The College of Education prepares teachers, counselors, administrators and other service personnel for positions in public education in Wyoming, throughout the nation, and the world. The teacher education program incorporates content area courses from the various colleges on campus with experiences in educational methodology. Programs are designed to provide students with a maximum amount of experience in the classroom.

Graduates of the College of Education are prepared to deal with youth growing up in a rapidly changing world. Programs are experiential, collaborative, outcomes based, and technologically supported. Emphasis is placed on professional ethics, a commitment to lifelong learning, and respect for all individuals in our culturally diverse society.

Programs of Study
Undergraduate Degrees
Bachelor of Arts
Elementary education
Elementary and special education
Secondary education
Bachelor of Science
Agricultural education
 Trades and industrial education
Technical education (UW/CC only)
Master of Arts
Education
Master of Science
Counseling
Education
Natural science
Education Specialist
Doctor of Education
Doctor of Philosophy
Counselor education and supervision
Education
Accreditation
The College of Education, a member of the American Association of Colleges of Teacher Education, is accredited by the National Council for Accreditation of Teacher Education. The Wyoming Professional Teaching Standards Board and the North Central Association of Colleges and Schools approve the college as an accredited teacher-preparing institution.

Organization of the College
The College of Education includes undergraduate teacher education and graduate studies in education. Departments offering undergraduate and graduate programs in the college include Professional Studies, Educational Studies, Elementary/Early Childhood Education, Secondary Education, and Special Education.

Undergraduate and graduate education are supported by several units. The Office of Teacher Education, McWhinnie Hall room 100, coordinates activities dealing with undergraduate academic advising, field experiences, and certification.

The College of Education, College of Arts and Sciences, Wyoming community colleges, many Wyoming districts, and the State Department of Education are part of the Wyoming School-University Partnership, which grounds collaborative efforts across the state related to K-12 preservice and inservice education.

The Laboratory School, an Albany County School District entity, serves the college, the university, the school district, and the state as an educational center for research, development, instructional advancement, and in-service education. The school enrolls students in pre-school through ninth grade.

Computer laboratories in the college feature a wide range of capabilities including Internet access. The laboratory equipment is frequently updated to serve the needs of students, faculty and staff.

The Learning Resource Center is a branch of the university library system. Educational materials are available to serve the needs of K-12 students, university students, university faculty and public school faculty in Wyoming.

Academic Advising
Students are assigned an academic adviser who will assist in planning a program combining University Studies requirements, core content requirements, and professional education courses. Students are expected to consult with their adviser regularly. The Office of Teacher Education coordinates advising and provides students and faculty with assistance in areas related to academic advising.

Student Responsibility
College of Education students are responsible for knowing and meeting graduation requirements. Students are expected to maintain a 2.75 UW Total Institution grade point average to enter Phase II and III of the Wyoming Teacher Education Program and continue in the professional education sequence and to graduate from the teacher education program.

Prior to enrolling in professional education courses, students are expected to have met the specific program and course prerequisites as listed in this publication. Students are expected to make reasonable academic progress toward completion of a degree. Professional education courses taken prior to the last 10 years will not be accepted in a degree and/or teacher certification program.

The College of Education does not accept transfer credits for Professional Education or content area courses with equivalents at UW when the grade earned was less than a C. The College of Education does not accept either teaching methodology or student teaching coursework or credits completed at other colleges or universities. Students must have a minimum 2.50 UW grade point average to transfer into the College of Education from another UW college.

Background Checks
Beginning spring semester 2011, all incoming students pursuing teacher certification and/or teacher endorsement programs must undergo an initial criminal background check prior to admission to the College of Education. Any costs associated with the background checks will be the students’ responsibility. Specific information regarding this process can be found at: http://www.uwyo.edu/education/.

A second background check is included as part of the state application process for the Wyoming Substitute Teaching Permit, which is required for admission to Phase II of the Wyoming Teacher Education Program.

Courses Taken for S/U Credit
Courses taken to satisfy professional education requirements and major content requirements must be taken for a conventional grade (A-F) unless offered for S/U grading only.
Wyoming Teacher Education Program

The Wyoming Teacher Education Program consists of increasingly demanding phases of professional preparation. Competencies based on professional standards, including those mandated by the Wyoming Professional Teaching Standards Board (PTSB), are addressed developmentally. A teacher candidate graduating from this program will have mastered competencies required by the PTSB and the education profession.

Admission:

Revised Wyoming Teacher Education admission requirements are pending approval for new and transfer students. These standards would be effective beginning fall 2013 for matriculating students. Preprofessional: students concentrate on the University Studies Program requirements. EDST 2450, Human Lifespan Program Development, must be completed prior to moving into Phase I.

Phase I: Sophomore students are introduced to teaching and learning through EDST 2480, Diversity and the Politics of Schooling. This course includes a field experience in a public school setting.

Phase II: A junior-level experience extends student competence through EDST 3000, Teacher as Practitioner. The practicum experience is in a public school guided by practicing K-12 faculty.

Phase IIIa/b: A two-semester sequence in the final year consists of fieldwork and pedagogy course work in the first semester. The second semester consists of a 16-week, full-time classroom experience. Field experiences are completed in Partner Schools.

Partner Schools are regional Wyoming district settings with collaborative agreements for concentrated field placements. These partnerships are focused on interactive mentoring by university and K-12 faculty and emphasize applied pedagogy.

Degree Program Curricula

The following curricula summarize the programs offered by the College of Education. Students complete content courses in their major as well as professional education courses, some of which can also be counted toward their University Studies Program requirements. Additional requirements are:

1. A minimum 2.75 UW Total Institution grade point average is required in order to enter Phase II, Phase III, as well as to successfully complete the Wyoming Teacher Education Program.

2. A minimum 2.50 grade point average in content area course work. Grades of less than “C” in courses taken at the University of Wyoming, and/or transferred from other colleges and universities, will not be accepted toward content area courses or professional education course requirements.

3. A front and back copy of valid Wyoming Substitute Teaching Permit must be submitted to the Office of Teacher Education with applications for Phases II and III. Substitute Teaching Permits that will expire before the end of Phase II or Phase III must be renewed prior to the beginning of the semester in which the application will expire.

Further information on each program is available in:

Office of Teacher Education
McWhinnie Hall Room 100
Dept. 3374, 1000 E. University Ave.
Laramie, WY 82071
Ph. (307) 766-2230

Agricultural Education Curriculum

Professional Education Requirements

<table>
<thead>
<tr>
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</thead>
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<td>EDST 3550</td>
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<tr>
<td>EDSE 3278</td>
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<tr>
<td>EDSE 4278</td>
<td>3</td>
</tr>
<tr>
<td>EDSE 4XXX</td>
<td>3</td>
</tr>
<tr>
<td>EDSE 4500</td>
<td>15</td>
</tr>
</tbody>
</table>

Agricultural Education with Area of Concentration

This program consists of a minimum of 126 total hours. Minimum of 2.75 cumulative GPA and minimum of 2.50 content GPA required. This major will be advised in the College of Education, with a secondary adviser in the College of Agriculture and Natural Resources. Refer to the College of Education for specific curriculum requirements.

Major Content

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>AGEC 1010 or 1020</td>
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<tr>
<td>AECL 1000</td>
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<tr>
<td>SOIL 2010</td>
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<td>REWM 2000</td>
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<td>ANSC 1010</td>
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</tr>
<tr>
<td>LIFE 2022 or 2023</td>
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<tr>
<td>LIFE 3400</td>
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</tbody>
</table>

Areas of Concentration (15-16 hours)

or Minors - All Ag Ed students are required to either complete courses in an area of concentration below, or complete a minor in the departments of Animal and Veterinary Science, Plant Science, Renewable Resources, Agricultural Communications, or Agricultural and Applied Economics. Minors must be declared and cannot be added after the B.S. degree has been earned. Completing a minor may require additional hours beyond the required 128 credit hours. Your AGNR adviser should be consulted when working on a minor for requirements.

- Animal and Veterinary Science (ANVS) 16 hrs.
  - ANSC 3100: 3 hrs.
  - ANSC 3010: 4 hrs.
  - FDSC 2040: 3 hrs.
  - And, one of the following:
    - PATB 4110 or ANSC 4120 or ANSC 4540 or FDSC 3060: 3 hrs.

- Agroecology (AECL) 15 hrs.
  - AECL 2026: 1 hr.
  - AECL 3030: 3 hrs.
  - Upper Division Coursework in ENTO, PLNT, SOIL: 8 hrs.
  - Upper Division course (TBA): 3 hrs.

- Rangeland Ecology and Watershed Management (REWM) 15 hrs.
  - REWM 2500: 2 hrs.
  - REWM 3020: 3 hrs.
  - REWM 4530: 1 hr.
  - REWM 4700: 3 hrs.
  - Upper Division Coursework in REWM: 3 hrs.
  - Upper Division course (TBA): 3 hrs.

- Soil Science (SOIL) 15 hrs.
  - SOIL 4120: 3 hrs.
  - SOIL 4150: 3 hrs.
  - SOIL 4160: 3 hrs.
  - Upper Division course in SOIL: 3 hrs.
  - Upper Division course (TBA): 3 hrs.

- Art Education with Concurrent Major in Art Curriculum

The art education program consists of a minimum of 123 total hours and prepares students for K-12 certification. Transfer students are required to take at least 26 hours of upper-division art course work from the University.
of Wyoming. Majors must earn a grade of C or better in all content courses. A minimum GPA of 2.50 in major content courses is required.

**Professional Education Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>EDST 2450</td>
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<tr>
<td>EDST 2480</td>
<td>4</td>
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<td>EDSE 4500</td>
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**Major Content**

<table>
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<tr>
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<td>ART 1110</td>
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<tr>
<td>ART 2020</td>
<td>3</td>
</tr>
<tr>
<td>ART 2305</td>
<td>1</td>
</tr>
</tbody>
</table>

The above major content courses must be completed before EDSE 4272. In addition to these courses, students must also complete 15 hours of art studio core, 3 hours of art history electives, 10 hours of upper division art courses, and 3 hours of interrelated arts electives.

**Elementary Education Curriculum Professional Education Requirements**

This program consists of a minimum of 120 total hours.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
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<table>
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<tbody>
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<td>ART 2020</td>
<td>3</td>
</tr>
<tr>
<td>ART 2305</td>
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</tbody>
</table>

The above major content courses must be taken prior to enrollment in EDEL 4109, 4309, 4409. EDST 3550 must also be completed before EDEL 4109, 4309, 4409.

The following areas must also be represented in the program. Courses may also fulfill University Studies requirements or be part of the area of concentration. No course may be double-counted within these four areas. Courses for speech and acting and American diversity must be selected from lists of designated courses, which are available from the Office of Teacher Education, or the college web site.

American diversity ..................................... 3
EDEL 3170 ............................................. 3
Music .................................................. 3
Speech and acting .................................... 3

**Areas of Concentration**

Elementary education majors must take a minimum of 18 semester hours in a specific area of concentration. The following approved areas provide specialization in:

1. Creative arts
2. International Education Studies or American Cultural Diversity
3. Environmental studies
4. Interdisciplinary early childhood
5. Individual and society (at UW/Casper College Center only)

A list of required courses and specific requirements for each area of concentration may be obtained from The Office of Teacher Education, or the college web site.

**English Education with Concurrent Major in Mathematics Curriculum**

Total hours required for the mathematics education curriculum is 120.

**Professional Education Requirements**

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**Major Content**

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<td>ENGL 4120</td>
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<tr>
<td>MATH 4600</td>
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</table>

**Mathematics Education with Concurrent Major in Mathematics Curriculum**

Total hours required for the mathematics education curriculum is 120.

**Professional Education Requirements**

<table>
<thead>
<tr>
<th>Course</th>
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**Major Content**

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**Mathematics Education with Concurrent Major in Mathematics Curriculum**

Total hours required for the mathematics education curriculum is 120.

