisite, PSY 449 or permission of instructor. Major systems of classification for normal and abnormal child/adult behavior.

**PSY 585. Counseling Assessment Techniques** (5).

Prerequisites, PSY 544 and permission of instructor. Use of structured interviews, behavioral observations, personality measures and standardized psychological tests in counseling practice.
PSY 588. Physiological Psychology (4). Prerequisite, BIOL 201 or permission of instructor. Problems, methods and techniques of neurophysiology and the physiology of human and infrahuman behavior patterns. Double listed with PSY 478. Additional requirements for PSY 588. Student may not receive credit for both PSY 478 and PSY 588.

PSY 591. Workshop (1-6).

PSY 592. Practicum in School Psychology (3). Prerequisite, admission to the school psychology program. Attainment of competence in the use of observational techniques, anecdotal reports, rating scales, behavioral analyses, and developmental interviews. Grade will be S or U.

PSY 592.2 Practicum in School Psychology (3). Prerequisite, PSY 592.1. Experience in complete case workouts within state and federal requirements. Includes assessments, interpretation of results, treatment plans and educational programs. Emphasis on developing consultation skills. May be repeated for credit. Grade will be S or U.

PSY 593.A. Introductory Practicum in Counseling (4). Prerequisite, admission to graduate programs in Counseling Psychology, School Counseling, or School Psychology and permission of Department Chair. To be taken concurrently with PSY 560. Interviews, role-playing, observation, and analysis of interview behavior. Grade will be S or U. May be repeated. A maximum of 4 credits may be included on the Course of Study on the Master’s degree.

PSY 593.B. Practicum in Counseling - Goal Setting and Treatment Planning (3). Prerequisites, PSY 551 (may be taken concurrently), PSY 560, 593.A and permission of Department Chair. Assess client problems, set goals, and plan counseling strategies. Grade will be S or U.

PSY 593.C. Advanced Practicum in Counseling I (3). Prerequisites, PSY 593.B and permission of Department Chair. Implementation of counseling strategies with children, adults, couples or families. Grade will be S or U.

PSY 593.D. Advanced Practicum in Counseling II (3). Prerequisites, PSY 593.C, PSY 567, PSY 571 (all may be taken concurrently) and permission of the Department Chair. Implementation and evaluation of counseling with children, adults, couples or families. Grade will be S or U.

PSY 593.E. Group Counseling Practicum (3). Prerequisites, PSY 561, PSY 593.B and permission of Department Chair. Supervised counseling of child or adult groups. Grade will be S or U.


PSY 595. Graduate Research (1-10). For students working on library research, thesis proposal, and collection of data prior to writing a thesis. Students using faculty time, supplies and/or equipment for thesis work must be registered for PSY 595 or PSY 700. May be repeated for credit. Maximum of 10 credits may be included on Course of Study for the Master’s degree.

PSY 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated.

PSY 597. Supervised Field Experience in Counseling (3). Prerequisite, advanced status in counseling options or advanced degree in counseling or equivalent. Grade will be S or U. May be repeated.

PSY 598. Special Topics (1-5). PSY 599. Seminar (1-5). May be repeated.

PSY 599.1. Professional Problems (3). Prerequisite, PSY 593.A. Ethics and legal issues, special minority population issues, and community resources.

PSY 683. School Psychology Internship (5-15). Prerequisite, permission of Department Chair. A full-time placement in school district (K-12). Grade will be S or U.

PSY 684.1. Counseling Internship (3-15). Prerequisite, PSY 593.D, PSY 593.E, PSY 584 and permission of Department Chair. Full-time internship placement in a mental health agency or psychiatric hospital. Grade will be S or U.

PSY 684.2. School Counseling Internship (3-15). Prerequisite, PSY 593.D and PSY 593.E and permission of Department Chair. Placement in the public schools (K-12). Grade will be S or U.

PSY 693. Supervision in School Psychology Practicum (1-6). Prerequisite, PSY 592.1 or equivalent and Department Chair approval. May be repeated. Training in the supervision of preparatory and initial level school psychology trainees.

