

TEACHER EDUCATION & MATHEMATICS DIVISION

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Introduction of Teacher Education & Mathematics Division

The Division of Teacher Education & Mathematics provides access to high-quality baccalaureate degree programs in Elementary Education, Secondary Education, Mathematics, and General and Interdisciplinary Studies; as well as, a variety of certificates and endorsements using, both, traditional and non-traditional means of delivery for a diverse population.

SPECIALIZED ACCREDITATION

The Teacher Education Program: National Council for Accreditation of Teacher Education (NCATE), an affiliate of the Council for Accreditation of Educator Preparation (CAEP). NCATE consolidated with TEAC in 2013 to form CAEP. The Teacher Education program is also accredited by the State of Idaho.

Majors Offered

ELEMENTARY EDUCATION WITH MINOR ENDORSEMENTS IN:

- Literacy K-12
- Special Education: Exceptional Child Generalist K-12
- Middle School Math 5-9
- Middle School Science 5-9
- Middle School Social Studies

SECONDARY EDUCATION WITH ENDORSEMENTS IN:

- Biology
- Chemistry
- Communication Arts
- Earth Science
- English
- Math
- Natural Science
- PE/Health
- Psychology
- Social Studies

GENERAL STUDIES: EDUCATION Mathematics

Program Outcomes

1. The program completer understands how learners grow and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate and challenging learning experiences.
2. The program completer uses understanding of individual differences and diverse cultures and communities to ensure inclusive learning environments that enable each learner to meet high standards.
3. The program completer works with others to create environments that support individual and collaborative learning, and that encourage positive social interaction, active engagement in learning, and self motivation.
4. The program completer understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and creates learning experiences that make the discipline accessible and meaningful for learners to assure mastery of the content.

5. The program completer understands how to connect concepts and use differing perspectives to engage learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues.
6. The program completer understands and uses multiple methods of assessment to engage learners in their own growth, to monitor learner progress, and to guide the teacher's and learner's decision making.
7. The program completer plans instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context.
8. The program completer understands and uses a variety of instructional strategies to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways.
9. The program completer engages in ongoing professional learning and uses evidence to continually evaluate his/her practice, particularly the effects of his/her choices and actions on others (learners, families, other professionals, and the community), and adapts practice to meet the needs of each learner.
10. The program completer seeks appropriate leadership roles and opportunities to take responsibility for student learning, to collaborate with learners, families, colleagues, other school professionals, and community members to ensure learner growth, and to advance the profession.

Teacher Certification Process

LC State continues to draw regional recognition for its excellence in preparing teachers. The College offers innovative programs in elementary and secondary education that are integrated and competency-based. It promotes high quality in teaching through a unique combination of course coherence, collaborative instruction, community partnerships, and performance assessment. The programs are designed to prepare competent, caring teachers who have the knowledge, skills, and dispositions needed to effectively help all students learn. Quality field experiences are the cornerstone of LC State's Teacher Education Programs. Students participate in multiple school-based experiences with teachers who demonstrate "best practices." Field experiences begin with a twenty-hour practicum and culminate with an internship. These experiences provide teacher candidates with opportunities to explore the connection between theory and practice, as well as to work with students from culturally diverse and exceptional populations. Students gain confidence through reflective practice and competence through frequent interaction with a community of skilled practitioners. Students in teacher education will provide evidence through performance that they have become dedicated and knowledgeable professionals, content specialists, competent educational designers, capable educational facilitators, insightful educational evaluators, reflective professionals, and culturally responsive professionals before being recommended for teacher certification.

Candidates who satisfactorily complete a Teacher Education Program at LC State are eligible to apply for a State of Idaho Standard Instructional certificate (K-12) with endorsement(s) in their chosen field of study.

This certificate is issued by the State of Idaho Department of Education and is recognized in all 50 member states of the NASDTEC Interstate Contract (see Idaho Department of Education Professional School Personnel Certification Standards). Teacher certification requirements vary among all states, and applicants should address any questions concerning teacher certification requirements to the individual state teacher certification agencies.

LC State does not issue teaching certificates. The LC State Teacher Education Program does provide an institutional recommendation of approved program completion only for students who have successfully completed the program. The Idaho State Department of Education evaluates for certification only after the applicant completes the application process. A certificate or notation of deficiencies generally takes 30-45 days.

Prior to being recommended to the state for certification, candidates must pass a final review of their work. This consists of a formal oral evaluation by at least two faculty members and one on-site teacher educator. The candidate presents, at that review, a portfolio that reflects mastery of the concepts and skills required to enter the teaching profession. Candidates failing this final oral review are given a remediation plan and sit for the final review again.

1. Application for teacher certification is the sole responsibility of the graduate. Idaho certification procedures and forms will be provided following student teaching.
2. To obtain an official LC State Institutional Recommendation for the State of Idaho¹ indicating completion of an approved Teacher Education Program, the graduate must submit the following to the LC State Teacher Education & Mathematics Division:
 - a. A completed "Application for an Idaho Professional Education Credential" form;
 - b. Official transcripts from ALL higher education institutions attended except LC State;
 - c. A check or money order for the appropriate State of Idaho application fee;
 - d. Any additional documents required by the Idaho State Department of Education Teacher Certification Office.
3. The Teacher Education & Mathematics Division will only process, endorse, and mail to the Idaho State Department of Education Teacher Certification office complete applications. Incomplete applications will not be processed.
4. The applicant must supply all data requested on the application form(s).

¹ Official LCSC Institutional Recommendations may be required for other states. Please follow that state certification agency's procedures. It is the responsibility of the graduate to meet those requirements.

PACE Program - PATHWAY FOR ACCELERATED CERTIFICATION AND ENDORSEMENT

Using a distance learning format, the PACE Program offers a nontraditional path to teacher certification. Candidates who decide to enter the PACE program must initially apply for admission to Lewis-Clark State College.

ELEMENTARY PACE – ONLINE OPTION

This online Elementary PACE Program requires candidates to have completed high school and be admitted to Lewis-Clark State College. Candidates take online classes to fulfill the requirements for a Bachelor of Science degree in Elementary Education, a Standard Instructional Teaching Certificate, and an All Subjects, K-8 endorsement. Ideally, candidates should begin this program fall semester. All coursework except the clinical internship is taken online. Clinical internships will be completed at an elementary school near the candidate's home.

ELEMENTARY PACE – COUER D'ALENE CAMPUS

The PACE Elementary Program requires candidates to hold an associate or higher degree from an accredited college or university. Candidates will fulfill the requirements for a Bachelor of Science degree in Elementary Education, a Standard Instructional Teaching Certificate, and an All Subjects, K-8 endorsement at the conclusion of the program. Candidates officially begin the program in the summer, so they must plan to attend two consecutive summer sessions. The remaining coursework is accomplished in two semesters utilizing distance learning technology, and a final semester of on-site internship (near the candidate's home).

Candidates should apply to the PACE Elementary Program prior to the beginning of the first summer session. To be guaranteed a summer position, Phase I coursework must be complete. There are a fixed number of openings in the PACE Program, so qualified candidates will be admitted as positions open. When candidates are offered admission, they must accept within two weeks or forfeit their position on the list. Candidates must enroll in at least one course per semester and complete the two summer sessions. Candidates are allowed up to four years to complete the program; those who do not will have to reapply for admission.

The procedures for admission to the Teacher Education Program help assure that teacher candidates are prepared academically and well-motivated to complete the intensive teacher education coursework and internship field experiences.

See requirements for "Entrance/Admission into the Teacher Education Program" below.

PACE MASTERY-BASED PATHWAY

This program is designed to prepare individuals with a bachelor's degree to become fully certified teachers. The program is completed on-line with support from mentors and instructors while working full-time in the classroom. Additional professional development is also provided in your region. Courses can be completed in as little as two weeks or take as long as one calendar year depending on your needs. This program is also available for teachers who are seeking to add an additional endorsement area to an existing license.

The program is designed around the needs of the applicant and includes an individualized learning plan. The plan consists of the following elements:

- Five-module core program
- Weekly virtual seminar/conference
- Quarterly professional development
- Literacy proficiency exams (ICLS), or courses – if applicable
- Math proficiency exams (MTI/TMT) – if applicable
- Additional content coursework – if applicable

Those who are interested in the PACE Mastery-Based Pathway should request a transcript evaluation by the Teacher Education & Mathematics Division's Program Assistant at alporquis@lcsc.edu. Forms are available in our resource library, here (<https://www.lcsc.edu/education/student-resources/>). Follow the link to "Request for Transcript Evaluation".