**Professional Education Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
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</tbody>
</table>
Modern Languages Education

Secondary education programs are offered in French, German, and Spanish. Total minimum hours required for the modern languages education curriculum is 123.

Modern Language Secondary Education programs require that all candidates score at the Advanced Low level or higher on the American Council of Teachers of Foreign Language Oral Proficiency Interview (OPI), as well as on the Writing Proficiency Test (WPT) in their language major/the language they intend to teach. In order to be admitted to the Methods II course, students must demonstrate having attained a rating of at least the Advanced Low proficiency level on the OPI and the WPT. Post-baccalaureate teacher certification program students must score at these levels prior to admission to Modern Language Secondary Education programs. Given these requirements, it is important that students take advantage of study abroad experiences that will assist them in reaching high levels of second language proficiency. For information on UW study abroad opportunities, contact the International Programs office at 766-3677, or consult their web site at www.uwyo.edu/intprogs.

Professional Education Requirements

EDST 2450.........................3
EDST 2480.........................3
EDST 2484.........................3
ITEC 2360.........................3
EDST 3000.........................6
EDST 3550.........................2
EDSE 3276.........................3
EDSE 4276.........................3
EDSE 4500.........................15

With Concurrent Major in French

The major consists of at least 31 hours beyond FREN 2030. Students who have taken French in high school should consult the Department of Modern and Classical Languages about proper placement. FREN 1010, 1020, and 2030 do not count toward the major; however, these courses may need to be taken as prerequisites.

French Major Content

FREN 2040.........................3
FREN 2130.........................3
FREN 2140.........................3
FREN 3005.........................1
FREN 3050.........................3
FREN 3060.........................3
FREN 3105.........................3
FREN 3110.........................3
FREN 4100.........................3
FREN 4110.........................3
FREN 4120 or 4130 or 4140...........3

Other Required Courses

COJO 1010 or THEA 1100..........3
ENGL/LANG 4750................3
ENGL/LANG 4770 or 4785..........3
EDCI 4450.........................3
EDCI 4350.........................3

and French (FREN) or courses related to the history, art and political science of the francophone world, in consultation with your academic adviser. [In addition to other required course work.] For those who wish to complete the ESL Endorsement, six of these hours can be earned by taking EDCI 5430 and EDCI 5440, or through study abroad in a French-speaking country...........12

With Concurrent Major in German

The major consists of at least 30 hours beyond GERM 2030. Students who have taken German in high school should consult the Department of Modern and Classical Languages about proper placement. GERM 1010, 1020, and 2030 do not count toward the major; however, these courses may need to be taken as prerequisites.

GERM 2040.........................3
GERM 2140.........................3
GERM 3060.........................3
GERM 3050.........................3
GERM 3060.........................3
GERM 4070.........................3
GERM 4100.........................3
GERM 4110.........................3
GERM 4145 or 4180.................3
GERM 4265.........................3

Other Required Courses

COJO 1010 or THEA 1100..........3
ENGL/LANG 4750 ................3
ENGL/LANG 4770 or 4785..........3
EDCI 4450.........................3
EDCI 4350.........................3

and German (GERM) or courses related to the history, art and political science of the German-speaking world, in consultation with your academic adviser. [In addition to other required course work.] For those who wish to complete the ESL Endorsement, six of these hours can be earned by taking EDCI 5430 and EDCI 5440, or through study abroad in a German-speaking country...........12

With Concurrent Major in Spanish

The major consists of at least 33 hours beyond SPAN 2030. Students who have taken Spanish in high school should consult the Department of Modern and Classical Languages about proper placement. SPAN 1010, 1020, and 2030 do not count toward the major; however, these courses may need to be taken as prerequisites.

SPAN 2040.........................3
SPAN 2140.........................3
SPAN 3050.........................3
SPAN 3060.........................3
SPAN 3080.........................3
SPAN 3100.........................3
SPAN 3120.........................3
SPAN 3200.........................3
SPAN 4070.........................3
SPAN 4080.........................3
SPAN 4090.........................3

Other Required Courses

COJO 1010 or THEA 1100..........3
ENGL/LANG 4750 ................3
ENGL/LANG 4770 or 4785..........3
EDCI 4450.........................3
EDCI 4350.........................3

and Spanish (SPAN) or Chicano Studies (CHST) or courses related to the history, art and political science of the Spanish-speaking world, in consultation with your academic adviser, in addition to other required course work. For those who wish to complete the ESL Endorsement, six of these hours can be earned by taking EDCI 5430 and EDCI 5440, or through study abroad in a Spanish-speaking country...........12

Science Education Curriculum

Concurrent majors in Science Education are offered in Biology, Chemistry, Earth System Science, and Geology.

A grade of C or better must be earned in each course included in the major content. A minimum GPA of 2.5 in major content courses is required.

Professional Education Requirements

EDST 2450.........................3
EDST 2480.........................4
EDST 2484.........................3
ITEC 2360.........................3
EDST 3000.........................6
EDST 3550.........................2
EDSE 3275.........................3
EDSE 4275.........................3
EDSE 4500.........................15
Biological Science Education with Concurrent Major in Biology

In addition to the professional education requirements, a minimum of 56 semester hours, including the major content courses (21-23 hours), biology electives (15 hours) and required electives (20 hours minimum).

Science Electives

At least one course from each of the following areas is required: chemistry, physics, environmental science, earth and space sciences.

Total minimum program hours: 121

Major Content

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIFE 1010</td>
<td>4</td>
</tr>
<tr>
<td>LIFE 2022</td>
<td>4</td>
</tr>
<tr>
<td>LIFE 2023</td>
<td>4</td>
</tr>
<tr>
<td>MICR/MOLB 2021</td>
<td>4</td>
</tr>
<tr>
<td>LIFE 3000</td>
<td>3</td>
</tr>
<tr>
<td>LIFE 3050 or 3500</td>
<td>4</td>
</tr>
<tr>
<td>LIFE 3400</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective Courses

15 hours in the Biological Sciences. Electives may be from one or more of these areas of emphasis: Microbial Emphasis; Plant and Fungal Emphasis; Animal Emphasis; Ecology Emphasis; Genetics and Evolution Emphasis (choices available from the Office of Teacher Education or the college web site). A minimum of 8 hours must be upper division.

Other Required Electives (20 hours minimum)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 2050</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1000 or 1020</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 1110</td>
<td>4</td>
</tr>
</tbody>
</table>

And one course from each of the following (8 hours minimum):

Earth and Space Science ... 4
Environmental Science ... 4

Chemistry Education with Concurrent Major in Chemistry

In addition to the professional education requirements, a minimum of 51 semester hours, including the major content courses (42 hours), science electives (9 hours) are required.

Required Content Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1020 or 1050</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1030 or 1060</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 2230</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 2420</td>
<td>4</td>
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<td>CHEM 2440</td>
<td>4</td>
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<tr>
<td>CHEM 4110</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 4230</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 4507 or 3550</td>
<td>3</td>
</tr>
<tr>
<td>LIFE 1010</td>
<td>4</td>
</tr>
<tr>
<td>MOLB/MICR 2021</td>
<td>4</td>
</tr>
</tbody>
</table>

Earth/Space Science Education with Concurrent Major in Earth System Science

In addition to the professional education requirements, a minimum of 71 semester hours, including the major content courses (46 hours), additional courses (16 hours), and elective courses (9 hours) are required.

Required Earth System Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIFE 1010</td>
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</tr>
<tr>
<td>CHEM 1020 or 1050</td>
<td>4</td>
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<tr>
<td>CHEM 1030 or 1060</td>
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<td>PHYS 1310</td>
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<tr>
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<tr>
<td>or SOIL 4535</td>
<td>3</td>
</tr>
<tr>
<td>ESS/ATSC/BOT/GEOG 4001</td>
<td>4</td>
</tr>
<tr>
<td>BOT/GEOG 4111 or 4140</td>
<td>3</td>
</tr>
<tr>
<td>ESS/GEOG 4140</td>
<td>3</td>
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<td>PHYS 4200</td>
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<tr>
<td>ESS 4950</td>
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</tr>
<tr>
<td>ESS 4970</td>
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And Additional Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
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<tr>
<td>MATH 2200</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2205</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 3600 or 3650</td>
<td>4</td>
</tr>
<tr>
<td>Elective Courses</td>
<td>9</td>
</tr>
</tbody>
</table>

Science Electives

At least one course from each of the following areas is required: physics, biological sciences, environmental science, earth and chemistry.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
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<td>MINIMUM 9 ADDITIONAL CREDITS</td>
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<td>LIFE 3050</td>
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<td>LIFE 3400</td>
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<tr>
<td>MOLB 3610</td>
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</tr>
<tr>
<td>MOLB 4100</td>
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<tr>
<td>MOLB 4105</td>
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<tr>
<td>CHEM 1020 or 1050</td>
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Required Earth System Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
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<td>ESS/GEOG 2000</td>
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<td>ESS 4970</td>
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And Additional Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tr>
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<td>GEOL 3600 or 3650</td>
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<tr>
<td>Elective Courses</td>
<td>9</td>
</tr>
</tbody>
</table>

Elective Courses: 15 hours (minimum)

At least 7 hours in GEOL courses numbered 2000 or higher, plus additional hours in GEOL at a minimum level of 2000 or higher, approved electives.

Physics Education with Concurrent Major in Physics

In addition to the professional education requirements, a minimum of 63 semester hours, including the major content courses (32 hours), and science (16 hours), and mathematics (15 hours) courses are required.

Major Content

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tr>
<td>PHYS 1310</td>
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<tr>
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<tr>
<td>PHYS 4510</td>
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</tr>
<tr>
<td>PHYS 2150 or 3100 or 3650 or 4050 or 4150 or 4160</td>
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Required Science Courses

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<td>CHEM 1020</td>
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<tr>
<td>COSC 1030</td>
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Required Mathematics Courses

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<th>Course</th>
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<tbody>
<tr>
<td>MATH 2200</td>
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<td>MATH 2205</td>
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<td>MATH 2210</td>
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Social Studies Education

Professional Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>EDST 2480</td>
<td>4</td>
</tr>
<tr>
<td>EDEX 2484</td>
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<td>EDST 3000</td>
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</tr>
<tr>
<td>EDST 3550</td>
<td>2</td>
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<tr>
<td>EDSE 3273</td>
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</table>
EDSE 4273..........................3
EDSE 4500............................15

Major Content
Concurrent majors in social studies education are offered in Geography (128 minimum credits total), History (128 minimum credits total), and Political Science (128 minimum credits total).

Majors must maintain a G.P.A. of 2.50 in major content courses and earn a grade of C or better in all content classes.

Social Studies Education with Concurrent Major in Geography
Geography Requirements: 17 hours
GEOG 1000............................3
GEOG 1010............................4
GEOG 1020............................3
GEOG 2150............................4
GEOG 3030............................3

23 hours of Geography (GEOG) electives (16 hours minimum) must be upper division.

Electives must be from those approved for the BA/BS in Geography program.