PSY 694. Supervision in Counseling Practicum (1-6). Prerequisites, PSY 593.B or equivalent and Department Chair approval. May be repeated. Training in the supervision of beginning and paraprofessional counselors.

PSY 700. Master’s Thesis, Project Study and/or Examination (1-6). Prerequisite, permission of Chair of student’s graduate faculty supervisory committee. Designed to credit and record supervised study for the Master’s thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits.

RESOURCES MANAGEMENT

Graduate Faculty
Program Coordinators:

Natural Resources:
Dr. Anthony Gabriel, Department of Geography and Land Studies
Central Washington University
400 E 8th Ave, Lind 119
Ellensburg, WA 98926-7420
(509) 963-3188
e-mail: gabriela@cwu.edu

Cultural Resources:
Dr. Steven Hackenberger
Department of Anthropology
Central Washington University
400 E 8th Ave, Farrell 317
Ellensburg, WA 98926-7544
(509) 963-3301
e-mail: hackenbe@cwu.edu

Professors:
Donald J. Cocheba, Emeritus, Economics,
Resource/Wildlife Economics
Anne S. Dennan, Emeritus, Anthropology,
American Culture Steven Hackenberger,
Anthropology, Cultural Resource Management, Cultural Ecology
David R. Hosford, Botany, Fungi in Forest Ecosystems, Mushroom Conservation
James L. Huckabay, Geography, Energy Resources, Aerial Photo Interpretation
Nancy Huhtquist, Geography, GIS, Urban Geography, Computer Cartography
Paul James, Biology, Fisheries Management, Fish Ecology
David S. Kaufman, Sociology, Social Impacts of Resource Management, Demography
George Macinko, Emeritus, Geography, Resources and Man, Environmental Philosophy
Richard S. Mack, Economics, Resource and Regional Economics
Morris Uebelacker, Geography, Resources and Land Utilization Patterns, Cultural Resource Management
Rex Wirth, Political Science, Resource Policy in Developing Nations

Associate Professors:
Tracy J. Andrews, Anthropology, Sociocultural Anthropology, Ecological Anthropology, Ethnicity
Kristina Ernest, Biology, Ecology, Wildlife Management
Anthony Gabriel, Geography, Biogeography, Lake and River Ecosystems, Coastal and Wetland Management, Pacific Northwest
Robert Hickey, Geography, GIS Remote Sensing, Environmental Impacts, Coastal Zones, Australia
Loran E. Catsinger, Anthropology, Cultural Anthropology
Robert Kuhlen, Geography, Land-use Planning, Cultural Ecology, Oceania
Karl Lillquist, Geography, Physical Geography, Remote Sensing, Global Change, Arid Lands

Assistant Professor:
Christopher Kent, Geography, Physical Geography, Water Resources, Watershed Planning, North America
Patrick Lubinski, Anthropology, Zoarchaeology, Computer Applications, Cultural Resource Management, Western North America
Patrick McCutcheon, Anthropology, Archaeology, Cultural Resource Management
Thomas Wellock, History, Environmental History, The American West, Nuclear Energy

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

Master of Science Resource Management

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, courses in geographic information systems, and a specialty track in either natural resource areas (management of land, mineral, water, 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 Graduate Studies and Research. The Course of Study is selected by advisement before completing 25 credits.

Program Admission Requirements. In addition to general regulations for admission to Master’s programs, applicants for admission must have the following qualifications:
   A. A solid background in a discipline closely related to the resources they expect to manage. Normally, a bachelor's degree is required in a technical field such as one of the biological or physical sciences, geography, engineering, geology or earth sciences, oceanography, archaeology or ethnology, history or architecture. In some cases work experience may be accepted in lieu of a technical major. Before admission, program faculty will evaluate the academic coursework and experience of all applicants for admission, and will recommend remedial coursework if, in their judgment, there are deficiencies in pre-baccalaureate work which need to be overcome before entrance into the program.
   B. A high proficiency in written and spoken English as well as potential for post-graduate study and research. Evidence of proficiency and potential may include: GRE scores, samples of previous writing, letters of recommendation, an interview.