PACE PROGRAM CONTACT INFORMATION

- o Dr. Teresa Carmack, Online Elementary Education PACE Program Coordinator, tacarmack@lcsc.edu; 208-792-2891
- o Dr. Melinda Tompkins, Coeur d'Alene Campus Elementary Education PACE Coordinator, mktompkins@lcsc.edu; 208-292-2530
- o Dr. Royal Toy, Secondary Education PACE Coordinator, retoy@lcsc.edu; 208-792-2730

EXPECTATIONS OF STUDENTS

Candidates for the baccalaureate degree in the Teacher Education Program must meet the LC State baccalaureate degree requirements, maintain an overall GPA of 3.0, and pass the Praxis II subject specialty exam(s) in their area as required by the State of Idaho. In addition, Elementary Education candidates must pass the State of Idaho Comprehensive Literacy Assessment. It is the student's responsibility to ensure that his/her program of study fulfills the General Education, major, minor, certification, and endorsement requirements. Requirements for graduation and requirements for teacher certification differ. The Office of Admission/Registrar has authority over graduation requirements. Therefore, the Teacher Education &

Mathematics Division does not substitute or waive any institutional General Education requirements. Further, such a substitution or waiver may jeopardize teacher certification. Students desiring to substitute or waive General Education requirements should consult with their Education advisor before petitioning.

PROFESSIONAL STANDARDS FOR THE K-12 TEACHER

Teacher Education faculty believe that in order to ensure the continuous intellectual, social, and physical development of all learners, the qualified teacher must perform several roles. In serving these roles, teachers demonstrate knowledge, skills, and dispositions related to eight main areas of professional competence. Successful teacher candidates must consistently exhibit:

1. Appropriate conduct as a professional
2. Knowledge of the foundations of the profession
3. Expertise in all subjects taught
4. Skills as an educational designer
5. Skills as an educational facilitator
6. Skills as an educational evaluator
7. Capacity for reflective practice
8. Ability to embrace the ideas of a culturally responsive educator.

Through participation in each of the Teacher Education programs at LC State, teacher candidates have opportunities to develop, nurture, and demonstrate their professional competence in each of these eight areas.

The Dedicated Professional. The teacher conducts herself/himself in a manner which shows care and concern for children and their learning and a commitment to the profession of education. The teacher exhibits high ethical and professional standards. The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.

The Knowledgeable Professional. The teacher is knowledgeable of how children, as individuals and in groups, learn and develop and how instruction can be provided to support the intellectual, social, and personal development of all types of learners. The teacher understands schools as organizations within the larger community context and the laws and norms that guide their operation.

The Content Specialist. The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he/she teaches. The teacher maintains currency in knowledge of the content area(s) and skills of the discipline.

The Educational Designer. The teacher plans and creates learning experiences based upon knowledge of subject matter, students, the community, and curriculum goals to make the central concepts, tools of inquiry, and structures of the discipline(s) he/she teaches meaningful for students. The teacher designs and develops learning opportunities which are congruent with how children learn and develop, which utilize well-selected instructional strategies and learning resources, and which are appropriately adapted to diverse learners.

The Educational Facilitator. The teacher utilizes a variety of instructional strategies (methods, techniques, etc.) and resources (media, technologies, etc.), effective classroom organization skills, and effective communication techniques to establish and facilitate engaging and meaningful learning environments that support the intellectual, social, and physical development of students. The teacher fosters active inquiry, collaboration, and supportive interaction in the classroom. The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.

The Educational Evaluator. The teacher understands and uses appropriate, formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social and physical development of the learner. The teacher performs appropriate, comprehensive assessments of the processes of instructional design, facilitation, and evaluation. The teacher adjusts and refines instruction based upon informed analysis.

The Reflective Professional. The teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community). The teacher actively seeks out opportunities to grow professionally.

The Culturally Responsive Educator. The teacher is a culturally responsive educator who understands and embraces the ideas of cultural consciousness, equity and human dignity, and social justice while striving to create learning environments that grant voice and authenticity to the beliefs, opinions, and experiences of students from diverse experiences.

The curriculum for Teacher Education at LC State promotes the development and practice of these qualities through performance-based courses and field experiences.

Admission Requirements

Students seeking admission to the Teacher Education Program must comply with admission requirements as stated in this catalog. Teacher Education Program requirements may change to comply with accreditation requirements, professional certification requirements, etc. Students may be required to meet college graduation requirements under a different catalog than that used to obtain admission to the Teacher Education Program.

THE PERFORMANCE-BASED TEACHER EDUCATION PROGRAM FOR ELEMENTARY EDUCATION IS COMPOSED OF THE FOLLOWING FOUR PHASES:

1. Pre-professional Studies
2. Professional Studies
3. Professional Internship I
4. Professional Internship II

After completing the General Education Core and pre-professional studies courses (Phase I), students who meet entry requirements may apply for admission into the Teacher Education Program. Application information is available from the Teacher Education & Mathematics Division office or online at [www.https://www.lcsc.edu/education/program-application](https://www.lcsc.edu/education/program-application). It is the responsibility of the student to secure admission to the Teacher Education Program and maintain that status. Students must be formally admitted to the program prior to participation in Phase II. The Teacher Education Program admission procedure addresses three areas:

1. Scholarship
2. A qualifying entrance examination and interview
3. Professional experience

Adverse factors will also be considered in the admissions decision. Those adverse factors include para-competencies (i.e. personal characteristics/attitudes inconsistent with the teaching profession exhibited by the student such as racism, intolerance, chronic lateness, patterns of course withdrawals, patterns of course incompletes, and moral turpitude).

Students must apply for admission into the Teacher Education Program no later than the first day of the semester prior to the semester in which they plan to begin Phase II course work. Students who plan to begin Phase II course work in the fall should apply no later than the first day of the previous spring semester (mid-January). Students who plan to begin Phase II course work in the spring should apply no later than the first day of the previous fall semester (mid-August). PLEASE NOTE: Admission to the Teacher Education Program will be based on the predetermined number of available, quality internship sites.

ENTRANCE/ADMISSION INTO THE TEACHER EDUCATION PROGRAM REQUIRES:

1. Course work: Satisfactory completion of all Phase I course work with a grade of "C-" or better in each course. Exception: Must have "C" or better in ENGL-101 to advance to ENGL-102. Note: At the time of application, students should be completing the last of these required courses. Also see Item #3.
2. Entrance Examination: For elementary undergraduate candidates: Passing scores in math, reading, and writing on the ACT exam or the SAT exam. This exam is not required for students seeking Elementary or Secondary Education Certification who already have a baccalaureate degree.
3. Scholarship: A minimum LC State cumulative grade point average (GPA) of 3.0; in addition, secondary candidates must maintain a minimum grade point average of 3.0 in their major teaching field.
4. Professional Experience: Evidence of successful work with children or adolescents and a short reflective essay.
5. Interview and Writing Sample: Students compose an extemporaneous essay followed by a formal interview with a panel of professionals from the education field.
6. Official transcripts: Required from all higher education institutions attended, other than LC State.

TRANSFER STUDENT ENTRANCE INTO THE TEACHER EDUCATION PROGRAM REQUIRES:

1. A transfer credit evaluation by the Teacher Education & Mathematics Division's Program Assistant immediately following admission to LC State.
2. Completion of steps noted above in "Entrance/Admission into the Teacher Education Program Requires".
3. Completion of a minimum of 32 LC State credits before graduation (see baccalaureate degree requirements).

POST-BACCALAUREATE STUDENT ENTRANCE INTO THE TEACHER EDUCATION PROGRAM REQUIRES:

1. A transfer credit evaluation by the Teacher Education & Mathematics Division's Program Assistant immediately following admission to LC State.
2. Completion of steps noted above in "Entrance/Admission into the Teacher Education Program Requires".

CERTIFIED TEACHERS SHOULD:

1. Consult with the Teacher Education & Mathematics Division's Program Assistant directly after being admitted to LC State.
2. Complete the Teacher Education & Mathematics Division's Special Permission Form to take certain upper-division course work.

BACKGROUND CHECKS

All students will be responsible for the cost of a name-based background check in the state in which they reside. These are processed through the student's state police and the cost varies by state. Proof of the background check should be submitted to the Teacher Education & Mathematics Division office. The background check is due before entering schools for any field experience associated with the student's teacher education program.

In addition, students will complete a fingerprint-based background check before entering their final internship. This background check is required for student teaching and for certification through the state of Idaho. The cost is \$28.25 and paid to State Department of Education.

ELEMENTARY EDUCATION FEES

- Name-Based Background Check (\$11-\$20; cost varies by state)
- Praxis II Exam: #5001 Elementary Ed: Multiple Subjects \$170
 - Praxis II exam subtests: #5002, #5003, #5004, and #5005 are \$60 each
- Praxis II exam in second teaching content area \$120 - \$146
- Fingerprint Background Check \$28.25
- Idaho State Teacher Certification \$75

SECONDARY EDUCATION FEES

- Name-Based Background Check (\$11-\$20; cost varies by state)
- Praxis II Content Specific Exams \$120 - \$146 (a separate Praxis exam is required for each content area teaching field)
- Fingerprint Background Check \$28.25
- Idaho State Teacher Certification \$75

Assessment

ACT OR SAT PLACEMENT EXAM

To demonstrate acquisition of basic skills, undergraduate students seeking admittance into either elementary or secondary teacher education programs must pass math, reading, and writing sections of the ACT or SAT exam at a level determined appropriate by the Teacher Education & Mathematics Division.