Additional Content Requirements: 24 hours (minimum); 15 hours (minimum) in HIST

Required:
HIST 1211............................3
HIST 1221............................3
HIST 1110............................3
HIST 1120............................3
Upper-division HIST Elective..........................3
ECON 1000............................3
POLS 1000............................3
POLS 2000............................3

Social Studies Education with Concurrent Major in History
Major Content
HIST 1211............................3
HIST 1221............................3
HIST 1251............................3
HIST 1110............................3
HIST 1120............................3
HIST 2000-level electives................6
HIST 3020 or 4055......................3
Upper-division history electives............18
(to include 6 hours non-U.S. history and
Single foreign language ..................8
Economics electives.....................6
Geography electives ....................7
Political Science electives...............6

Social Studies Education with Concurrent Major in Political Science
Political Science Requirements: 36 hours
POLS 1000............................3
POLS 1200............................3
POLS 2300 or 2310.....................3
POLS 2460............................3
POLS 3100............................3
POLS 4100............................3
POLS 4110............................3

Additional 15 hours (minimum) of POLS course work from this list including at least one Senior Seminar:
POLS 2000............................3
POLS 2070............................3
POLS 2200............................3
POLS 3220............................3
POLS 3270............................3
POLS 3300............................3
POLS 3500............................3
POLS 3680............................3
POLS 4051............................3
POLS 4052............................3
POLS 4090............................3
POLS 4120............................3
POLS 4230............................3
POLS 4290............................3
POLS 4300............................3
POLS 4330............................3
POLS 4400............................3
POLS 4430............................3
POLS 4530............................3
POLS 4710............................3
POLS 4810............................3
POLS 4840............................3
POLS 4850............................3
POLS 4870............................3
POLS 4890............................3
POLS 4900............................3
POLS 4910............................3

Additional Content Requirements: 28 hours (minimum); 18 hours (minimum) in HIST:
Required:
HIST 1211............................3
HIST 1221............................3
History Electives..........................12
and
GEOG 1010............................4
GEOG 1000 or 1020.....................3
ECON/INST 1000......................3

Graduate Study
The four departments of the College of Education provide support for master’s and doctoral degree programs. Faculty and staff work to deliver these programs by providing campus-based courses, courses taught through compressed video, courses taught on-site at different locations in Wyoming, courses taught online, and courses taught in hybrid formats.

The College of Education is dedicated to offering high quality graduate programs that will provide students with the necessary skills to become educational leaders within their areas of specialization and expertise. All graduate students in the College of Education are expected to become scholars, researchers, and practitioners. They must, therefore, be knowledgeable about the ever-changing literature and research in education, the characteristics and needs of learners, and methods for facilitating learning. They must also understand the process of change and how to facilitate changes in learning settings that reflect what is known about the teaching/learning process. These skills are important to all graduate students, regardless of their areas of specialization or major emphasis.

Degree Programs
College of Education programs fall under one of the following university approved degree titles:
- Master of Arts
- Master of Science
- Master of Science in Counseling
- Education Specialist
- Doctor of Education
- Ph.D. in Education
- Ph.D. in Counselor Education and Supervision
- Ph.D. in Curriculum and Instruction

The departments in the college are approved to offer one or more of the above listed degrees with specialization in their particular areas. The specializations available are:
- Adult and Post-Secondary Education
- Counselor Education (Counselor Education and Supervision, Community Counseling, School Counseling, and Student Affairs in Higher Education Program)
- Curriculum Studies
- Curriculum and Instruction/Early Childhood Development interdisciplinarity concurrent major program
- Educational Leadership
- Instructional Technology
- Special Education
- Literacy Education
- Mathematics Education
- Science Education

Master’s Programs
Currently graduate programs in the college are outcome-based. Faculty in the various specializations work with students to develop individual competencies. Consult each department for current degree requirements and program expectations.
**Doctoral Programs**

**Doctor of Education (Ed.D.)**

The College of Education Ed.D. program prepares students for scholarly inquiry and professional leadership in education. The program consists of (1) applied research, (2) courses and professional experiences in education and related fields designed to develop a comprehensive academic basis for leadership roles in education, and (3) applied professional experiences tailored to individual needs and career goals. Each student works closely with an adviser and a supervisory faculty committee to select courses, topics of research and inquiry, and teaching experiences.

All coursework in the Ph.D. in Education program addresses the following goals:

1. To convey deep scholarly knowledge of education and related fields
2. To promote a broad understanding of various methods of inquiry in education and develop competency in several of those methods
3. To advocate practices that demonstrate a commitment to diversity in education
4. To foster ethical and professional research and practice in education
5. To promote excellence as a college teacher

Effective preparation for the Ph.D. stems from collaborative research and inquiry into topics of mutual interest by students and faculty scholars/researchers. A major portion of the program consists of the individual student and selected faculty members(s) jointly engaged in research and inquiry. Successful Ph.D. applicants tend to have high aptitude for research and inquiry and express interest in general topics which the faculty of the college are actively inquiring and researching.

Options in the Ph.D. in Education are:
- Adult and Post Secondary Education
- Educational Leadership
- Instructional Technology

Options in the Ph.D. in Curriculum and Instruction are:
- Curriculum Studies
- Literacy Education
- Mathematics Education
- Science Education

**Ph.D. in Education and Ph.D. in Curriculum and Instruction**

The College of Education Ph.D. program prepares students for careers of scholarly inquiry and teaching in higher education. The program consists of (1) continuous research or inquiry, (2) courses and professional experiences in education and related fields designed to develop a comprehensive academic basis for future work in research and teaching, and (3) teaching and other related experiences tailored to individual needs and career goals. Each student works closely with an adviser and a supervisory faculty committee to select courses, topics of research and inquiry, and teaching experiences.

All coursework in the Ph.D. in Education program addresses the following goals:

1. To convey deep scholarly knowledge of education and related fields
2. To promote a broad understanding of various methods of inquiry in education and develop competency in several of those methods
3. To advocate practices that demonstrate a commitment to diversity in education
4. To foster ethical and professional research and practice in education
5. To promote excellence as a college teacher

Effective preparation for the Ph.D. stems from collaborative research and inquiry into topics of mutual interest by students and faculty scholars/researchers. A major portion of the program consists of the individual student and selected faculty members(s) jointly engaged in research and inquiry. Successful Ph.D. applicants tend to have high aptitude for research and inquiry and express interest in general topics which the faculty of the college are actively inquiring and researching.

Options in the Ed.D. are:
- Adult and Post-Secondary Education
- Curriculum and Instruction
- Educational Leadership
- Instructional Technology

**Ph.D. in Counselor Education and Supervision**

The PhD program in Counselor Education and Supervision is CACREP accredited and prepares professionals for positions as faculty in Counselor Education departments through personalized, developmentally oriented coursework emphasizing the integration of theory and experiential learning. This doctoral program is ideal for self-initiating persons who thrive in an atmosphere supportive of faculty/student interactions, small class environments, intensive class discussions and opportunities for self-direction and scholarly activity. The doctoral program is built upon the basis of a strong Master’s program and upholds the philosophical orientations, coherent principles, and applied knowledge and skills as counselors and supervisors.

The doctoral degree program is 60 credit hours for individuals who have completed a 60-hour CACREP master’s program. Students with a 48-hour CACREP master’s degree are required to complete and additional 12 semester credits. Students, through coursework, practica and faculty guidance, develop competencies in the areas of counseling, supervision, teaching, leadership, advocacy, research and scholarship.

**Learner Outcomes**

Doctoral Students in the Counselor Education and Supervision will demonstrate the following learner outcomes through the development of a professional e-portfolio (that is presented and reviewed on an annual basis).

1. **Academic and Professional Goals:** Students will demonstrate a clear vision of their professional and academic goals and academic preparation by developing and completing an approved program of study that meets the standards set forth by the Council for Accreditation of Counseling and Related Educational Programs (CACREP).

2. **Professional Licensure:** Students will obtain professional licensure as a Licensed Professional Counselor (LPC) in the state of Wyoming and/or develop a plan to obtain licensure for the state in which they intend to relocate upon graduation.

3. **Democratic Perspectives:** Students will demonstrate development as a culturally competent, creative, skilled & ethical counselor, supervisor and educator including the areas of advocacy, leadership, social justice, and promoting caring communities.

4. **Research and Scholarship:** Students will develop a professional identity as an academic researcher by demonstrating a clear and active research agenda that includes a plan of action for professional presentations and manuscripts.

5. **Professional Development:** Students will develop a clear and diligent plan for becoming a skilled counselor educator, including self-care.
Mathematics Education (EMAT)

5100. Theory and Research for Mathematical Learning. 3 (Max. 6). Advanced study of theory and research related to learning of mathematics, with attention to significant human mental development factors. Critically examines the scholarly basis for mathematical learning, including reviews of epistemological foundations, research-based factors, core issues, and advocacies for educational practices. **Prerequisites:** enrollment in Mathematics Education Ph.D. specialization or permission of the instructor.

5200. Advanced Study of Mathematics Curriculum, Assessment, and Evaluation. 3 (Max. 6). Advanced study of theory, research and practices related to curriculum, assessment and evaluation in mathematics education. Critically examines the historical and contemporary influences on these, including mathematical, philosophical, psychological, pedagogical, social and political forces and factors. **Prerequisites:** enrollment in Mathematics Education Ph.D. program or permission of the instructor.

5300. Theory and Practice for Mathematics Teaching and Teacher Education. 3. Advanced study of theory and research of mathematics teaching teacher education. Examines the scholarly basis for current rationales and practices, including a critical review of evidential effectiveness, core issues, and advocacies for reform. A major emphasis will include analysis and critique of significant theoretical and research literature. **Prerequisites:** enrollment in Mathematics Education Ph.D. program or permission of the instructor.

5400. Analysis and Critique of Research in Mathematics Education. 3. Both theoretical and empirical research and scholarship in the field of mathematics education are critically analyzed. Students develop a deep understanding of pivotal historical and contemporary literature that helped shape the field of mathematics education and begin a formative development of their research interests. **Prerequisites:** at least two from EMAT 5100, EMAT 5200, or EMAT 5300.

Curriculum and Instruction Graduate Programs

The Program

The master of arts and doctor of education in education with an option in curriculum and instruction are offered by three departments in the College of Education that collaborate to deliver the degrees: Educational Studies, Elementary and Early Childhood Education, and Secondary Education. A doctor of philosophy is being offered through the College of Education. These degree programs consist of required courses in curriculum and in research with a choice of electives chosen for their curricular emphasis. A graduate student in curriculum and instruction may choose a curricular emphasis in any of the following areas: agriculture, art, early childhood education, early childhood special education, English, English as a Second Language (ESL), literacy, mathematics, modern languages, science, and social studies education.

Educators wishing to broaden their theoretical understanding of curriculum and instruction, to increase their knowledge and skills in their content specializations, to pursue additional endorsements, and to develop new strategies and materials for their classrooms should consider the Master of Arts in Education, with a concentration in Curriculum and Instruction. Educators wishing to pursue advanced graduate level study with a school-based, practitioner-oriented focus should consider the Doctorate of Education, with a concentration in Curriculum and Instruction. Educators interested in engaging more intently on educational research and in pursuing a career in higher education should consider the Doctorate of Philosophy in Education, with a concentration in Curriculum and Instruction. Successful completion of any of these programs contributes to the professional development of educators and prepares them for roles of leadership within their subject areas, schools and/or higher education institutions.

The website for the Curriculum and Instruction can be found at: (www.uwyo.edu/c_i/)

For more information about any of the Curriculum and Instruction program offerings, please contact the Curriculum and Instruction Office Associate at: 307-766-6371 or mhanse19@uwyo.edu.

Program Specific Degree Requirements

Master of Arts in Education

Option: Curriculum and Instruction

• One year teaching (or its equivalent) required for admission
• Minimum 3.0 GPA on applicant’s most recent degree from an accredited institution
• Minimum of 32 hours of graduate credit
• Courses delivered via Outreach using distance technologies
• New provisions for teachers who are also working on their National Board Certificate
• Core Courses: 16 hours of program area core graduate credits
• Concentration: 15+ hours in either a certificate or endorsement program, academic content area, or general curriculum and instruction area of interest (with direction and consent of faculty adviser)
• Capstone consisting of one of the following:
  o Plan A (thesis) – EDCI 5960: Thesis Research (4 graduate credits)
  o Plan B (non-thesis) - EDCI 5890: Directed Professional Studies (2 graduate credits)
  o National Board Certificate – EDCI 5890: Directed Professional Study (1 graduate credit)

C&I Program Core:

• Classroom Assessment (EDCI 5500, 3 credits)
• Principles of Curriculum (EDCI 5000, 3 credits)
• Issues in Multicultural Education (EDCI 5450, 3 credits)
• Advanced Instructional Strategies (EDCI 5790, 3 credits)
• Action Research (EDRI 5550, 3 credits) OR Intro to Research (EDRI 5530, 3 credits)
• Midpoint Portfolio (EDCI 5400, 1 credit)

Areas of Concentration

• Certificates or Endorsements
  o Early Childhood and Early Childhood – Special Education (see www.uwyo.edu/elemed/ec/)
  o English as a Second Language (see www.uwyo.edu/esl)
  o Literacy (see www.uwyo.edu/elemed/literacy.asp)
  o Teachers of American Indian Children (see www.uwyo.edu/tac/)
Requirements include: the master’s does not guarantee acceptance. Meeting requirements for teacher credential is contingent upon successful completion of the master’s program. NOTE: Acceptance to the master’s is via application and contingent upon successful completion of the teacher credential. Meeting requirements for the master’s does not guarantee acceptance.