C. A good background in basic statistics (the equivalent of two quarters of undergraduate statistics), knowledge of microeconomic principles, and some knowledge of computer systems (the equivalent of a one-quarter undergraduate course).

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.

Required Core Courses Credits

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>REM 501</td>
<td>Introduction to Resource Management</td>
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<tr>
<td>REM 502</td>
<td>Policy and Law in Resource Management</td>
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<tr>
<td>REM 505</td>
<td>Introduction to Graduate Research</td>
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<tr>
<td>REM 506</td>
<td>Resource Management Colloquium</td>
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<td>REM 522</td>
<td>Resource Analysis</td>
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<tr>
<td>REM 562</td>
<td>Issues and Conflicts in Resource Management</td>
<td>3</td>
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</table>

Subtotal 22

REM Course Requirements

Core Credits: 22

Prerequisite: ECON 462 (5)

Electives (to be selected by advisement):

  - Natural Resource or Cultural Resource Management (minimum 15). 27

REM 700, Thesis Credits: 6

Total: 60

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.

Graduate Courses in Resource Management

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 505. Introduction to Graduate Research (3). Prerequisite, permission of instructor. Discussion and application of research problem definition, research methods, literature review, and funding sources as applied to a research proposal.

REM 506. Resource Management Colloquium (1). This class is a seminar series for REM students to both observe and present relevant research. All REM students must take this class twice: once as an attendee, once as an attendee who must also present their research proposal. Grade will be S/U.

REM 515. GIS in Resource Management (3). Introduction to uses and management applications of Geographic Information Systems, with emphasis on discovering its utility as a technology for both natural and cultural resources.

REM 522. Resource Analysis (5). Prerequisite, ECON 462. 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.”


REM 590. Internship (1-8). Prerequisite, approval of program coordinator. Supervised off-campus practical experience in accordance with a written agreement between student, faculty and cooperating agency. Grade will be S or U. May be repeated for credit.

REM 593. Resource Management Field Experience (1-8). Prerequisites, permission of instructor and program director. Off campus experience in the field study of resource management. May be repeated for credit.

REM 597. Graduate Research (1-10). May be repeated for credit.

REM 598. Special Topics (1-5).

REM 599. Seminar (1-3).

REM 700. Master’s Thesis, Project Study and/or Examination (1-6). Prerequisite, permission of Chair of student’s graduate faculty supervisory committee. Designed to credit and record supervised study for the Master’s thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits.
SCIENCE EDUCATION

Graduate Faculty
Program Coordinator: Martha J. Kurtz
SCI 302F

Associate Professors
Martha J. Kurtz, Chemistry and Science Education
Bruce C. Palmquist, Physics and Science Education

Assistant Professor
Ian J. Quitadamo, Biological Sciences and Science Education

General Departmental 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.

Graduate Courses in Science Education

SCED 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.

SCED 598. Special Topics (1-5).

SOCIOMETRY

Graduate Faculty
Chair: Kirk Johnson
Farrell 409

Professors
Laura Appleton, Social Roles, Social Movements, Social Theory
John R. Dugan, Statistics, Methodology, Social Psychology
Charles L. McGehee, Social Psychology

Associate Professors
Delores Cleary, Crime
Nelson Pichardo, Ethnic Studies, Co-Society
Nancy Wessel, Sociology of family, Child Abuse, Social Change

SPECIAL EDUCATION

Graduate Faculty
Program Coordinator: George W. Bellah McConnell: 106

Professors
Wesley Van Tassel, Acting, Directing, Management, Literature

Associate Professor
Brenda J. Hubbard, Acting, Improvisation, Directing, Literature
George W. Bellah, Combat, Movement, Acting, Directing
Scott Robinson, Costume Design and Technology
Michael J. Smith, Acting, Voice, Improvisation

Assistant Professors
Christina Barrigan, Lighting Design and Technology
Derek Lane, Scenic Design and Technology

Adjunct Professor/Lecturer
David Barnett, McConnell Stage Manager, Technical Direction, Scene Technology