IDAHO COMPREHENSIVE LITERACY ASSESSMENT (ICLA)

All teacher education candidates whose teaching responsibilities will include elementary education, special education, and/or reading must pass the Idaho Comprehensive Literacy Assessment. The ICLA consists of three areas: language structure, comprehension, and assessment.

PRAXIS SERIES ASSESSMENTS

Students seeking teacher certification in the state of Idaho must take Praxis II exams in their content areas. Elementary candidates must pass the Praxis II exam #5001 Elementary Education Multiple Subjects. Passing scores on this exam may be used for entrance into the program, but the elementary candidate must pass all four subtests of #5001. Elementary candidates are also required to take a second Praxis II content test in an additional endorsement/teaching field. Students are required to meet the qualifying scores set by the Idaho State Department of Education to enter into the internship experience.

PORTFOLIO

The portfolio is a form of performance assessment requiring teacher certification candidates to demonstrate that they have the knowledge, skills, and dispositions needed to be effective classroom teachers and to positively impact student learning. Development of the portfolio is a yearlong endeavor. During a candidate's internship experience, he/she will collect, organize, and display evidence that he/she is able to meet the standards required for completion of the LC State Teacher Education Program.

EXIT INTERVIEW

As a final evaluation of an intern's ability to demonstrate the professional competencies required by the program, she/he will pass an exit interview conducted during the final phase of the internship experience. The intern's faculty mentor will chair the exit interview. An on-site-teacher-educator who is familiar with the intern's capabilities and a second representative from the Teacher Education & Mathematics Division will also participate in the exit interview.

Advising

Academic advising is mandatory for all Teacher Education & Mathematics Division majors. An advisor is assigned when a student declares a major within the Division. Students with academic advising questions or concerns should meet with their advisors during posted office hours or by appointment. Students are required to meet and personally obtain their assigned advisor's approval on course selections. Students should come to advising appointments with a tentative class schedule prepared. Secondary Education majors must have two advisors. See specific majors for additional information.

Special Policies

TEACHING INTERNSHIP INFORMATION

For Elementary Education majors, the Teaching Internship is a two-semester sequence of integrated course work and field experiences.

For teacher candidates seeking endorsement in Secondary Education (6-12), the Teaching Internship consists of one semester in the field. Over the course of the semesters, the candidate engages in field-based opportunities to apply the knowledge, skills, and dispositions developed in course work. The internship provides the teacher candidate with mentored experiences in all areas of teacher performance. Students must be admitted to the Teacher Education Program and pass their required Praxis examination(s) before an internship placement is considered. A grade of "B-" or better is

required for all professional education Phase II, III & IV course work in the Elementary Education program, and a grade of "B-" or better is required in all 300- & 400-level education courses in the Secondary Education program.

During the internship, candidates are expected to fulfill additional responsibilities both on campus and at their assigned school site. Interns shall complete course assignments as well as duties assigned at their school. They should perform professionally according to public school policies and procedures. Failure to successfully progress through the internship may result in an extended internship, inability to continue with the internship experience, or withdrawal from the Teacher Education Program.

The internship involves a candidate's total commitment for the entire term of assignment. For this reason the Teacher Education & Mathematics Division chairperson must approve any additional course work. Extracurricular college activities, coaching, and outside employment are not to interfere with achieving a successful internship experience.

Candidates' requests for college and school supervision in long distance internship sites (outside the LC State service area) must be made in writing at least two semesters prior to the internship. Candidates will be assessed a fee to assist in paying the added expense of supervision at a long-distance site. The instructional teams must approve all requests for distant internships. No guarantee is made that a long-distance site will be available or approved.

Additional Division Programs

STATE ALTERNATIVE AUTHORIZATION: CONTENT SPECIALIST

The Division of Teacher Education & Mathematics supports the State of Idaho Alternative Authorization: Content Specialist Teaching Certification option. This option permits highly qualified candidates to be offered teaching positions in Idaho schools while completing certification requirements based on a formal pre-assessment of their content area and pedagogical knowledge, skills, and dispositions.

Clubs, Honor Societies, other Activities

CHI KAPPA CHAPTER OF KAPPA DELTA PI HONOR SOCIETY

Kappa Delta Pi, an International Honor Society in Education, was founded March 8, 1911 at the University of Illinois. The Chi Kappa Chapter of Lewis-Clark State College was installed in 1996 (and was the first Idaho chapter); it became the last chapter necessary to complete membership in all fifty states. The Chi Kappa Chapter promotes better teaching and learning through identification and recognition of both outstanding teacher candidates and practicing educators. Teacher candidates must possess a grade point average of no less than 3.5 and be nominated on the basis of demonstrated potential to become strong leaders in education. Practicing educators are nominated by a committee of their peers as individuals who have demonstrated high academic ideals and made significant contributions to the education profession. The chapter sponsors several annual social and professional activities, and members have the opportunity to represent the chapter at the biennial national conference.

LC State STUDENT CHAPTER, IDAHO COUNCIL FOR EXCEPTIONAL CHILDREN

Idaho Council for Exceptional Children (CEC), LC State Student Chapter welcomes new members seeking a special education minor. The student chapter actively participates in professional development activities that align to the state unit and shares the following mission statement: "to improve educational outcomes for individuals with exceptionalities." CEC, a non-profit association, accomplishes its mission, which is carried out in support of special education professionals and others working on behalf of individuals with exceptionalities, by advocating for appropriate governmental policies, setting professional standards, providing continuing professional development, advocating for newly and historically underserved individuals with exceptionalities, and helping professionals achieve the conditions and resources necessary for effective professional practice.

LC State IDAHO LITERACY COUNCIL FOR YOUNG PROFESSIONALS

The purpose of the Idaho Literacy Council for Young Professionals is to promote literacy and connect with literacy educators at LC State, in the Lewis-Clark Valley, across the state of Idaho, and beyond. This is a professional service organization affiliated with the Idaho State Council and the International Literacy Association and is open to college-aged literacy students at LC State or recent graduates of LC State.

In-STEM Club

Promoting inclusivity in STEM fields at LCSC, particularly those underrepresented in STEM, through support, mentoring, and community.

ED-214 PRINCIPLES OF EDUCATION 3.00 Credits

An introduction to the teaching profession through consideration of relevant principles including the importance of education and teaching, the purpose of schools, teaching orientations and styles, trends in education, international influences on American education, the changing nature of American education, the administration and governance of schools, school funding, social issues affecting education and learning, schools and their environs, and education in other societies. Includes twenty hours of field experience in area elementary and secondary schools.

ED-216 PHYSICAL EDUCATION FOR THE ELEMENTARY TEACHER 2.00 Credits

Designed to aid the classroom teacher in developing and implementing physical education programs in elementary and middle schools. Cross-listed with KIN-216.

ED-222 BEGINNING SIGN LANGUAGE 3.00 Credits

Students will learn a sign language and finger spelling system consistent with English, used in educating hearing impaired individuals.

ED-225 TECHNOLOGIES FOR TEACHING, K-12 3.00 Credits

This course addresses foundational knowledge that educators need to be successful in the twenty-first-century classroom and teaching profession. Emphasis is placed on designing effective media, tech-rich instruction, and digital pedagogy. Through participation in the course, students will gain practical experience using a variety of instructional media and applications as well as theoretical frameworks for technology-enhanced teaching and instructional design. Emerging and crucial concepts for educators including cybersecurity, digital citizenship, and digital literacy are explored in detail.

ED-250 PRAXIS PREPARATION FOR ELEMENTARY TEACHER CANDIDATES 1.00 Credit

Preparation for the State-required Praxis subject tests for elementary teaching candidates. The required subject area tests are either 5001 - Elementary Education: Multiple Subjects or 7811 - Elementary Education: Content Knowledge for Teaching. Both of these consist of tests in Reading & Language Arts, Mathematics, Social Studies, and Science. The structure of this course is to focus upon a different one of these subject areas in each semester on a rotating basis.

ED-290 DIRECTED STUDY IN EDUCATION 1.00-12.00 Credits**ED-291 WORKSHOP IN EDUCATION 1.00-3.00 Credits****ED-292 SPECIAL TOPICS IN EDUCATION 1.00-3.00 Credits****ED-295 PRACTICUM IN EDUCATION 1.00-12.00 Credits****ED-299 RESEARCH ASSISTANTSHIP 1.00-12.00 Credits**

Graded P/F only.