Requirements include:
- Bachelor’s degree completed prior to application
- 2.5 GPA minimum required in content course work; a 2.75 UW Institutional GPA minimum must be achieved throughout the teacher certification coursework
- Completed additional content courses, as required for the area in which certification is sought (i.e., Elementary, Secondary English, etc.). Specific course requirements for each certification area can be found in program sheets for each area, also available through the Office of Teacher Education’s website: http://ed.uwyo.edu/postbac.asp
- EDST 2450 and ITEC 2360 program prerequisites
- Current Wyoming Teacher Substitute Certificate (contact the State of Wyoming Professional Teacher Standard Board)
- Academic Content Areas – Math, History, Art, Music, Science, etc.
- Curriculum and Instruction Studies – focus on special education, educational leadership, diversity studies, counseling, instructional technology, etc.

Program Specific Admission Requirements
Application deadlines and materials can be found on the Curriculum and Instruction program web page (www.uwyo.edu/c_i/).

Program Specific Degree Requirements
Master of Arts in Education
Option: Curriculum and Instruction with an Emphasis in Teacher Certification
This program provides a post baccalaureate student the opportunity to earn a teaching certification while taking hours that lead to a master’s degree. The intent is to provide distance learning opportunities required for this master’s program after the certification is earned. It begins with classes in summer. Once students have completed the teacher credential portion of the program, they can apply for the master’s program. NOTE: Acceptance to the master’s is via application and contingent upon successful completion of the teacher credential. Meeting requirements for the master’s does not guarantee acceptance.

Requirements include:
- Bachelor’s degree completed prior to application
- 2.5 GPA minimum required in content course work; a 2.75 UW Institutional GPA minimum must be achieved throughout the teacher certification coursework
- Completed additional content courses, as required for the area in which certification is sought (i.e., Elementary, Secondary English, etc.). Specific course requirements for each certification area can be found in program sheets for each area, also available through the Office of Teacher Education’s website: http://ed.uwyo.edu/postbac.asp
- EDST 2450 and ITEC 2360 program prerequisites
- Current Wyoming Teacher Substitute Certificate (contact the State of Wyoming Professional Teacher Standard Board)
- Teacher Credential Core Courses: 19 credits (secondary) or 28 credits (elementary)
- Admissions requirements consistent with those described in Master’s of Arts in Education program (described above) with exception of one year teaching experience
- Master’s Course Core Requirements: 20-22 credits

Teacher Credential Core Requirements:
- Introduction to Special Education (EDEX 2484, 3 undergraduate credits)
- Foundations of Education in a Diverse Society (EDST 4000, 3 undergraduate credits)
- The Art and Science of Teaching (EDCI 5550, 4 graduate credits)
- Advanced Topics in Pedagogy (EDCI 5250, 3 graduate credits)
- Educational Assessment (EDST 3550, 2 undergraduate credits)
- Seminar in Assessment (EDCI 5560, 1 graduate credit)
- Methods II (Secondary Only; EDSE 42XX, 3 undergraduate credits)
- Humanities (Elementary Only; EDEL 4109, 5 undergraduate credits)
- Science (Elementary Only; EDEL 4409, 5 undergraduate credits)
- Literacy (Elementary Only; EDEL 4309, 2 undergraduate credits)
- Residency in Teaching (EDSE 4500 Secondary; EDEL 4500 Elementary, 11 undergraduate credits)
- Internship (EDSE 5990 Secondary and Elementary, 4 graduate credits)

C&I Master’s Core Requirements:
- Principles of Curriculum (EDCI 5000, 3 credits)
- Issues in Multicultural Education (EDCI 5450, 3 credits)
- Advanced Instructional Strategies (EDCI 5790, 3 credits)
- Action Research (EDRE 5550, 3 credits) OR Intro to Research (EDRE 5530, 3 credits)
- Midpoint Portfolio (EDCI 5400, 1 credits)
- Classroom Assessment (EDCI 5500, 3 credits) OR EDCI 5XXX (elective; in consultation with adviser)
- Capstone consisting of one of the following:
  o Plan A (thesis) - EDCI 5960: Thesis Research (4 credits)

For more information, contact the Office of Teacher Education or visit the web page (http://www.uwyo.edu/ted/post_bac.asp)

Program Specific Admission Requirements
Application deadlines and materials can be found on the Curriculum and Instruction program web page (www.uwyo.edu/c_i/).

Program Specific Degree Requirements
Doctor of Education (Ed.D.) in Education
Option: Curriculum and Instruction
- Bachelor and master’s degree required for admission
- 30 credits transferable (as part of master’s) from UW or other accredited university
- 3 years teaching experience (required)
- EDRE 5530 Introduction to Research (or equivalent; required)
- Minimum of 80 graduate credit hours in the following:
  o Core Courses (15 graduate credit hours)
  o Cognate (Area of Interest) (18 graduate credit hours)
  o Research (9-12 graduate credit hours)
  o Practicum/Internship (2 graduate credit hours)
  o Dissertation (6 graduate credit hours)

Core courses:
- EDAD 5600 - Diversity in Education
- EDCI 5730- Learning Theories: Research & Praxis
- EDAD - Educational Leader as Change Agent
- EDAD 5650 - Educational Leader as Communicator
- EDRE 5660- Proposal Writing

Cognate courses and advanced courses (minimum of 18 credits)
- EDCI 5800 – Curriculum Development
- EDCI 5790 – Advanced Instructional Strategies
- An additional 12 credits (elective, in consultation with adviser and/or committee)
**Curriculum and Instruction Graduate Programs**

### Advanced research courses (minimum of 9-12 credits)
- EDR 5530 (Introduction to Research) (may have been met in master's program)
- Some Combination of the following (in consultation with adviser and/or committee)
  - EDR 5600 (Ed Research 1 - Quantitative)
  - EDR 5610 (Ed Research 2 - Quantitative)
  - EDR 5620 (Ed Research 3 - Quantitative)
  - EDR 5630 (Ed Research 4 - Quantitative)
  - EDR 5640 (Introduction to Qualitative Research)
  - EDR 5650 (Advanced Qualitative Research)

### Practicum/Internship
- EDCI 5580 - Internship (2 credits)

### Dissertation Hours
- The required number of dissertation credits is a minimum of 6.
- Preliminary exam (after coursework is completed): Guidelines determined by program, department, or committee
- Problem-Based Dissertation (after preliminary exam): Guidelines determined by program, department, or committee

### Notes:
These requirements for an Ed.D. in Education are minimum requirements only.

### Program Specific Admission Requirements
Application deadlines and materials can be found on the Curriculum and Instruction program web page (www.uwyo.edu/c_i/).

### Program Specific Graduate Assistantships
Applicants interested in a Graduate Assistantship must submit a graduate assistantship application to the Curriculum and Instruction Office.

### Program Specific Degree Requirements
**Doctor of Philosophy (Ph.D.) in Education**

#### Option: Curriculum and Instruction
- Bachelor and master's degree required for admission
- 30 credits transferable (as part of master's) from UW or other accredited university
- Residency requirement: 1-2 consecutive full-time semesters on campus
- Minimum of 81 total credits required in the following areas:
  - Core Courses (9 graduate credit hours)
  - Cognate (Area of Interest) (18 graduate credit hours)
  - Research (12-15 graduate credit hours)
  - Dissertation (12 graduate credit hours)

### Core courses (minimum of 9 credits)
All PhD option areas require EDCI 5870, Intro to Doctoral Studies. In addition, doctoral students, with direction from their committees, will choose a minimum of two additional courses from the remaining five core courses:
- CNSL 5900 (Practicum in College Teaching)
- EDCI 5810 (Writing for Professional Publication)
- EDCI 5730 (Learning and Cognition)
- EDCI 5660 (Dissertation/Thesis Prospectus Writing)

We also understand that students may meet the requirements for the core content in other ways, such as a master's degree in an area that emphasizes coursework in diversity or multi-cultural education. Committees may determine that the requirements for additional course(s) have been met. However, Introduction to Doctoral Studies may not be waived.

### Cognate courses and advanced courses (minimum of 18 credits)
- EDCI 5600 (Diversity in Education)
- EDCI 5730 (Learning Theories: Research and Praxis)
- EDCI XXXX (Elective, in consultation with adviser and/or committee)
- 9 additional courses in some area of advanced area of study

### Advanced research courses (minimum of 15 credits)
- EDR 5530 (Introduction to Research) (may have been met in master's program)
- Some Combination of the following (in consultation with adviser and/or committee)
  - EDR 5600 (Ed Research 1 - Quantitative)
  - EDR 5610 (Ed Research 2 - Quantitative)
  - EDR 5620 (Ed Research 3 - Quantitative)
  - EDR 5630 (Ed Research 4 - Quantitative)
  - EDR 5640 (Introduction to Qualitative Research)
  - EDR 5650 (Advanced Qualitative Research)

### Dissertation Hours
- The required number of dissertation credits is a minimum of 12.
- Preliminary exam (after coursework is completed): Guidelines determined by program, department, or committee
- Dissertation (after preliminary exam): Guidelines determined by program, department, or committee

### Notes:
These requirements for a PhD in Education are minimum requirements only.

### Program Specific Admission Requirements
Application deadlines and materials can be found on the Curriculum and Instruction program web page (www.uwyo.edu/c_i/).

### Program Specific Graduate Assistantships
Applicants interested in a Graduate Assistantship must submit a graduate assistantship application to the Certification and Instruction Office.

### Certificates and/or Endorsements
**Teachers of American Indian Children Certificate Leading to a Wyoming Endorsement**

This graduate program, the University of Wyoming certifies that those who complete its five specialized courses possess the attitudes, knowledge, and competence necessary to effectively teach American Indian Children. Upon completion, students will receive official recognition of their achievement on their University of Wyoming transcripts and an official certificate.

### Required program courses:
- EDCI/AIST 5450 – Issues in Multicultural Education
- EDCI/AIST 5110 – Educational Foundations of American Indian Education
- EDCI/AIST 5121 – History and Philosophy of American Indian Education
• EDCI/AIST 5130 – Cultural Foundations of American Indian Education
• EDCI/AIST 5141 – Instructional Methods in American Indian Education

For more information, visit the web page (http://www.uwyo.edu/elemed/ec/)

**Literacy Certificate Leading to a Wyoming Reading Endorsement**

The University of Wyoming offers the required courses in the graduate literacy program. The program is designed to serve graduate level K-12 teachers in Wyoming who wish to obtain the Wyoming Reading Endorsement, and those who choose to apply the course work toward a master’s or doctoral degree in Curriculum & Instruction.

**Required Courses:**
- EDCI 5710 [5070]: Advanced Content Area Reading (3 credits)
- EDCI 5720: Literacy Assessment and Practices (3 credits)
- EDCI 5750: Research in Reading and Writing Instruction (3 credits)
- EDCI 5760 [5870]: Social Literacies (3 credits)
- EDEC 5320 [4320]: Advanced Oral & written Language Development (3 credits)

**Electives**
For approved electives, see www.uwyo.edu/elemed/literacy.asp

For more information, visit the web page (http://www.uwyo.edu/)

**English as a Second Language Certificate leading to a Wyoming English as a Second Language Endorsement**

The English as a Second Language (ESL) endorsement is designed to meet the ten state standards for teaching second language learners. It is offered in conjunction with departments in the College of Arts and Sciences. The need to address the specific educational issues and challenges English language learner students face by way of culturally and linguistically responsive professional practices is critical importance to the vitality of our classrooms, schools, and communities.