THEATRE ARTS

Graduate Faculty
Program Coordinator: George W. Bellah McConnell: 106

Professors
Wesley Van Tassel, Acting, Directing, Management, Literature

Associate Professor
Brenda J. Hubbard, Acting, Improvisation, Directing, Literature
George W. Bellah, Combat, Movement, Acting, Directing
Scott Robinson, Costume Design and Technology
Michael J. Smith, Acting, Voice, Improvisation

Assistant Professors
Christina Barrigan, Lighting Design and Technology
Derek Lane, Scenic Design and Technology

Adjunct Professor/Lecturer
David Barnett, McConnell Stage Manager, Technical Direction, Scene Technology

Master of Arts

Theatre Production

Program Overview

The graduate program in Theatre Arts is designed to prepare English and drama teachers to teach and produce theatre in the secondary and middle schools. Required core 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. Some graduate study is available during the regular school year. It should be noted that most students find it necessary to register for thesis credits during the academic year.

Special Facilities and Resources

The department works in two theatres and various studios and shops.

Most graduate courses are offered in the first and second summer sessions. Many are intensive and meet from three to 10 hours per day. Most candidates can complete approximately 16 credits per summer. The Theatre Arts department also offers graduate courses in the Drama Teachers’ Summer Institute. Qualified students in the Institute may enroll in the master’s degree courses if room permits, and master’s candidates may enroll in selected courses from the Institute listings.

Housing for master’s candidates and Summer Institute teachers is available in nearby university accommodations. A limited number of teaching or research assistantships are available to qualified candidates for both the summer and the academic year.

Admission Requirements

Incoming candidates are expected to meet the requirements for admission to the Graduate School at Central Washington University 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 courses if the candidate does not hold a bachelor’s degree in theatre and basic course work in theatre history. (Prerequisite courses may often be taken in the Drama Teachers’ Summer Institute.) An assessment entry exam is required and is taken shortly after classes begin. Neither the Graduate Record Examination nor a foreign language is required for the program.
Program Requirements
A minimum of 50 credits is required for the degree. Thesis credits may be included in the minimum. The thesis required is a full production of a play or musical at an approved outside venue 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 view the production in performance at the candidate’s theatre. An oral examination and defense of the 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. Of the 50 credits required, 40 must be at the 500 level. Prerequisites required for admission to the program may not be applied.

Graduate Assistantships
Teaching or service assistantships are assigned to second or third summer candidates. A limited number are available. Assistantships are appointed by the Dean of Graduate Studies upon recommendation of the department chair.
Assistantship applications must be completed by Feb. 16 in order to insure consideration. Applicants should submit all materials required by the university graduate office. Contact Academic Services at (509) 963-3001 to receive application materials.

Program Requirements
A core program from seven components is required.

Required Core Courses Credits
Component 1: Directing Skills ........................ 13
TH 539, Directing Young Actors (3)
TH 540, Graduate Directing I (3)
TH 541, Graduate Directing II (3)
TH 542, Musical Theatre Directing (4)

Component 2: History, Literature and Criticism .................................. 9
TH 501, Introduction to Graduate Studies (1)
TH 510, Studies in Dramatic Literature (4)
TH 511, Analysis and Criticism (4)*
*Prerequisite: 9 credits of theatre history or literature or committee approval

Component 3: Acting Skills .................................. 6
TH 543, Teaching Young Actors (3)
TH 544, Acting Styles (3)

Component 4: Drama in the Classroom .............. 6
TH 520, Exploring Drama in the Classroom (3)
TH 584, Puppetry in the Classroom (3)

Component 5: Technology and Design ............ 6
TH 560, Stage and TV Makeup (3)
TH 562, Costume Accessories (3)
TH 566, Masks and Makeup (3)
TH 568, Lighting Techniques (3)
TH 580, Scenic Methods (3)

Component 6: Movement and Improvisation .................... 4
TH 531, Mime and Movement (2)
TH 533, Stage Combat and Choreography (2)
TH 534, Improvisational Techniques (2)

Component 7: Thesis Project ..................... 6
TH 700, Master’s Thesis, Project Study and/or Examination (6)

Total 50

Component 8: Optional
TH 570, Musical Theatre Workshop (1-6)
TH 585, Puppet Theatre Workshop (1-6)

Graduate Courses in Theatre Arts
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.