ED-310 PROFESSIONAL FOUNDATIONS OF EDUCATION 3.00 Credits

Designed for post bachelors DLT teacher candidates, this course is a systematic survey of the philosophical foundations and historical development of public education, the legal, financial, and organizational principles associated with schooling, and certain social issues that have helped to shape, guide, and/or impact contemporary education. Twenty hours of field experience required. ED-214 meets the same requirement.

ED-318 ASSESSMENT OF LEARNING 3.00 Credits

An introduction to the theory of assessment. Presents the foundational concepts, principles, and procedures needed to systematically acquire, organize, and apply information about learners and learning. This course is a component in the elementary teacher education program's technology strand and is designated as technology-intensive. Pre-requisite: Elementary Education Majors must be admitted to the teacher education program.

ED-321 EDUCATIONAL PSYCHOLOGY 3.00 Credits

Psychology directly applicable to teaching and learning: Basics of our thinking physiology; basics of interpreting relevant research; development theories and their relation to learning; motivation theories and means to motivate students; behaviorism as applied and misapplied to classroom management and instruction; differentiating based upon receptive/perceptive modes, intelligences, and learning styles; memory and cognition paths; and the personally and socially constructed nature of knowing.

ED-328 MATH METHODS K-8 3.00 Credits

Based on NCTM standards, students will plan, deliver, assess, and reflect upon math lessons presented to elementary school children. Pre-requisites: MATH-157 and MATH-257; Admission to the Elementary Teacher Education Program.

ED-345 CULTURALLY RELEVANT TEACHING 3.00 Credits

The course is designed for classroom teachers and future teachers and will provide information for the selection of teaching strategies suited to the learners culture, literacy, language proficiency, and communication skills. The course will examine issues related to working with diverse peoples, deepen levels of awareness regarding individual differences and develop an understanding of the challenges of language acquisition in the classroom setting. Specific teaching strategies for students whose first language is not English.

ED-390 DIRECTED STUDY IN EDUCATION 1.00-12.00 Credits**ED-392 SPECIAL TOPICS IN EDUCATION 1.00-3.00 Credits****ED-394 INTERNSHIP IN EDUCATION 1.00-12.00 Credits**

Graded P/F only.

ED-395 PRACTICUM IN EDUCATION 1.00-12.00 Credits**ED-399 RESEARCH ASSISTANTSHIP 1.00-3.00 Credits**

Graded P/F only.

ED-411 DIGITAL CITIZENSHIP/MOBILE/REMOTE TECH 3.00 Credits

This course is designed to give you, the teacher candidate, formal experiences in the development of knowledge, skills, and dispositions supporting the strategic integration of mobile and remote technologies into teaching and learning and the related issues and responsibilities of digital citizenship that accompany these practices. Students enrolling in this course should have completed at least one course delivered online or be concurrently enrolled in an online course. It is expected that students who begin this course already have some experience performing fundamental operations with a microcomputer including the use of word processing software, World Wide Web browsing software, and electronic mail software.

ED-413 DESIGNING ONLINE INSTRUCTION 3.00 Credits

This course is designed to give you, the teacher candidate, formal experiences in the development of pedagogical knowledge, skills, and attitudes necessary to design and develop effective, online learning experiences. It is expected that students who begin this course already have some experience performing fundamental operations with a microcomputer including the use of word processing software, World Wide Web browsing software, and electronic mail software. Previous experience participating in coursework implementing an online learning management system is also expected.

ED-414 PROFESSIONAL INTERN ONLINE TEACHING 7.00 Credits

This course is designed to give you, the teacher candidate, formal experiences in the practice of skills to design, develop, implement, and evaluate effective teaching in an authentic, online instructional environment. Through a field-based, practicum experience, you will demonstrate your capacity to design, facilitate, and evaluate one or more online courses to designated students within the Kindergarten to Twelfth Grade range. Pre-requisites: ED-411, ED-413, ED-423, admission to the Elementary or Secondary Teacher Education Program, and has met all requirements to start an internship. Co-requisite: ED-415.

ED-415 TEACHING ONLINE 1.00 Credit

This course is designed to give you, the teacher candidate, opportunities to engage in productive reflective practices about the design, development, implementation, and evaluation activities of your professional internship in online teaching. In this seminar, you and your colleagues will reflect on your internship experiences and the development of your skills to design, facilitate, and evaluate instruction of an online course. Pre-requisite: Admission to the Elementary or Secondary Teacher Education Program. Co-requisite: ED-414.

ED-422 INTERMEDIATE SIGN LANGUAGE 3.00 Credits

Continuation of ED-222.

ED-423 INSTRUCTIONAL TECHNOLOGY STRATEGIES, K-12 2.00 Credits

Instructional Technology Strategies, K-12 is designed to give students formal experiences in the development of the knowledge, skills, and dispositions supporting the strategic integration of technologies into the teaching and learning process. This includes an exploration of best practices in instructional methods and strategies for technology-enriched learning environments. Through literature review and discussion/exploration activities, you will develop your knowledge and skills in the variety of strategies and facilitation techniques that best serve teachers and learners in technology-enriched and digital learning environments. Special attention will be given to the instructional functions of current technologies and their relation to the primary models of instruction and their implementation. Pre-requisite: Admission to the Elementary or Secondary Teacher Education Program.

ED-424 MEDIA & TECHNOLOGIES FOR TEACHING, K-12 2.00 Credits

Media & Technologies for Teaching, K-12 is a course to address the strategic integration of current media and technologies into teaching and learning. Through participation in this course, students, as teacher candidates, will recognize the accepted professional standards regarding the roles and responsibilities that teachers serve to create and maintain learning environments best served by current technologies. Students will develop the knowledge and skills necessary to effectively design, develop, select, and implement a variety of types of instructional media and to implement a variety of current technologies as enhancements to teaching and learning processes. Students will also become prepared to foster sound principles of digital citizenship and digital literacy in teaching and learning environments. Pre-requisite: ED-224 and admission to the Elementary or Secondary Teacher Education Program.

ED-425 INSTRUCTIONAL METHODS AND CLASSROOM MANAGEMENT, K-8 2.00 Credits

This course is designed with a focus upon the exploration, understanding, implementation and integration of a repertoire of pedagogical knowledge, skills and dispositions related to K-8 instructional design, facilitation and evaluation, along with an examination of classroom management theories and strategies. This course will afford students the opportunities to become familiar with various instructional methods, models and practices, classroom management and relationship building to enhance educational relevance for K-8th grade students. Through various activities, including micro-teaching and other forms of presentation, students will demonstrate knowledge and skill acquisition in the development of instructional design, facilitation and evaluation. Additional projects will focus on research and product development to demonstrate understanding of key aspects related to classroom management, discipline and motivation through creating relevant and healthy relationships within the context of the classroom community. Pre-requisite: Students must be formally admitted to the Elementary Teacher Education Program.

ED-426 PROFESSIONAL INTERNSHIP IN EDUCATION K-8, I 7.00-14.00 Credits

A performance-based experience where interns have opportunities to develop and refine instructional materials and practices based on researched best practices for reading, language arts, math, science, health, social studies, physical education, visual and performing arts and multicultural issues to be utilized in K-8 classroom settings. The importance of effective communication strategies, including appropriate technology, will be emphasized. Interns will have numerous opportunities to interact with classroom teachers and elementary students during this first semester of a year-long internship. Pre-requisite: Admission to the Elementary Teacher Education Program. Co-requisites: ED-427 and SE-428.

ED-427 PROF SEMINAR: ISSUES IN EDUCATION I 1.00 Credit

Promotes self-reflection and the successful transition into the teaching profession through opportunities for interns to address and reflect upon contemporary and perennial issues that affect and inform their praxis. Includes questions of instructional philosophies and orientations, classroom management, professional conduct, ethics and legal considerations, interpersonal communications, steps toward securing employment, efficient time management, and proposals for educational reform and innovation. Fee required. Pre-requisite: Admission to the Elementary Teacher Education Program. Co-requisites: ED 426 and SE 428.

ED-429 PROFESSIONAL INTERNSHIP IN EDUCATION K-8, II 7.00-14.00 Credits

A continuation of ED-426. As the internship experience proceeds the intern will continually assume more responsibility for classroom instruction and management. This is a writing integrated course. Pre-requisite: Admission to the Elementary Teacher Education Program Co-requisites: ED-430 and SE-431. Graded P/F only.

ED-430 PROF SEMINAR:ISSUES IN EDUCATION II 1.00 Credit

A continuation of ED-427. LCSC faculty as well as occasional guests including teachers and school administrators will conduct the seminar. Pre-requisite: Admission to the Elementary Teacher Education Program. Co-requisites: ED-429 and SE-431.

ED-432 PACE SEMINAR 1.00 Credit

This seminar provides opportunities for PACE candidates to investigate and share techniques for the development of a personal folio evidencing their abilities to meet State of Idaho Content Area Standards in their chosen teaching field, to begin preparation of their professional portfolios, and to make arrangements for their internship experience under the direction and guidance of a Division of Education faculty supervisor. Pre-requisite: Admission to the PACE Teacher Education Program or permission of the instructor.