**Required Courses:**
- LANG/ENGL 4785: Linguistics, Language Teaching, and Social Context (3 credits)
- EDCI 4350/5350: Introduction to Second Language Acquisition (3 credits)
- EDCI 5430: Theory and Methods of ESL I (3 credits)
- EDCI 5440: Theory and Methods of ESL II (3 credits)
- EDCI 5580: Internship in English as a Second Language (3 credits)

For more information, visit the web page (http://www.uwyo.edu/elemed/literacy.asp)

**The Early Childhood Special Education Program (Birth to Five) Leading to Wyoming Certification**

Post-baccalaureate students who have earned a BA/BS in Elementary Education, Family and Consumer Sciences/Child Development Option, or a related field in early childhood development are eligible for this program. This is a pre-k program and does not prepare candidates to work in kindergarten or primary grade classrooms.

**Required courses:**
- EDEC 5250: Content Area Reading (3 credits)
- EDEC 5260 [5870]: Social and Writing Instruction (3 credits)
- EDCI 5740: Research in Reading and Practices (3 credits)
- EDCI 5750: Research in Reading and Writing Instruction (3 credits)
- EDCI 5760 [5870]: Social Literacies (3 credits)
- EDEC 5320 [4320]: Advanced Oral & written Language Development (3 credits)

**Electives**
For approved electives, see www.uwyo.edu/elemed/literacy.asp

For more information, visit the web page (http://www.uwyo.edu/)

**Curriculum and Instruction (EDCI)**

**USP Codes are listed in brackets by the 1991 USP code followed by the 2003 USP code (e.g. [M2Q]).**

**4000. Environmental Education for Teachers. 2-3 (Max. 6).** An introduction to the philosophy, methods and content of environmental education for students in elementary and secondary education. Prerequisite: senior standing.

**4050. Minority Sexual/Gender Identity Issues in Education. 3.** How youth of minority sexual and gender identities have been educated: the challenges they experience in U.S. K-16 schools, the risk factors related to academic success (health, safety, and emotional well being), and strategies to create safe, caring, and inclusive learning environments for all youth. Dual listed with EDCI 5050; cross listed with WMST 4050. Prerequisite: completion of WA and WMST 2000 with C or better.

**4120 [LIBS 4120]. Literature for Young Adults. 3.** Designed for prospective and working library media specialists and teachers who wish to strengthen their backgrounds in the utilization of literature with young adults in classrooms and libraries. The course involves the reading and critique of literature. Dual listed with EDCI 5120. Prerequisite: senior level or graduate standing. (Offered based on sufficient demand and resources)

**4140 [LIBS 4140]. Storytelling. 3.** [C3(none)]. An investigation of storytelling as an art and as an aid to instruction. Emphasis is on literature for preschool and elementary age children. Dual listed with EDCI 5140. Prerequisite: junior standing or EDCI 4120 is recommended. (Offered based on sufficient demand and resources)

**4160 [LIBS 4160]. Recent Trends in Children’s Literature. 2.** Important new developments in the subject matter, settings and style of children’s books are identified and studied. Students in this course are expected to have a strong basic knowledge of children’s literature. Dual listed with EDCI 5160. Prerequisite: EDCI 4120. (Offered based on sufficient demand and resources)

**4300. Introductory Diagnosis Corrective Reading Instruction. 3-4 (Max. 4).** Provides students with opportunities to work with children who have severe reading problems. Students in this course tutor one or two children for an entire semester under the direct guidance of the course instructor and the supervising teacher of the teaching division of the reading clinic. Prerequisite: consent of instructor.
4330. Advanced Diagnosis, Corrective Reading Instruction. 3-4 (Max. 4). Designed to provide students with opportunities to work with children who have reading problems. Students in this class tutor under the direct guidance of the course instructor. Prerequisites: EDCI 3100, 4300 and consent of instructor.

4340. Integrating Computer-Based Technologies in Teaching _____ 1-3 (Max. 6). Equips students with information, skills and insights necessary for successful integration of computer-based technologies into classroom teaching. Content includes modeling of techniques, teaching strategies and appropriate applications of computer-based technologies in specific content areas and consideration of computer-related issues facing educators. Prerequisite: ITEC 2360 or equivalent.

4350. Introduction to Second Language Acquisition. 3. Addresses theoretical and conceptual foundations of working with second language learners. Focus is on the classroom applications of this theoretical base to interactions with English language learners, curriculum, instruction, assessment and evaluation, classroom organization, and school-community relations. Native American language revitalization issues are featured. Dual listed with EDCI 5350. Prerequisite: none.

4400 [3400]. The Middle School. 2-3 (Max. 3). This is the basic professional course in the program for the preparation of middle years educators. A review of the reorganization of junior high school leading to the establishment of the middle school philosophy, the teacher, and the unique function of the middle school compose the essential outline topics of the course. Prerequisites: EDST 3000, EDST 2450 or PSYC 4300, WA, 2.5 GPA. (Offered fall, spring and summer)

4450 [4250]. Issues In Multicultural Education. 3. Provides the future teacher and other interested students with a better understanding of current issues and social foundations of multicultural America. Enables more accurate educational decisions related to utilizing strengths and diversity of each cultural group. Dual listed with EDCI 5450. Prerequisite: students must have at least 12 credit hours in education classes.

5000. Principles of Curriculum. 3. Provides an overview of general understandings fundamental to the study of all aspects of curriculum to include pre-school, kindergarten thru high school. Consideration is given to the various factors, institutions and societal issues that impinge on and affect the decision making processes of curriculum developers. Prerequisite: graduate standing in education.

5010. Supervision of the School Music Program. 2-4 (Max. 4). Two sections: vocal; instrumental. Designed for graduate students who have a background in music education and for other interested graduate students in education. Prerequisite: 12 hours of education and graduate standing.

5020. Curriculum Workshop. 1-4 (Max. 4). Two sections: vocal; instrumental. Designed for graduate students who have a background in music education and for other interested graduate students in education. Prerequisite: 12 hours of education and graduate standing.

5050. Minority Sexual/Gender Identity Issues in Education. 3. How youth of minority sexual and gender identities have been educated: the challenges they experience in U.S. K-16 schools, the risk factors related to academic success (health, safety, and emotional well being), and strategies to create safe, caring, and inclusive learning environments for all youth. Dual listed with EDCI 4050; cross listed with WMST 5050. Prerequisites: completion of WA and WMST 2000 with C or better; graduate standing; completion/concurrent enrollment in ADED 5260.

5070. Educational Trends. 1-6 (Max. 6). Provides reading, discussion, research, and appraisal of new methods, materials, equipment, and experimental programs concerned with the improvement of education as it pertains to curriculum and instruction. The maximum allowable credit applies to the total offerings under this number. Prerequisite: 12 hours of education courses.

5100. Foundations of American Indian Education. 3. Examines cultural, geographical, linguistic, spiritual, political and societal factors before, during and after colonization of the Americas. Definitions and day-to-day realities of terms like ethnocentrism, cultural relativism, assimilation, acculturation, and institutional racism. Development of insights into positive teacher-pupil-community relationships that honor culture and language differences and enhance achievement. Cross listed with AIST 5110. Prerequisites: AIST 1001 and 15 credit hours of AIST or EDST.

5120. Literature For Young Adults. 3. Designed for prospective and working library media specialists and teachers who wish to strengthen their backgrounds in the utilization of literature with young adults in classrooms and libraries. Involve reading and critiquing literature. Dual listed with EDCI 4120. Prerequisite: senior level or graduate standing.

5121. History and Philosophy of American Indian Education. 3. Addresses the history of Indian education in the U.S. and Canada, examination of missionary initiatives, government programs, and tribal efforts. Review of documentary accounts of Native education, review autobiographical accounts of Native teachers and children. We will develop insight necessary for development of appropriate teaching methods and materials. Cross listed with AIST 5121. Prerequisites: Post-Baccalaureate standing.

5130. Cultural Foundations of American Indian Education. 3. In-depth study and analysis of the educational experiences of American Indians, focusing on contemporary educational issues and experiences, examining the impacts of cultural orientations, stereotypes, bias and other issues on the educational attainment of American Indian students. Critique instructional practices and programs developed addressing the needs of American Indian students. Cross listed with AIST 5130. Prerequisites: Post-Baccalaureate status.

5140. Storytelling. 3. An investigation of storytelling as an art and as an aid to instruction. Emphasis is on literature for preschool and elementary age children. Dual listed with EDCI 4140. Prerequisite: junior standing or EDCI 4120 is recommended.

5141. Instructional Methods in American Indian Education. 3. Addresses culturally relevant methodologies for teaching American Indian students, review of documentary accounts of Native education and autobiographical accounts of Native teachers and children as students develop appreciation of the complexity and difficulties of Native education. Students acquire insight necessary for development of appropriate teaching methods and materials. Cross listed with AIST 5141. Prerequisites: Post-Baccalaureate status.

5160. Recent Trends in Children's Literature. 2. Important new developments in the subject matter, settings and style of children's books are identified and studied. Students in this course are expected to have a strong basic knowledge of children's literature. Dual listed with EDCI 4160. Prerequisite: EDCI 4120.

5205. Methods of Teaching Middle-Level Mathematics. 3. Research based pedagogy and pedagogical content knowledge for teaching middle-level mathematics. Designed for practicing teachers of middle-grades mathematics. Cross Listed with NASC 5205. Prerequisites: admission to the SMTC program.

5215. Using Instructional Technology for Middle-Level Mathematics. 3. Covers the use of technology appropriate to middle-level mathematics teaching, such as microworlds, geographic information systems, spreadsheets, and other content appropriate technologies. Cross Listed with NASC 5215. Prerequisites: admission to the SMTC Program.
5225. Assessment for Middle-Level Mathematics. 3. Middle-level Mathematics Initiative teacher participants examine, analyze, and implement a variety of assessments that are aligned with standards and instruction appropriate to the middle level math learner. Cross listed with NASC 5225. Prerequisites: admission to the SMTCT program.

5250. Advanced Topics in Pedagogy. 3. A graduate level seminar to be taken concurrently with undergraduate methods courses in specific content areas (EDSE 425X-4260, EDEL 4309) EDCI 5250 is restricted to students pursuing teacher certification leading to a Master of Arts in Curriculum and Instruction. Prerequisite: Successful completion of EDCI 5550, EDST 3500, EDCI 5870, Seminar in Assessment, earned Bachelor’s degree from an accredited institution.

5270. Seminar for Early Career Teachers. 3. Provides an opportunity to engage in critical issues facing beginning teachers as well as to address pressing challenges faced. Provides an opportunity for mutual support and academic engagement around these critical issues as well as propel the beginning teacher further into the teaching profession. Prerequisite: teaching credentials required.

5300. Perspectives In Reading Instruction. 3. Designed to provide an intense examination of reading instruction for the large number of students in typical classrooms. The teaching and learning of basic reading skills is analyzed and discussed. Reading materials, alternative approaches to reading instruction, and classroom organization schemes are examined. A major thrust of the class is the application of current developments in reading to classrooms.

5310. Reading Comprehension Processes and Instruction. 3. Designed to acquaint the student with recent developments, research findings, and newer practices. Viewpoints expressed by experts are compared, and an emphasis is given to the objectives of knowledge and to an understanding of attitudes and skills. Prerequisite: graduate standing.

5320. The Writing Process in the Classroom. 3. Designed to acquaint the student with recent developments, research findings, and newer practices in the area of composition. Viewpoints expressed by experts are compared, and an emphasis is given to the objectives of knowledge and to an understanding of attitudes and skills. Prerequisite: graduate standing.

5350. Introduction to Second Language Acquisition. 3. Addresses theoretical and conceptual foundations of working with second language learners. Classroom applications of this theoretical base to interactions with English language learners, curriculum, instruction, assessment and evaluation, classroom organization, and school-community relations. Native American language revitalization issues are featured. Dual listed with EDCI 4350. Prerequisite: graduate standing.