TH 501. Introduction to Graduate Studies (1). Prerequisite: Admission to the M.A. program. Introduction to current theatre research topics and library resources.

TH 510. Studies in Dramatic Literature (4). Prerequisite: TH 501 or concurrent enrollment. Course content identified by title in the university class schedule.

TH 511. Analysis and Criticism (4). Prerequisite: TH 501 or concurrent enrollment. Critical analysis from Aristotle to the present as applied to selected dramatic texts.

TH 520. Exploring Drama in the Classroom (3). Projects for building drama skills through classroom activities ranging from creative movement to storytelling.

TH 521. Curriculum & Program Development (2). Exploration of national trends and practices in high school drama programs with emphasis on development in specific situations.

TH 522. Program and Curriculum Activities (3). Practical training and application of the units of study, warm-up techniques, and production fundamentals that are the basis of the high school drama curriculum. Continuation of TH 521. Courses need not be taken in sequence.

TH 531. Mime and Movement (2). Techniques for teaching basic mime skills and stage movement classes to teenage performers.

TH 532. Stage Combat & Choreography (2). Training in combat and choreography skills, and practice in teaching these skills for stage performance with weapons.

TH 533. Improvisational Techniques (2). Improvisational exercises to teach young performers for the purpose of freeing the body and voice, emphasis on body.

TH 539. Directing Young Actors (3). Techniques to draw truth from young actors and eliminate over-acting, ham, and frozen memorization.

TH 540. Graduate Directing I (3). Theory and practice in directing realistic plays.

TH 541. Graduate Directing II (3). Theory and practice in directing classical plays.


TH 543. Teaching Young Actors (3). Study and exercises in specific directing techniques: focus, blocking, script analysis, and teaching subtext and objectives to young actors. Continuation of TH 539.

TH 544. Acting Styles (3). Practice in applying skills of performance to special textual needs, including stylized comedy, modern realism, and heightened language. Same as TH 444. Student may not receive credit for both.

TH 545. Voice and Diction (2). Practice in voice production and techniques for teaching voice skills to young performers. Includes a unit on speaking Shakespearean verse.

TH 546. Teaching Shakespeare Performance (3). Prerequisite, acceptance into the Drama Teachers’ Summer Institute. Techniques to guide young actors for analysis, preparation, and speaking Shakespeare’s language.

TH 560. Stage & TV Makeup (3). Study of materials, and practice in techniques of creating effect through makeup. Formerly TH 460, may not receive credit for both.

TH 562. Costume Accessories (3). Hat making and accessory construction and their relationship to theatrical costuming. Formerly TH 462, may not receive credit for both.

TH 565. Creative Costuming (3). Creating costumes, both realistic and classic, from old clothes and unusual materials with a minimal budget.

TH 566. Makeup and Masks (3). Creating masks from face castings and techniques for special effects makeup. Formerly TH 466, may not receive credit for both.

TH 568. Lighting Technique (3). Study of color, instruments, drafting and electricity for lighting stage productions, with emphasis on limited equipment and budgets.

TH 570. Music Theatre Workshop (1-6). Participation in the production of a large musical from first rehearsal to opening night.
TH 571. Design Methodology (3). Prerequisites: TH 510, Study and practice in the concepts and fundamentals of design for the stage.

TH 580. Scenic Methods (3). Study and practice in techniques of scenery construction, stage rigging, and painting.


TH 584. Puppetry in the Classroom (3). Art of puppetry applied to classroom use by teachers and counselors, emphasizing self-expression and entertainment.

TH 585. Puppet Theatre Workshop (1-6). Participation in the production of a complete puppet theatre show from construction of puppets to first performance.

TH 591. Workshop (1-6). No more than two workshops for a combined maximum of eight credits can be applied toward a Master's program.

TH 596. Individual Study (1-6).

TH 598. Special Topics (1-6).

TH 599. Seminar (1-5). May be repeated.

TH 700. Master's Thesis Project (1-6). Prerequisites, permission of chair of student’s graduate faculty supervisory committee. Designed to credit and record supervised study for the Master’s examination. Grade will be either S or U. May be repeated for up to 6 credits.