ED-445 INSTRUCTIONAL STRATEGIES AND CLASSROOM MANAGEMENT, 6-12 3.00 Credits

This course familiarizes students with a variety of instructional models and practices, classroom management strategies, and the building of learning communities to meet the needs of students in grades 6-12. Students demonstrate pedagogical knowledge, skills, and dispositions. Students develop products that demonstrate understanding of key aspects of classroom environment, instruction, management, and motivation. Includes significant clinical experience hours in area secondary schools. Pre-requisite: ED-214 (with a minimum grade of C-), ED-318 (with a minimum grade of B-), ED-321 (with a minimum grade of B-), and admission into Secondary Teacher Education Program. ED-447 must be taken concurrently.

ED-447 TEACHING METHODS IN THE CONTENT AREA 2.00 Credits

This course combines theoretical and practical learning experiences in pedagogical content knowledge. Students demonstrate requisite knowledge, skills, and dispositions through authorship of content-specific unit plans. Special emphasis is placed on teaching methods and strategies relevant to a content area. Provides a meaningful pre-internship clinical experience in the content area for students. Course can be taken within one academic year of Clinical Internship. Pre-requisites: ED-214 or ED-310 (with a minimum grade of C-), ED-318 (with a minimum grade of B-), ED-321 (with a minimum grade of B-) and admission into secondary education program. Must take ED-445 concurrently.

ED-452 INTERNSHIP SEMINAR 1.00 Credit

This seminar promotes self-reflection and the successful transition into the teaching profession through opportunities for interns to address and reflect upon their internship experiences and contemporary and perennial issues that affect and inform their praxis. Pre-requisite: Admission into the Secondary Education Program. Co-requisites: ED-460 and ED-461.

ED-454 PROFESSIONAL TEACHING STRATEGIES 6-12 3.00 Credits

This course in instructional design focuses on the acquisition and integration of basic pedagogical knowledge, skills and dispositions related to secondary teaching methods necessary to design, develop, deliver and evaluate effective instruction. Teacher candidates will become familiar with a variety of traditional and contemporary teaching models to meet the needs of a culturally and intellectually diverse classroom population. Includes a demonstration of requisite knowledge, skills, and dispositions through authorship of a course rationale and syllabus and unit plan templates, completing videotaped mini-teaching lessons and passing quizzes and the course examination Pre-requisite: Admission to the Secondary Teacher Education Program. This course is not available to students who have successfully completed ED 454 prior to Fall 2003.

ED-460 PROFESSIONAL INTERNSHIP IN EDUCATION 6-12 3.00-12.00 Credits

The integration and application of pedagogical knowledge, skills, and dispositions necessary to successfully design, develop, deliver, and evaluate instruction during a semester-long internship with an on-site secondary teacher educator. Interns are asked to utilize a variety of traditional and contemporary teaching strategies, aids, materials, and activities to meet the needs of a culturally and intellectually diverse classroom population. Interns will participate in regular seminars, lectures, and/or laboratory sessions in support of their internship activities. The intern should have a means of transportation to the internship school. Pre-requisite: Successful completion of all Phase I and Phase II requirements. Pre-requisite: Admission into the Secondary Education Program. Co-requisites: ED-452 and SE-407. Graded P/F only.

ED-461 PROFESSIONAL INTERNSHIP IN EDUCATION K-12 3.00-12.00 Credits

For candidates seeking K-12 teaching certificates, the integration and application of pedagogical knowledge, skills, and dispositions necessary to successfully design, develop, deliver, and evaluate instruction during a semester-long internship with on-site K-12 teacher educators. Interns are asked to utilize a variety of traditional and contemporary teaching strategies, aids, materials, and activities to meet the needs of a culturally and intellectually diverse classroom population. Interns will participate in regular seminars, lectures, and/or laboratory sessions in support of their internship activities. The intern should have a means of transportation to the internship school. Pre-requisite: Successful completion of all Phase I and Phase II requirements. Pre-requisite: Admission into the Secondary Education Program. Co-requisites: ED-452 and SE-407. Graded P/F only.

ED-476 LEARNER DEVELOPMENT & DIFFERENTIATION (MODULE A) 3.00 Credits

Builds pedagogical knowledge for the candidates about students: development, individual learning differences, learning environments, and uses understanding of individual differences and diverse cultures and communities.

ED-477 CREATING AN ENVIRONMENT THAT FOSTERS COLLEGE AND CAREER READY SKILLS (MODULE B) 3.00 Credits

Builds pedagogical knowledge for the candidates in creating supportive environments that encourage positive social interaction, active engagement in learning, and self-motivation in students. With a focus specifically on the development of the skills necessary for college and career readiness. Acceptance into the PACE Mastery-Based Pathway Program required.

ED-478 CREATING AN ENVIRONMENT FOR ALL LEARNERS (MODULE C) 3.00 Credits

Builds pedagogical knowledge for the candidates in creating supportive environments that encourage individual and collaborative learning, positive social interaction, active engagement in learning, and self-motivation in students, With a focus specifically on understanding diversity. Acceptance into the PACE Mastery-Based Pathway Program required.

ED-479 DIFFERENTIATION AND APPLICATION OF CONTENT (MODULE D) 3.00 Credits

Builds pedagogical knowledge for the candidates in their content area(s) to make the content accessible to students. Specific focus will be in the development of engaging learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues that leads toward mastery of content. Acceptance into the PACE Mastery-Based Pathway Program required.

ED-480 DESIGNING INSTRUCTION AND ASSESSMENT LITERACY (MODULE E) 3.00 Credits

Builds pedagogical knowledge for the candidates in methodologies of assessment, planning, and instruction. Specific attention is given to the impact of assessment on learning, instruction for learning, student's application of knowledge, community context, and decision making for curriculum. Acceptance into the PACE Mastery-Based Pathway Program required.

ED-490 DIRECTED STUDY IN EDUCATION 1.00-14.00 Credits**ED-491 WORKSHOP IN EDUCATION 1.00-3.00 Credits**

Graded P/F only.

ED-491A WORKSHOP IN EDUCATION 1.00-12.00 Credits**ED-492 SPECIAL TOPICS IN EDUCATION 1.00-3.00 Credits****ED-494 INTERNSHIP IN EDUCATION 1.00-12.00 Credits****ED-495 PRACTICUM IN EDUCATION 1.00-12.00 Credits****ED-499 RESEARCH PROJECT AND SEMINAR IN EDUCATION 1.00-12.00 Credits****MATH-015 ARITHMETIC AND PRE-ALGEBRA 3.00 Credits**

Preparation for MATH 023 and MATH 025. Arithmetic with whole numbers, signed numbers, fractions, and decimals. Order of operations, variables, simplifying of algebraic expressions. Concrete representations of arithmetic operations and algebraic concepts are emphasized. Particularly appropriate for students who experience anxiety when learning mathematics. Course fee.

MATH-023 BASIC ALGEBRA FOR MATH AS A LIBERAL ART 3.00 Credits

Brief review of integer arithmetic, fraction arithmetic, percent and order of operations. Evaluating formulas. Units and unit analysis. Solving equations in one variable and using equations in one variable to solve application problems. Graphing linear equations, intercepts, slope, writing the equation of a line. Introduction to functions. Average rate of change, introduction to linear and exponential models. Simplifying exponential expressions, scientific notation, introduction to logarithms. Introduction to sets, counting methods, and discrete probability. Pre-requisite: A grade of C or better in Math-015 or satisfactory placement score. Course fee.

MATH-025 BASIC ALGEBRA 3.00 Credits

Brief review of prealgebra. Solving equations and inequalities in one variable; applications. Evaluating formulas; unit analysis. Graphing linear equations, intercepts, slope, writing the equation of a line, introduction to functions. Average rate of change and linear models. Graphing linear inequalities. Systems of linear equations; applications. Exponent rules and scientific notation. Addition, subtraction, multiplication, and factoring of polynomials in one variable. Using the zero product property to solve quadratic equations in one variable. Pre-requisite: A grade of 'C' or better in MATH-015 or satisfactory placement score.

MATH-123 MATH IN MODERN SOCIETY 3.00 Credits

This course introduces students to the form and function of mathematics as it applies to liberal-arts studies with a heavy emphasis on its applications. Topics covered include ratios, rates and proportions; properties of linear equations; graphing linear equations; constructing and using linear models; exponential and logarithmic equations and models; financial applications; and elementary probability and statistics. Pre-requisite: MATH-023, MATH-025, MTHPT-103 or MTHPT-120 with a grade of 'C' or better, or permission of the instructor.

MATH-123P MATH IN MODERN SOCIETY--SUPPLEMENT 2.00 Credits

This course provides just-in-time preparation for the mathematical skills necessary to be successful in MATH-123 with an emphasis on problem-solving and college-readiness skills. Topics will include order of operations, fraction and decimal arithmetic, percent, scientific notation, interval notation, lines, calculator use, and mathematical modeling. Must be taken concurrently with MATH-123.