5390. Literature and Reading/Writing Instruction. 3. Links the use of literature for children with instruction and practice in reading, writing, spoken language, and critical thinking skills. Students are expected to have a strong background knowledge of literature for children before taking this course. Dual listed with EDCI 4390. Prerequisite: EDEL 2280, or basic children’s literature course work.

5400. Midpoint Portfolio Reflection. 1. Allows students to reflect, self-assess, and receive guidance related to their progress in the C&I Master’s Program. Requirements include: self-assessment of progress toward the C&I program outcomes, completion of a variety of research abstracts, formation of the students’ graduate committees and approval of programs of study. Prerequisites: admission to the Curriculum and Instruction Master’s Program and completion of at least 12 hours of EDCI coursework.

5430. Theory and Methods of ESL I. 3. Provides an overview of theoretical and practical considerations in the teaching of English as a second/foreign language; acquaints students with different approaches, methods and procedures in TESL/TEFL; examines issues in the profession; requires a teaching/tutoring component. Prerequisite: EDCI 5350.

5440. Theory and Methods of ESL II. 3. Continues the theoretical and practical considerations in the teaching of ESL. Emphasis on Specifically Designed Academic Instruction in English (SDAIE) and literacy development for intermediate and advanced English language learners. Application of different approaches, methods, and procedures in TESL/TEFL. Development of curriculum. Issues in the profession. Requires teaching/tutoring component. Prerequisites: EDCI 5430.

5450. Issues in Multicultural Education. 3. Provides future and inservice teachers and other interested students with a better understanding of current issues and social foundations of multicultural America. Enables more accurate educational decisions related to utilizing strengths and diversity of each cultural group. Additional assignments are required of students completing this course for graduate credit. Dual listed with EDCI 4450. Prerequisite: 12 credit hours of education classes.

5480. Short Course. 1-6 (Max. 6). Provides offerings in special topics in curriculum and instruction on the basis of need. The maximum allowable credit is six semester hours. Prerequisites: 6 hours of education courses.

5490. Individual Problems. 1-6 (Max. 6). Provides flexible credit for seniors who may need the credit for graduation, or for students who wish to undertake intensive study of a special problem identified in a regular class. Prerequisite: 12 hours of education courses and consent of instructor.

5500. Classroom Assessment. 3. Provides reading, discussion, and research examining a variety of classroom-based assessments with a focus on the alignment of teaching, learning, and classroom assessment at the P-12 level. Prerequisite: graduate standing.

5510. Improvement of Instruction In:. 1-3 (Max. 12). This series of courses is designed to acquaint the student with recent developments, research findings, and newer practices in each of the fields listed. Viewpoints expressed by experts are compared, and an emphasis is given to the objectives of knowledge and to an understanding of attitudes and skills. Prerequisite: graduate standing and consent of instructor.

5515. National Board Certification Seminar. 1-3 (Max. 12). Provides information and support for teachers in the National Board Certification process. Content includes: reviewing, understanding, and applying best practice research; development of differentiated instruction; integration of formative assessment and reflective practice; understanding problem solving across the curriculum; and focuses on writing strategies for National Board Certification success. Prerequisite: graduate student standing.

5550. The Art and Science of Teaching. 4. Students will engage in a variety of experiences related to teacher decision making. Students research a variety of curriculum and instruction topics to discern the range of theories and associated models and develop personal theories and methods they plan to employ in their classrooms. Prerequisite: successful completion of EDST 4000 and earned Bachelor’s degree from an accredited institution.

5560. Seminar in Assessment. 1. One credit hour course is designed for students in the (post baccalaureate) teaching credential program with master’s option. Covers important concepts of assessment such as teachers as graders, self- and peer-assessment techniques, standardized assessment instruments, challenges facing new teachers, using assessment for planning/modifying instruction to improve learning experiences, and differentiated assessment in diverse classrooms. Prerequisites:
5580. Internship. 1-8 (Max 12). An internship experience may be required as part of the planned program in curriculum and instruction. A maximum of eight hours may be counted in meeting the minimum requirements of a graduate degree, but additional credit may be taken beyond this limit for the recording of appropriate supervised experience. Prerequisite: 15 hours of education, consent of department head, and graduate standing.

5600. Diversity in Education. 3. Provides practicing teachers and graduate level students with an understanding of the macrolevel influences on diversity in education. Includes an examination of competing models of diversity in education as well as reviews critical scholarly work in the field (including alternative methodological frameworks for engaging in this research). Includes competencies for developing advocacy-oriented skills and dispositions. Prerequisite: graduate level students only.

5650. Early Childhood Secondary Education Curriculum. 3. Graduate students specializing in curriculum and instruction work intensively on key issues, questions, and/or themes pertaining to early childhood through secondary school curriculum and participation in systematic, critical, interpersonal evaluation. Prerequisite: EDCI 5000 or concurrent enrollment in EDCI 5000.

5700. Institute In Reading. 2-6 (Max. 6). Prerequisite: graduate standing.

5710. Advanced Content Area Reading. 3. Designed to provide educators with a knowledge of reading factors as they relate to various disciplines. The content of the course includes reading comprehension development, writing and oral language strategies as learning tools, techniques for vocabulary development, questioning strategies and development of study skills. Prerequisite: at least one year of successful classroom teaching experience in a recognized K-12 school setting.

5720. Literary Assessment and Practices. 3. Takes a socio-linguistic perspective on language, literacy, and methods of literacy documentation: The constructs of assessment and evaluation are critically examined in terms of their social contexts and the cultural space in which they operate. Prerequisite: at least one year of successful teaching experience in a recognized K-12 school setting.

5750. Research in Reading and Writing Instruction. 3-6 (Max. 6). Critically examines reading-writing research for the express purpose of recognizing fundamentals of superior studies. Students are encouraged to select and pursue a topic in reading-writing research for intensive examination. Students may pursue areas of emphasis in elementary, secondary, or higher education. Prerequisite: EDEC 4320 or EDCI 4330, 5310 or 5320 or graduate standing in education.

5760. Social Literacies. 3. Orient students toward an ethnographic and linguistic perspective on literacy. It is designed to refocus attention from schooled literacy and to understand the literacies that children bring to school from their own sociocultural contexts. Prerequisite: at least one year of successful classroom teaching experience in a recognized K-12 school setting.

5790. Advanced Instructional Strategies. 3. Designed to allow graduate students and other educators to explore in depth the various instructional strategies that are available to them, research behind the development of these strategies, learning theories and the philosophy upon which they are based, curriculum standards that have encouraged their development, and assessment techniques that effectively measure student's learning. Prerequisite: graduate standing and classroom teaching experience.

5800. Curriculum Development. 3. The process of developing an early childhood through grade 12 curriculum are learned. Factors involved in initiating, developing, and evaluating curricula are studied. Prerequisite: EDCI 5000 and 5650.

5810. Writing for Professional Publications. 3. Designed to give students a structured experience with writing to publish in professional journals. Students will be expected to have written and submitted a publishable article by the end of the course. Prerequisite: 8 hours of graduate coursework completed.

5820. Research Methods in Literacy Education. 3. Doctoral seminar to examine the array of research methods (both quantitative and qualitative) employed in literacy research. Prerequisite: graduate student status.

5870. Seminar. 1-6 (Max. 8). Advanced students in curriculum and instruction work intensively on current issues and problems and participate in systematic, critical interpersonal evaluation. Students may pursue areas of emphasis in elementary, secondary, or higher education in the seminar. Only six hours may be allowed in the curriculum and instruction program on a student's program under this number. Prerequisite: consent of instructor and graduate standing.

5880. Special Problems. 1-6 (Max. 9). Provides a broad perspective through selected reading material and, wherever possible, the student collects and uses original information from a practical school situation. All work is done independently under the direction of a faculty member. Many conferences are held as necessary to assure successful completion of the project. Prerequisite: consent of instructor and department head, and graduate standing.

5890. Directed Professional Study. 1-6 (Max. 9). Provides additional opportunity for the student to pursue advanced graduate work through independent research. Projects are done under the direction of a graduate faculty member. Offered in the areas of business education and distributive education. Prerequisite: consent of the instructor, the department head and graduate standing.

5900. Practicum in College Teaching. 1-3 (Max. 3). Work in classroom with a major professor. Expected to give some lectures and gain classroom experience. Prerequisite: graduate status.

5920. Continuing Registration: On Campus. 1-2 (Max. 16). Prerequisite: advanced degree candidacy.

5940. Continuing Registration: Off Campus. 1-2 (Max. 16). Prerequisite: advanced degree candidacy.

5959. Enrichment Studies. 1-3 (Max. 99). Designed to provide an enrichment experience in a variety of topics. Note: credit in this course may not be included in a graduate program of study for degree purposes.

5960. Thesis Research. 1-12 (Max. 24). Designed for students who are involved in research for their thesis project. Also used for students whose coursework is complete and are writing their thesis. Prerequisite: enrollment in a graduate degree program.

5980. Dissertation Research. 1-12 (Max. 48). Designed for students who are involved in research for their dissertation project. Also used for students whose coursework is complete and are writing their dissertation. Prerequisite: enrollment in a graduate level degree program.

5990. Internship. 1-12 (Max. 24). Prerequisite: graduate standing.

Literacy Education (LTED)

5800. Theoretical Perspectives on Literacy Processes and Practices. 3. A doctoral seminar aimed at providing students with a broad introduction to theoretical perspectives on literacy processes and practices as well as the functions of theory in literacy research. Features reading and discussion of key works from cognitive, sociocultural, and critical research in literacy. Prerequisite: graduate student status.
5820. Research Methods in Literacy Education. 3. Doctoral seminar to examine the array of research methods (both quantitative and qualitative) employed in literacy research. Prerequisite: graduate student status.

5840. Research in Literacy Education with Diverse Populations. 3. Examines historical and current research on literacy practices with diverse students including African American, Latino, American Indian/Alaska Native, and English Language Learners of many cultures and linguistic groups. Prerequisite: graduate student status.

Department of Educational Studies
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Web site: www.uwyo.edu/edstudies
Department Head: R. Timothy Rush

Professors:
KAY PERSICHITTE, B.A. University of Northern Colorado 1975; M.Ed. Colorado State University 1985; Ph.D. University of Northern Colorado 1993; Professor of Educational Studies 2003; Dean, College of Education 2008.
ALLEN TRENT, B.S. Eastern Kentucky University 1986; M.S. University of Dayton 1992; Ph.D. The Ohio State University 2000; Professor of Educational Studies 2012.

Associate Professors:
JEASIK CHO, B.A. Taegu National University of Education 1991; M.Ed. Kyungpook National University 1993; Ph.D. The Ohio State University 2001; Associate Professor of Educational Studies 2009, 2003.
ANGELAJAIME, B.S. California State University, Sacramento 1995; M.A. San Francisco State University 1997; Ph.D. Purdue University 2005; Associate Professor of Educational Studies 2010, 2004.
EDWARD JANAK, B.S. Fredonia 1992; M.Ed. University of South Carolina 1996; Ph.D. 2003; Associate Professor of Educational Studies 2012.

Assistant Professors:
KEVIN ROXAS, B.A. University of Notre Dame 1992; M.A. University of San Francisco 2000; Ph.D. Michigan State University 2008; Assistant Professor of Educational Studies 2008, 2012.

Assistant Lecturer:

Educational Studies encompasses curriculum designed to bring together courses offered in the academic areas of educational foundations (including introductory content in educational history, sociology, and policy), teaching and learning, assessment, multicultural education, and educational psychology (including developmental psychology). The department offers interdisciplinary, field-based courses for those candidates in the first two phases of the teacher education program. The connection between course work, multicultural education, educational psychology, and teaching and learning, along with field-based experiences, has the structural effect of bridging the gap between theory and practice.