MATH-130 FINITE MATHEMATICS 4.00 Credits

Systems of linear equations and inequalities, elementary matrix algebra, introduction to linear programming, elementary discrete probability and statistics. Emphasis on applications to business, economics and social sciences. Pre-requisite: A grade of 'C' or better in MATH 025 or MTHPT 103 or satisfactory placement score.

MATH-143 COLLEGE ALGEBRA 3.00 Credits

Emphasis on the concept of real-valued functions and their applications, including domain, range, algebraic operations, composition, inverses, and graphing. Topics include polynomial functions, division of polynomials, roots of polynomials, theory of equations, complex numbers, fundamental theorem of algebra, rational functions and asymptotes, logarithmic and exponential functions, transformations, solving systems of linear and nonlinear equations, and matrices. Students will engage in multi-step algebraic manipulation of complicated functional expressions. Pre-requisite: Satisfactory placement score, or placement into MATH-143P to be taken concurrently with MATH-143.

MATH-143P SUPPLEMENTAL INSTRUCTION FOR COLLEGE ALGEBRA 2.00 Credits

The course provides embedded instruction of skills necessary for college algebra. Topics may include absolute value, factoring trinomials, function notation, exponents and logarithms, systems of linear equations, simplifying rational and radical expressions, solving rational and radical equations, graphing, and inequalities. Pre-requisite: This course must be taken concurrently with MATH-143. MATH-025 with a grade of C or better, or satisfactory placement score.

MATH-144 TRIGONOMETRY 2.00 Credits

This course introduces right-triangle and circular function approaches to trigonometry. Topics include plane trigonometry, trigonometric identities, graphs of trigonometric functions, amplitude, frequency, phase shift, inverse trigonometric functions and their graphs, polar coordinates, and polar representation of complex numbers. Pre-requisite: MATH-143 or satisfactory placement score.

MATH-147 COLLEGE ALGEBRA AND TRIGONOMETRY 5.00 Credits

The course emphasizes functions, circular trigonometry and multilevel problem solving as preparation for calculus. Functions are treated as mathematical entities, including domain, range, algebraic operations, composition, inverses, and graphing. Polynomial, logarithmic, exponential, trigonometric, inverse trigonometric, radical and rational functions are explored. Algebraic techniques include division of polynomials, roots of polynomials, theory of equations and inequalities, complex numbers and DeMoivre's Theorem, the Fundamental Theorem of Algebra, solving systems of linear and nonlinear equations, and matrices. Trigonometric identities are derived, proven, and applied. Polar coordinates, vectors and oblique triangles are introduced and used in a variety of applications. Analytic geometry focuses on circles, parabolas, distance and midpoints. MATH-147 is equivalent to MATH-143 plus MATH-144. Pre-requisite: A grade of 'C' or better in MATH-143P or satisfactory placement score.

MATH-153 STATISTICAL REASONING 3.00 Credits

This course introduces students to problem solving and decision making using single and multivariable statistical models. The course focuses on conceptual understanding of randomness, variability, statistical models, and inference through exploration of data. The use of technology for analysis of data is integrated throughout. Topics include descriptive statistics, probability, hypothesis testing, confidence intervals, likelihood ratios, correlation, and regression. Pre-requisite: A grade of 'C' or better in MATH-023, MATH-025, or appropriate math placement score.

MATH-153P SUPPLEMENTAL INSTRUCTION FOR MATH 153 1.00 Credit

This course provides just-in-time preparation of the mathematical skills necessary to be successful in MATH-153 with an emphasis on problem-solving and college-readiness skills. Topics may include order of operations, fraction and decimal arithmetic, percent, scientific notation, interval notation, lines, calculator use, and use of statistical software. Pre-requisite: This course must be taken concurrently with MATH-153. MATH-015 with a grade of C or better, or satisfactory placement score.

MATH-157 MATHEMATICS FOR ELEMENTARY TEACHERS I 4.00 Credits

This course provides an overview of some of the mathematics taught in grades K-8 with an emphasis on conceptual understanding and communication of mathematical principles. This is the first course in a two-course sequence of mathematics content courses which is not intended to be a methods of teaching course. Topics may include numbers and the base-ten system; fractions and problem-solving; addition, subtraction, multiplication, and division of real numbers; ratio and proportional relationships; and number theory. Pre-requisite: A grade of 'C' or better in MTHPT-137 or satisfactory placement score, or placement into MATH-157P to be taken concurrently with MATH-157.

MATH-157P SUPPLEMENTAL INSTRUCTION FOR MATH 157 1.00 Credit

This course provides just-in-time preparation of the mathematical skills necessary to be successful in MATH-157 and MATH-257 with an emphasis on problem-solving and college-readiness skills. Topics may include accuracy vs precision, order of operations, number theory, fraction and decimal arithmetic, percent, properties of real numbers, conversions and unit analysis, geometry and measurement, factoring, mental math, exponents and scientific notation, lines and graphing, probability, and statistics. This course must be taken concurrently with MATH-157. Prerequisite: MATH-023 or MATH-025 with a grade of C or better or satisfactory placement score.

MATH-170 CALCULUS I 4.00 Credits

Definitions of limit, derivative, antiderivative, definite integral. Computation of the derivative, including logarithmic, exponential, and trigonometric functions. Applications of the derivative, optimization, mean value theorem. The fundamental theorem of calculus, brief introduction to applications of the integral and to computation of antiderivatives. Intended for students in engineering, mathematics, and the sciences. Pre-requisites: A grade of "C" or better in MATH-147 or MATH-143 and MATH-144 or satisfactory placement score.

MATH-175 CALCULUS II 4.00 Credits

Applications of the integral, symbolic and numerical techniques of integration, inverse transcendental functions. Sequences and series, with an emphasis on power series and approximation. Pre-requisite: A grade of 'C' or better in MATH-170.

MATH-186 DISCRETE MATHEMATICS 3.00 Credits

Topics such as sets, functions, algorithms, logic, Boolean algebra are included. This course consists of numerous topics which are particularly valuable to students pursuing a computer science minor. Pre-requisite: A grade of 'C' or better in MATH-143 or MATH-147, or satisfactory placement score.

MATH-190 DIRECTED STUDY IN MATH 1.00-12.00 Credits**MATH-192 SPECIAL TOPICS IN MATHEMATICS 1.00-12.00 Credits****MATH-195 PRACTICUM IN MATHEMATICS 1.00-2.00 Credits**

Tutoring in the mathematics laboratory or functioning as a teacher's aide in a lower division mathematics course. Pre-requisite: Approval of the division chair. May be repeated for a total of 4 credits.

MATH-240 INTRODUCTION TO LINEAR ALGEBRA 2.00 Credits

The introduction to linear algebra course covers systems of linear equations, Gaussian elimination, matrices vector spaces, linear independence, basis, dimension, determinants, eigenvalues, and eigenvectors. Pre-requisite: MATH-170.

MATH-253 STATISTICAL METHODS FOR THE SCIENCES 3.00 Credits

Introduction to statistical methods for scientists including design of statistical studies, basic sampling methods, descriptive statistics, probability and sampling distributions, inference regression, and analysis of variance. Pre-requisite: A grade of 'C' or better in MATH-143 or MATH-147 or satisfactory placement score.

MATH-257 MATHEMATICS FOR ELEMENTARY TEACHERS II 4.00 Credits

This course is a continuation of MATH-157 and continues an overview of some of the mathematics taught in grades K-8 with an emphasis on conceptual understanding and communication of mathematical principles. This is the second course in a two-course sequence of mathematics content courses which is not intended to be a methods of teaching course. Topics may include algebra; geometry; measurement; area of shapes; circumference; the number pi; construction proofs of the Pythagorean theorem; solid shapes and their volumes and surface areas; geometry of motion and change; statistics; and probability. Pre-requisite: MATH-157 with a grade of C or better.

MATH-267 MATHEMATICS FOR MIDDLE SCHOOL TEACHERS 4.00 Credits

This course is designed to prepare teachers of middle school mathematics. The course provides an overview of some of the mathematics taught in grades 6-10 with an emphasis on conceptual understanding and communication of mathematical principles through reasoning and problem-solving. Topics will include transformational geometry; counting and probability; and statistics. Additional topics may include set theory; graph theory; number theory; coding; intuitive calculus; introduction to linear algebra; basic topology; and discrete mathematics. Pre-requisite: MATH-143 or MATH-147 with a grade of C or better, or satisfactory placement score.

MATH-275 CALCULUS III 4.00 Credits

Vector algebra and geometry, functions of several variables, partial and directional derivatives, gradient, chain rule, optimization, multiple and iterated integrals. Parametric curves and surfaces in 3-space, vector fields, divergence and curl, line and surface integrals. Green's, Stokes' and divergence theorems. Pre-requisite: A grade of 'C' or better in MATH-175.

MATH-285 EUCLIDEAN GEOMETRY 3.00 Credits

This course is designed to prepare teachers of middle and high school geometry. The course emphasizes classic geometric proof and application of geometric theorems. Topics include parallel lines, triangles, quadrilaterals, circles, and polygons. Pre-requisite: A grade of 'C' or better in MATH-147A, MATH-157, or MATH-186, or satisfactory placement score.

MATH-290 DIRECTED STUDY IN MATHEMATICS 1.00-3.00 Credits

Pre-requisite: A grade of 'C' or better in MATH 170 or permission of the division.

MATH-291 WORKSHOP IN MATHEMATICS 1.00-3.00 Credits**MATH-292 SPECIAL TOPICS IN MATHEMATICS 1.00-3.00 Credits****MATH-295 PRACTICUM IN MATHEMATICS 1.00-2.00 Credits**

Tutoring in the mathematics laboratory or functioning as a teacher's aide in a lower division mathematics course. Pre-requisite: Approval of the division chair. May be repeated for a total of 4 credits.

MATH-299 RESEARCH ASSISTANTSHIP 1.00-12.00 Credits**MATH-300 INTRODUCTION TO MATHEMATICAL REASONING 3.00 Credits**

Introductory topics in mathematics- logic, set theory, properties of the real line- number theory, induction, mappings, rigorous treatment of limits of sequences. Emphasis is on the concept of theorem and proof. Pre-requisite: A Grade of "C" or better in MATH 175.

MATH-313 NUMBER THEORY 3.00 Credits

Modular arithmetic, Pythagorean triples, prime numbers, quadratic reciprocity, Diophantine approximation, elliptic curves, and public key encryption systems. Pre-requisite: MATH-175.

MATH-320 PROBABILITY AND STATISTICS 3.00 Credits

Sample spaces, random variables, central limit theorems, stochastic processes, estimation and testing of hypotheses. Pre-requisites: MATH-175 and MATH-253 with a grade of C or better.

MATH-340 LINEAR ALGEBRA 3.00 Credits

Systems of linear equations, vector spaces, linear independence, basis, dimension, inner products, transformation, injectivity and surjectivity, orthogonal projections, orthonormal bases. Eigenvalues and eigenvectors. Positive definite matrices. Pre-requisite: A grade of 'C' or better in MATH-175.

MATH-345 ORDINARY DIFFERENTIAL EQUATIONS 3.00 Credits

Separation of variables, variations of parameters- methods of characteristic roots, undetermined coefficients- systems of differential equations. Laplace transform, and power series. Pre-requisite: A Grade of "C" or better in MATH-175.

MATH-364 PRINCIPLES OF OPTIMIZATION 3.00 Credits

In this course, students will learn the optimization techniques used to model and solve problems from various disciplines such as business, engineering, sciences, sports, etc. This course introduces students to optimization methods for linear, nonlinear, and integer programming. Emphasis will be on techniques that expand student understanding of Calculus and Linear Algebra concepts as well as how to formulate a model; interpret problems mathematically and geometrically; solution techniques in cases where Calculus cannot be used. Additional emphasis will include the theory behind solution techniques; sensitivity analysis; and how to use Octave/Matlab to solve problems. Pre-requisite: MATH-275 with a grade of C or better, or permission of the instructor.

MATH-367 MATHEMATICS FOR MIDDLE/SECONDARY SCHOOL TEACHERS 4.00 Credits

This course is designed to prepare teachers of middle and secondary school mathematics. The course provides an overview of some of the mathematics taught in grades 6-12 with an emphasis on conceptual understanding and communication of mathematical principles through reasoning and problem-solving. Topics will include transformational geometry; counting and probability; and statistics. Additional topics may include set theory; graph theory; number theory; coding; intuitive calculus; introduction to linear algebra; basic topology; and discrete mathematics. Pre-requisite: MATH-143 or MATH-147 with a grade of C or better, or satisfactory placement score.

MATH-386 MODERN GEOMETRY 3.00 Credits

Postulates of Euclid and Hilbert, transformational geometry, topics from projective and affine geometry. Understanding of the foundations of high school geometry is emphasized. Pre-requisite: MATH-170 with a grade of C or better.

MATH-390 DIRECTED STUDY IN MATHEMATICS 1.00-3.00 Credits**MATH-391 WORKSHOP IN MATHEMATICS 1.00-3.00 Credits****MATH-392 SPECIAL TOPICS IN MATHEMATICS 1.00-12.00 Credits****MATH-395 PRACTICUM IN MATHEMATICS 1.00-2.00 Credits****MATH-399 RESEARCH ASSISTANTSHIP 1.00-12.00 Credits****MATH-450 COMPLEX ANALYSIS 3.00 Credits**

Complex numbers and functions, complex derivatives and integrals, residue theory, conformal mappings and uniform convergence. Pre-requisite: A grade of 'C' or better in MATH-300.

MATH-460 ABSTRACT ALGEBRA I 3.00 Credits

This is the first course in a two-course sequence that provides an introduction to abstract algebra. Topics include groups, subgroups, permutation groups, isomorphisms, homomorphisms, quotient groups, and the fundamental theorem of finite abelian groups. Pre-requisite: MATH-300 with a grade of C or better.

MATH-461 ABSTRACT ALGEBRA II 3.00 Credits

This is the second course in a two-course sequence that provides an introduction to abstract algebra. Topics include rings, subrings, ideals, quotient rings, polynomial rings, vector spaces, fields, extension fields, and Galois theory. Pre-requisite: MATH-460 with a grade of C or better.

MATH-470 GENERAL TOPOLOGY 3.00 Credits

An introduction to the fundamental concepts of general topology including set theory, metrics, neighborhoods, bases, subspaces, mappings, continuity, separation axioms, compactness and connectedness. Pre-requisite: A grade of 'C' or better in MATH-300.

MATH-480 REAL ANALYSIS I 3.00 Credits

This course is the first course in a two-course sequence that provides a theory of the real line, properties of real numbers, and real-valued functions. Topics include convergence of sequences; open and closed sets; density of sets; Cauchy sequences; monotone convergence theorem; pointwise and uniform convergence of functions; continuity; mean value theorem; intermediate value theorem; compactness; and differentiability. Pre-requisite: MATH-300 with a grade of C or better.

MATH-481 REAL ANALYSIS II 3.00 Credits

This course is the second course in a two-course sequence on the theory of real-valued functions. Topics include sequences and series of functions, Weierstrass M-test, power series, Taylor series, Riemann integrability, metric spaces, convergence in metric spaces, and differentiability of functions with higher dimensional domains. Pre-requisite: MATH-480 with a grade of C or better.

MATH-490 DIRECTED STUDY IN MATHEMATICS 1.00-3.00 Credits

Pre-requisite: A grade of 'C' or better in MATH-170 or permission of the division.

MATH-491 WORKSHOP IN MATHEMATICS 1.00-3.00 Credits**MATH-492 SPECIAL TOPICS IN MATHEMATICS 1.00-3.00 Credits****MATH-494 INTERNSHIP IN MATHEMATICS 1.00-12.00 Credits**

Internship in Math.

MATH-495 PRACTICUM IN MATHEMATICS 1.00-2.00 Credits

Tutoring in the mathematics laboratory or functioning as a teacher's aide in a lower division mathematics course. Pre-requisite: Approval of the division chair. May be repeated for a total of 4 credits.

MATH-499 RESEARCH PROJECT AND SEMINAR IN MATH 1.00-3.00 Credits

Students will conduct and communicate the results of a research project in the Natural Sciences Division. Topics may include the historical, philosophical, cultural and environmental aspects, and the processes of natural science. Requirements of students include satisfactory oral presentation and defense of their research and submission of a written report approved by their advisor to the Natural Sciences Division. Prerequisite: NS-398.

RE-217 CHILDREN'S LITERATURE AND STORYTELLING 3.00 Credits

Acquaints students with the wide range of literature for children and with criteria for judging quality in making book selections for classroom use. Students will demonstrate abilities in using a variety of effective methods for sharing and responding to literature and for integrating literature throughout the curriculum. Includes a technology component and an emphasis on integrating the use of multiethnic literature throughout the curriculum.

RE-290 DIRECTED STUDY IN READING 1.00-12.00 Credits**RE-291 WORKSHOP IN READING 1.00-12.00 Credits****RE-292 SPECIAL TOPICS IN READING 1.00-3.00 Credits****RE-295 PRACTICUM IN READING 1.00-12.00 Credits****RE-299 RESEARCH ASSISTANTSHIP 1.00-12.00 Credits**

Graded P/F only.