The courses offered by the department are linked with the state of Wyoming’s Professional Education Standards. In addition to striving to meet the state standards, the faculty works to engage students on issues of leadership, literacy, multiculturalism/diversity, special education, and technology. Authentic assessments are key aspects of department courses. Educational Studies courses are guided by the Wyoming Teacher Education Program (WTEP) Standards. These standards (available at www.uwyo.edu/ted/coe_standards.html) are aligned with the state Professional Education Standards and are assessed via a series of WTEP Learner Outcomes. Additional information about learner outcomes and the Wyoming Teacher Education Program Assessment Plan can be found at ed.uwyo.edu/LearnerOutcomes.aspx.

Masters and Doctoral degrees in education are available. The Educational Studies Department joins with the departments of Secondary Education and Elementary and Early Childhood Education to offer graduate programs in Curriculum and Instruction. Additional information may be found on the Curriculum and Instruction Department’s web page (www.uwyo.edu/c_i).

Educational Studies (EDST)

USP Codes are listed in brackets by the 1991 USP code followed by the 2003 USP code (e.g. [M2QB]).

1500. Education for Social Justice. 3. [none]1, L Provides an introduction to the College of Education, UW, and the field of education in general. Students discover the primary intellectual activities associated with diversity, multiculturalism, and social justice. Will be of most interest to those interested in teaching as a career.

2450. [EDFD 2450]. Human Lifespan Development. 3. [C2CS] Offers a multidisciplinary and holistic overview of human development from conception to old age. Examines how and why people function as they do, the physical, cognitive, social and emotional aspects of being human and inquires into how goals, interests and roles in life change over time. While this course is interesting to any student, in that we learn about ourselves, it is especially useful for those preparing for human services careers. Prerequisite: 2.50 UW institutional GPA. (Offered each semester)

2475. [EDUC 2475]. Independent Studies. 1-3 (Max. 9). Offers students the opportunity to complete special course-related work independently under direction of a college faculty member. Directed readings are done and projects are completed. Requires at least two conferences with instructor. Prerequisite: consent of instructor.

2480. Diversity and the Politics of Schooling. 4. [none]1, D Designed to acquaint the student with philosophical, social, and political influences on North American education, to develop an understanding of the qualities of critical thinking, to raise awareness of critical issues in education, to develop an understanding of individual differences, diversity and multiculturalism. Prerequisites: Grade of C or better in EDST 2450, sophomore standing, 2.5 cumulative GPA. (Offered each semester)

3000 [EDUC 3000]. Teacher as Practitioner. 6. [W2Q, WB] Begins Phase II of the teacher education sequence. Practicum experiences are integral. Links theory and philosophy to classroom practice. Focuses on three major topics: planning for educational experiences, instructional models and strategies, and managing classrooms. Prerequisites: WTEP application, successful completion of WA, Grade C or better in QA, 2.75 cumula-
tive GPA, Grade C or better in EDST 2480, Grade C or better in ITEC 2360, grade C or better in EDEX 2484, Grade C or better in O course, junior standing, current State of Wyoming Substitute Teaching License. (Offered each semester)

3550. Educational Assessment. 2. Designed to introduce students to key concepts and issues in classroom and standardized education assessments. Topics include standards, reliability and validity of norm- and criterion-referenced assessments, and special issues surrounding the assessment of students with special needs. Addresses the basic ideas of classroom test design. Prerequisites: grade of C or better in QA course, and EDST 2480, 2.75 Cumulative UW Institutional GPA. (Offered each semester)

4000. Foundations of Education for a Diverse Society. 3. Designed to acquaint students with philosophical, social, and political influences of North American education; to develop an understanding of the qualities of critical thinking for reflective teaching; to raise awareness of contemporary critical issues in education; to develop an understanding of individual differences, diversity, and multiculturalism. Practicum included. Prerequisites: earned bachelor's degree from an accredited institution, a cumulative UW institutional GPA of 2.75 or better and EDST 2450.

4100. Foundations of American Indian Education. 3. [none] Examines cultural, geographical, linguistic, spiritual, political and societal factors before, during and after colonization of the Americas. Definitions and day-to-day realities of terms like ethnocentrism, cultural relativism, assimilation, acculturation, and institutional racism. Development of insights into positive teacher-pupil-community relationships that honor culture and language differences and enhance achievement. Cross listed with AIST 4110. Prerequisites: AIST 1001 and 15 credit hours of AIST or EDST.

4740 [EDFD 4740]. Field Studies in _______. 1-5 (Max. 12). Offered only through extension services. Broad and flexible; can be utilized in numerous situations to meet local needs. Credit in this course is not applicable toward advanced degrees. Prerequisite: 6 hours of education. (Offered based on sufficient demand and resources)

4750 [EDUC 4750]. Perspectives on Teaching. 1-3 (Max. 6). For undergraduate students selected to collaborate with UW faculty or professional staff in the delivery and sometimes the design of a university course, this course augments in-class experiences with an examination of basic learning and teaching principles. Offered for S/U only. Prerequisites: 3.0 GPA; consent of instructor.

Department of Elementary/Early Childhood Education
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Web site: www.uwyo.edu/eledem
Department Head: Peter William Moran

Professors:


GEORGE KAMBERELIS, B.A. Bates College 1976; M.A. University of Chicago 1979; M.S. University of Michigan 1990; Ph.D. 1993; Professor of Elementary and Early Childhood Education 2011.


Associate Professors:

STEVEN M. BIALOSTOK, B.A. University of the Pacific 1975; M.S.W. California State University—Sacramento 1986; Ph.D. University of Arizona 1999; Associate Professor of Elementary and Early Childhood Education 2005, 2000.


SCOTT A. CHAMBERLIN, B.A. Purdue University 1989 and 1993; M.Ed. University of Utah 1998; Ph.D. Purdue University 2002; Associate Professor of Elementary and Early Childhood Education 2009, 2003.

TRICIA JOHNSON, B.S. Lehigh University 1991; M.Ed. 1993; Ed.S. George Washington University 1997; Ed.D. Columbia University 2004; Associate Professor of Elementary and Early Childhood Education 2012.

STEVEN LOCKE, B.A. Indiana University 1985; M.S. Portland State University 1991; Ph.D. Indiana University 1997; Associate Professor of Elementary and Early Childhood Education 2005, 2001.


LYDIA NGANGA, B.S. University of Wyoming 1998; M.S. 2000; Ph.D. 2005; Associate Professor of Elementary and Early Childhood Education 2011, 2005.


KATHERINE MUIR WELSH, B.A. University of California—Berkeley 1986; Single Subject Teaching Credential (Life Sciences) University of California—Santa Barbara 1990; Ph.D. University of California—Los Angeles 2002; Associate Professor of Elementary and Early Childhood Education 2008, 2002.

Assistant Professors:

JENNIFER FORESTER, B.S. Western Carolina University 2002; M.A.T. University of North Carolina at Charlotte 2006; Ph.D. North Carolina State University, expected 2010; Assistant Professor of Elementary and Early Childhood Education 2012, 2010.

TAO HAN, B.A. Sungshin Women’s University, Korea 1984; M.A. University of Arizona 1993; M.A. University of Nevada-Reno 2002; Ph.D. 2006; Assistant Professor of Elementary and Early Childhood Education 2012, 2010.

ANA HOUSEAL, B.A. University of Iowa 1985; M.A. University of Northern Iowa 1998; Ph.D. University of Illinois 2010; Assistant Professor of Elementary and Early Childhood Education 2011.

SAMARA MADRID, B.A. University of Hawaii at Hilo 1998; M.A. San Jose State University 2000; Ph.D. Ohio State University 2007; Assistant Professor of Elementary and Early Childhood Education 2012, 2009.

TAMMY MIELKE, B.S. Martin Luther College 1991; M.A. Eastern Michigan University 2002; Ph.D. Coventry University, UK 2007; Assistant Professor of Elementary and Early Childhood Education 2011.

Associate Lecturers:

DIANA L. WIIG, B.A. University of Northern Iowa 1975; M.A. University of Wyoming 1990; Ph.D. 2004; Associate Lecturer of Elementary and Early Childhood Education.

Assistant Lecturers:

Elementary Education (EDEL)

USP Codes are listed in brackets by the 1991 USP code followed by the 2003 USP code (e.g. [M24+QB]).

1000. Exploring Hot Topics in Education. 2. [(none)♣I] Academic, content-based course designed for first year students. Focuses on critical-thinking skills necessary to understand, analyze, and produce knowledge within the framework of educational inquiry.

1010 [EDCI 1010]. Field Experience for Prospective Elementary and Secondary Teachers. 1-4 (Max. 4). Introductory course in teacher education. Provides an overview of the theory and practice of what is required to become and be a teacher. An initial practicum is included. Cross listed with EDSE 1010. Prerequisite: sophomore standing. (Offered based on sufficient demand and resources)

1410. [EDCI 1410]. Elementary School Mathematics Seminar I. 1. Covers selection of basic mathematics concepts, materials and curricula appropriate for elementary schools. This course parallels the content of MATH 1100 and should be taken during the same semester. Experiences in assigned mentor teacher classrooms are required. Prerequisite: consent of instructor. (Offered fall and spring semesters)

1430. [EDCI 1430]. Life Science in the Elementary School. 1. Covers selection of basic life science concepts, materials and curricula appropriate for elementary school. This course parallels the content of LIFE 1010 and concurrent enrollment in LIFE 1020 is expected. (Offered fall and spring semesters)

1450. [EDCI 1450]. Earth Science in the Elementary School. 1. Covers selection of basic earth science concepts, materials, and curricula appropriate for elementary school. This course parallels the content of ASTR/GEOL 1070 and concurrent enrollment in ASTR/GEOL 1070 is expected. (Offered fall and spring semesters)

2000 [EDCI 2000]. Undergraduate Seminar in _____. 1-2 (Max. 8). Designed to discuss strategies and instructional activities used in content courses the students take and to be a linkage between what the prospective teachers study and what they will teach. It provides the opportunity to discuss appropriate activities, strategies and programs in a teaching area related to the content area being studied. Cross listed with EDSE 2000. Prerequisite: consent of instructor. (Offered based on sufficient demand and resources)

2280 [LIBS 2280]. Literature for Children. 3. [CL♣CH] A survey course, the purpose of which is to prepare prospective elementary teachers and library-media specialists to provide knowledgeable service in the use of print and non-print materials for children. Includes study of evaluative criteria, wide reading, viewing and listening as well as discussion of literature for children. Prerequisite: successful completion of ENGL 1010, sophomore standing, education major. (Offered fall and spring semesters)

2410. [EDEL 1420, EDCI 1420]. Elementary School Mathematics Seminar II. 1. Covers selection of basic mathematics concepts, materials and curricula appropriate for elementary schools. Alle出售的 content of MATH 2120 and concurrent enrollment in MATH 2120 is expected. Prerequisite: consent of instructor. (Offered fall and spring semesters)

3140 [EDCI 3140]. Teaching Reading in the Elementary School. 2-4 (Max. 4). Provides an acquaintance with basic assumptions underlying curriculum and processes in reading and to give opportunity for selecting and using instructional materials. Prerequisites: junior standing, 2.5 minimum cumulative GPA, satisfactory completion of WA requirements, committee approval. (Offered based on sufficient demand and resources)

3170 [EDCI 3170]. Art in the Elementary School. 3. [(none)♣CA] Provides a foundation for understanding art in order to facilitate the teaching of art and the integration of art education into the elementary school curriculum. Involves both applied reading and studio production. Attention is given to development of artistic skills and meaningful art experiences based on DBAE principles. Prerequisite: junior classification, 2.5 minimum cumulative GPA. (Offered fall, spring and summer)

3550 [EDCI 3550]. Methods of Teaching: _____. 2-5 (Max. 10). Develops an understanding of methods common to all disciplines. Through reflective inquiry and problem solving students will become involved in teaching practices and techniques. Cross listed with EDSE 3550. Prerequisites: EDST 3000, junior class standing, 2.5 minimum cumulative GPA, must maintain grade of C or better in major. (Offered based on sufficient demand and resources)

4000 [EDUC 4000]. Becoming a Reflective Practitioner: Practicum. 2. Part of Phase IIIa of the teacher education program. Practicum experience is integral to EDUC 4250 and must be taken concurrently. Cross listed with EDUC 4000. Prerequisites: 2.5 cumulative GPA, successful completion of EDST 3000 (grade, interview and portfolio).