RE-301 PSYCHOLINGUISTICS, LITERACY, AND LANGUAGE ACQUISITION 3.00 Credits

The purpose of this course is to develop students' understanding of language structure and language acquisition, to raise students' awareness of children's and young adults knowledge of language and their ability to use language, and to spark students' recognition of ways in which learning to talk and developing literate behaviors are similar. In this course we will explore the socio-psycholinguistic dimensions of language, literacy and culture. Models of theories of language acquisition will be examined including both oral and written language. Additionally, different types of discourse will be analyzed as to how they might impact literacy and language development for both first and second language learners. The course will also stress the importance of language learning as a social activity, and the possibilities of language acquisition as a means for transformative learning.

RE-303 EMERGENT LITERACY 3.00 Credits

Examines methods of literacy instruction appropriate for use with young children at various developmental stages. Methods examined reflect current theory and research and emphasize the importance of graphophonic, syntactic, and semantic cueing systems in the reading process. Students will have direct involvement with children in elementary classrooms as they observe and practice a variety of instructional methods.

RE-307 LITERACY LEADERSHIP 3.00 Credits

Develops students' theoretical and practical understandings of the following: designing and implementing literacy initiatives in elementary environments; supporting elementary teacher's literacy instruction; assessment and diagnosis of struggling readers and writers; leading literacy-oriented professional development for elementary teachers. This course includes a 20 hour field experience. Admission to the Elementary Teacher Education Program or permission of instructor. Pre-requisite: RE-340/SE-340 and RE-342/SE-342.

RE-309 DISCIPLINARY LITERACY 3.00 Credits

This course provides the background, issues, and strategies for future teachers to help intermediate, middle, and secondary students increase their literacy comprehension across disciplines. The course is designed to support content instruction using research-based literacy strategies for all learners. Topic areas include increasing comprehension of content in informational and narrative text, writing to persuade and inform, and using digital resources appropriately to engage in critical thinking, creativity, and collaborative problem solving.

RE-340 FOUNDATIONAL LITERACY 4.00 Credits

Letter knowledge, phonological awareness, and an understanding of speech-sound correspondences are essential for all children to learn how to become readers and writers. However, it is also critical for children to learn how to use these tools to better their thinking and reasoning. In this course students will develop and demonstrate knowledge of written and oral language used in literacy development through classroom lecture, research assignments, activities, and field experiences. This course includes a 24-hour field experience in a K-2 grade classroom and it aligns with the Idaho Comprehensive Literacy Coursework (ICLC). Pre-requisite: Admission to the Elementary Teacher Education Program or permission of instructor. Crosslisted with SE-340.

RE-342 INTERMEDIATE LITERACY 4.00 Credits

Develops and applies students' theoretical understandings of the processes of literacy learning from grades 3-8. Includes focus on instruction and assessment of: reading comprehension, vocabulary, fluency, and writing. Includes implications for meaningful instruction for academically and culturally diverse learners. This course includes a 25-hour field experience in a 3-8 grade classroom and it aligns with the Idaho Comprehensive Literacy Coursework (ICLC). Pre-requisite: Admission to the Elementary Teacher Education Program. Crosslisted with SE-342.

RE-390 DIRECTED STUDY IN READING 1.00-12.00 Credits**RE-392 SPECIAL TOPICS IN READING 1.00-12.00 Credits****RE-399 RESEARCH ASSISTANTSHIP 1.00-12.00 Credits**

Graded P/F only.

RE-490 DIRECTED STUDY IN READING 1.00-12.00 Credits

RE-491 WORKSHOP IN READING 1.00-12.00 Credits

RE-492 SPECIAL TOPICS IN READING 1.00-12.00 Credits

RE-495 PRACTICUM IN READING 1.00-12.00 Credits

RE-499 RESEARCH ASSISTANTSHIP 1.00-12.00 Credits

Graded P/F only.

SE-322 INCLUSION STRATEGIES K-12 3.00 Credits

Designing strategies for teaching and assisting individuals with learning differences or disabilities in school settings. Emphasizes standards of performance related to teaching and team responsibilities of professionals working to assist students with individual strengths or needs. Pre-requisite: Admission to Teacher Education Program or permission of instructor.

SE-332 INDIVIDUALIZED ASSESSMENT 3.00 Credits

The study and application of models and techniques of diagnosis and educational assessment used in identifying, classifying, planning for, monitoring, and evaluating individuals with disabilities and educational programs. Co-requisite: SE-335.

SE-333 INDIVIDUALIZED INSTRUCTION 3.00 Credits

Instructional design and planning for teaching individuals with disabilities or learning needs. Emphasizes standards of instructional practice for motor, cognitive, academic and functional life skills.

SE-334 INDIVIDUALIZED MOTIVATION 3.00 Credits

Motivational planning for teaching individuals with disabilities or special needs. Emphasizes standards of practice related to planning and managing the teaching learning environment, and managing student behavior and social interaction skills.

SE-335 SPECIAL EDUCATION FIELD EXPERIENCE 1.00 Credit

Individualized and small group instruction experiences involving students with disabilities. Emphasizes standards of performance related to basic, social interaction, motor and functional skills development. Graded P/F only.

SE-340 FOUNDATIONAL LITERACY 4.00 Credits

Letter knowledge, phonological awareness, and an understanding of speech-sound correspondences are essential for all children to learn how to become readers and writers. However, it is also critical for children to learn how to use these tools to better their thinking and reasoning. In this course students will develop and demonstrate knowledge of written and oral language used in literacy development through classroom lecture, research assignments, activities, and field experiences. This course includes a 24-hour field experience in a K-2 grade classroom and it aligns with the Idaho Comprehensive Literacy Coursework (ICLC). Pre-requisite: Admission to the Elementary Teacher Education Program or permission of instructor. Crosslisted with RE-340.

SE-342 INTERMEDIATE LITERACY 4.00 Credits

Develops and applies students' theoretical understandings of the processes of literacy learning from grades 3-8. Includes focus on instruction and assessment of: reading comprehension, vocabulary, fluency, and writing. Includes implications for meaningful instruction for academically and culturally diverse learners. This course includes a 25-hour field experience in a 3-8 grade classroom and it aligns with the Idaho Comprehensive Literacy Coursework (ICLC). Pre-requisite: Admission to the Elementary Teacher Education Program. Cross-listed with RE-342.

SE-390 DIRECTED STUDY IN SPECIAL EDUCATION 1.00-12.00 Credits

SE-394 INTERNSHIP IN SPECIAL EDUCATION 1.00-12.00 Credits

SE-399 RESEARCH ASSISTANTSHIP 1.00-3.00 Credits

SE-407 ADAPTIVE TEACHING 6-12 2.00 Credits

Approaches to adapting curriculum, instruction and evaluation for students with learning difficulties in the secondary schools. Emphasis will be on motivation and alternative learning environments. Practical experiences are integrated into the course. Pre-requisite: Admission to the Secondary Teacher Education Program.

SE-428 ADAPTIVE TEACHING I 1.00 Credit

Approaches to adapting learning environments and motivation for students with learning differences or disabilities. Emphasizes standards of performance related to learning differences and adapting environments. Pre-requisite: Admission to the Elementary Teacher Education Program.

SE-431 ADAPTIVE TEACHING II 1.00 Credit

Approaches to adapting curriculum, instruction and assessments for students with learning differences or disabilities. Emphasizes standards of practices related to disabilities and adaptive instruction. Pre-requisite: Admission to the Elementary Teacher Education Program.

SE-467 PHYSICAL ACTIVITY AND RECREATION FOR INDIVIDUALS WITH SPECIAL NEEDS 3.00 Credits

Study of the categories of exceptionality. Socio-cultural dimensions of learning and teaching are examined. Strategies for teaching and assisting individuals with special needs and a wide variety of abilities in sport and physical activity. Includes field experiences with Special Olympics, physical and occupational therapists, and adapted physical educators in schools. Cross-listed with KIN-467.

SE-477 CONSULTING WITH PARENTS AND PROFESSIONALS 2.00 Credits

Theory and practice of consulting with parents of students with disabilities. Emphasizes standards of performance related to communication, collaborative partnerships, professional and ethical practices.

SE-484 SPECIAL EDUCATION INTERNSHIP 6.00 Credits

Individualized planning and instruction in resource or inclusion programs for students with disabilities. Emphasizes standards of performance integrating knowledge and skills required for the CEC Common Core of Knowledge and Skills Essential for All Beginning Special Education Teachers. Fee required. Pre-requisite: Admission to the Elementary or Secondary Teacher Education Program. Graded P/F only.

SE-490 DIRECTED STUDY IN SPECIAL EDUCATION 1.00-12.00 Credits**SE-491 WORKSHOP IN SPECIAL EDUCATION 1.00-12.00 Credits****SE-492 SPECIAL TOPICS IN SPECIAL EDUCATION 1.00-12.00 Credits****SE-494 INTERNSHIP IN SPECIAL EDUCATION 1.00-12.00 Credits****SE-495 PRACTICUM IN SPECIAL EDUCATION 1.00-12.00 Credits**