4109 [EDUC 4109]. Elementary Humanities Education. 5. Content and pedagogy to develop the reflective practitioner of teaching humanities in the elementary school. The following themes are addressed: curriculum; theory translated into instructional planning and practice; practices that promote effective learning; behavior and relationships; and teaching strategies. Prerequisites: 2.75 cumulative GPA; 2.5 content GPA; grade of C or better in EDST 3000; successful completion of specific content courses required in major; grade of C or better in EDST 3550; concurrent enrollment in EDUC 4309 and EDUC 4409.

4309 [EDUC 4309]. Elementary Literacy Education. 2-5 (Max. 6). Encompasses content and pedagogy to develop the reflective practitioner for teaching literacy in the elementary school. Addresses the following themes: curriculum; theory translated into instructional planning and practice; practices that promote effective learning; behavior and relationships; and teaching strategies. Prerequisites: 2.75 cumulative GPA; 2.5 content GPA; Grade C or better in EDST3000, successful completion of specific content courses required in major; grade of C or better in EDST3550. Concurrent enrollment in EDUC 4109 and EDUC 4409.

4409 [EDUC 4409]. Elementary Math/Science Education. 5-6 (Max. 6). [(none)♣WC] Includes content and pedagogy in teaching math/science in the elementary school. Addresses the following themes: curriculum; theory translated into instructional planning and practice; practices that promote effective learning; behavior and relationships; and teaching strategies. Prerequisite: 2.75 cumu-
Early Childhood (EDEC)

USP Codes are listed in brackets by the 1991 USP code followed by the 2003 USP code (e.g. [M24#QB]).

1020 [EDCI 1020]. Introduction to Early Childhood Education. 3. Introduces students to the field of early childhood education through lecture, discussion, observation and participation. The student will be exposed to different programs currently in operation in the community and region. Special emphasis will be placed on evaluating early childhood education as a career.

3000. Observing Young Children. 3. The general goal of the course is to introduce students to observation and recording techniques appropriate for assessing the growth and development of young children in the school setting. A secondary goal is to understand how observation and recording techniques can facilitate curriculum planning and parent-teacher conferences. Prerequisites: EDEC 1020 and FCSC 2121.


3220 [EDCI 3220]. School Program for Young Children. 3. Describes, identifies, and examines programs and best practices of teaching young children in school settings. Lecture and discussion are supported by a two hour practicum in an early childhood school setting. Prerequisites: EDEC 1020 and FCSC 2121.

4320 [EDCI 4320]. Oral and Written Language Acquisition. 3. Introduces the student to the nature of language development as it pertains to oral and written communication in education. Recent research in the areas of oral and written language acquisition is compared and contrasted. Implications for facilitating the development of all language modes in educational settings is emphasized. Prerequisites: EDST 2480 or equivalent, junior standing and declared Elementary Education or Family and Consumer Sciences major.

4350. Health Management Issues in Early Education. 3. Provides the student the opportunity to examine the implications of a child’s health status on his/her personal, educational, social and cognitive development. Provides personnel working closely with the young child with disabilities and his/her family an understanding of the issues related to health concerns and a framework for intervention planning. Special emphasis is placed on concerns specific to the child in a day care, preschool or other school setting. Cross listed with NURS/FCSC 4350. Prerequisites: junior standing and consent of the instructor.

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Early Childhood

The College of Education offers two certification programs in early childhood education: one at the undergraduate level for teachers serving children from birth to age eight and one at the graduate level serving children with special needs from birth through age five. In addition, undergraduate students in elementary education may choose early childhood education as an 18 hour area of concentration. All of the programs are interdisciplinary in nature, with course offerings available from four different colleges on campus: education, agriculture, arts and sciences and health sciences. Specific advising in each of the early childhood options support students in their program development. The following courses are a partial list of the course offerings available. Masters and Doctoral degrees in education are available. Additional information may be found on the department’s webpage.

Program Areas

Adult and Post-Secondary Education

The Program

This nationally recognized program offers the following graduate degrees in education: master of arts (M.A.) option Adult and Post Secondary Education and doctor of education (Ed.D.), option Adult and Post Secondary Education. The master’s program requires 34 credit hours beyond the bachelor’s degree and is available online. The Ed.D. is the terminal professional degree in education designed for students who desire to improve their professional practice as educators. The Ed.D. requires a minimum of 80-82 semester hours beyond the bachelor’s degree, of which 36 hours must be taken in the student’s chosen field. A bachelor’s and master’s degree is required of all students to be admitted to an Ed.D. program. Candidates may, with the approval of the faculty, transfer up to 30 semester hours from previous course work.

Adult and Post-Secondary Education

The domain or field of adult education is vast and varied, extending from self-directed learning (educational activities initiated and largely conducted by the individual himself or herself) to more formal educational opportunities sponsored by institutions and agencies (such as adult basic education, community colleges, university and local education centers). Within the adult education graduate program at UW, this focus is generally narrowed to educational endeavors sponsored by institutions and agencies and specifically designed for adult participants. Areas of study include the following:

1. adult development and learning theories;
2. leadership development in post secondary education institutions
3. the social, historical, and international context of adult education;
4. equity and access to continuing education opportunities for adults

Graduate study in adult education addresses the challenges faced by institutions and agencies in the design and delivery of post secondary education and the preparation of educators to meet these challenges.

Career Options

Graduates of the program are employed specifically as faculty and administrators in community colleges and universities, human resource developers, adult literacy educators, military training specialists, training coordinators for government and social service agencies (such as the Department of Family Services, the Department of Labor, Family Planning Agencies, and the Eppson Center for Seniors), museum educators, adult learning consultants, and continuing professional educators in many fields including law, religion, nursing, and PK-12 teaching.

Program Specific Degree Requirements

Master’s Program

Master of Arts in Education, Option: Adult and Post-Secondary Education

Plan A (thesis)

Minimum of 34 hours of graduate credit
18 hours of program area core graduate hours
Approval of adviser
3 hours of EDRE 5530 Introduction to Educational Research
4 hours of thesis research

Plan B (non-thesis)

Minimum of 34 hours of graduate credit
4 hours of ITEC 5090 Masters Capstone
18 hours of program area graduate hours
3 hours of EDRE 5530 Introduction to Educational Research

Program Specific Degree Requirements

Doctor of Education (Ed.D.) in Education, Options: Adult and Post-Secondary Education

The Ed.D. is the terminal professional degree in education designed for students who desire to improve their professional practice as educators. The Ed.D. is delivered through distance delivery system and requires a minimum of 80 to 82 semester hours beyond the bachelor’s degree, of which 36 hours must be taken in the student’s chosen field. Candidates may, with the approval of the faculty, transfer up to 30 semester hours from previous graduate level coursework. A bachelor’s degree and a master’s degree are required of all students to be admitted to the Ed.D. program.

Program Specific Admission Requirements

Application deadlines and materials can be found on the Adult and Postsecondary Education program web page (http://www.uwyo.edu/profstudies/).
Program Specific Graduate Assistantships

Applicants interested in a Graduate Assistantship must submit a graduate assistantship application to the Professional Studies department office no later than February 1 for fall term admission (see above).

Adult Education (ADED)

USP Codes are listed in brackets by the 1991 USP code followed by the 2003 USP code (e.g. [M2♣ QB]).

1000. Adult Education Inquiry. 2. [(none)♣I] Basic underpinnings of the field of adult education. Themes discussed include learning theories, learning styles, multiple ways of knowing, and issues surrounding access, opportunity, diversity, and schooling. While serving as an introduction to careers and theory in adult education, also addresses some practical higher education survival skills.

1008. Eastern Thought Western Practice. 2. [(none)♣P] Major concepts of Eastern thought from Confucius and Osho are explored, examined, to understand eastern ways of perceiving reality, knowledge, and values. Hands-on activities are employed to experience and practice the applications of the concepts. Students are challenged to critically think, analyze, and compare with their own, increase their consciousness of diversity.

4750 [EDUC 4750]. Perspective on Teaching. 1-3 (Max. 6). For undergraduate students selected to collaborate with UW faculty or professional staff in the delivery and sometimes the design of a university course, this course augments in-class experiences with an examination of basic learning and teaching principles. Prerequisite: 3.0 GPA.

5000. Trends In Adult Education. 3. Provides reading, discussion, research, and appraisal of new methods, materials, equipment, and experimental programs concerned with the improvement of education as it pertains to adult education. Prerequisite: graduate standing.

5020. Survey of Adult Education. 3. Designed as an introduction to the field of adult education; its focus is the general knowledge base upon which the practice of adult education rests; e.g. history and philosophy, adult learning and development, agencies and programs, and problems and issues. Prerequisite: graduate standing.

5050. Learning Theories for Education. 3. Learning and development theories are essential for educators who are designing and implementing educational applications and opportunities. Topics covered include orientations toward learning, motivation, life transitions, cognition, learning how to learn, self-directed learning, and strategies for improving learning in educational contexts. Prerequisite: graduate standing.

5090. Masters Capstone. 4. Capstone is designed to provide a forum in which to apply theories, principles, and skills to the kinds of practice. It provides a vehicle to document the successful completion of general and degree specific competencies and to examine and critique current scholarship in adult education. Students complete the requirements of the Plan B process. Cross listed with ITEC 5090. Prerequisites: graduate standing consent of instructor and department head.

5100. Mountain Folk School. 2. Within residential and learning community, this course seeks to strengthen one’s relationship with the natural world, increase understanding of cultural heritage, and heighten sensitivity for time and place. Participants explore ways of further developing keener ways of seeing, critiquing, and connecting to the setting and heritage surrounding them. Prerequisite: graduate standing.

5240. Teaching Adults. 3. Developed upon the premise that individuals teach as they would expect to be taught. Focuses on methods for teaching adults in formal as well as informal settings. The learning styles literature is reviewed and implications for instructional settings are analyzed. Participants also critique their teaching performance through videotaped sessions. Prerequisite: graduate standing.

5260. Educational Issues Race, Class, and Gender. 3. Designed to help participants examine the current issues and debates in the literature of race, class, and gender from theoretical and practical perspectives. Related areas of ethnicity, national origin, sexual orientation, language, physical appearance, body size, and other constructs of difference will also be addressed. Prerequisite: graduate standing.

5440. Information Technology. 3. Provides information to help learners efficiently access information electronically. Philosophical, ethical, and management issues as well as technical information on the various mechanisms for electronic access now and in the near future are presented. The analysis of needs combined with knowledge of electronic tools for the purpose of sufficiently meeting the information needs of clientele is stressed, as well as knowledge of the appropriate use of electronic products for more specific problems/projects. Cross listed with LIBS 5440. Prerequisite: graduate standing and/or consent of instructor.

5450. Short Course In Adult Education. 1-2 (Max. 6). Used for special topics in adult education on the basis of need. Prerequisite: graduate standing.

5490. Directed Professional Study. 1-6 (Max. 6). Provides additional opportunity for a student to pursue advanced graduate work through independent research. Projects are done under the direction of a graduate faculty member. Prerequisite: graduate standing.

5510. Adult Education Movement in the United States. 3. Provides an opportunity to explore significant works and historical moments in the adult education and instructional technology literature, to analyze the emergence of an adult education movement in the United States, and to participate in local research into the history of Wyoming adult education and instructional technology activities. Prerequisite: graduate standing.

5610. Planning and Evaluation of Instructional Systems. 3. Participants investigate the concepts, issues, methods, and attitudes involved in the planning and evaluation of instructional systems. Topics covered include planning processes, theory and technique, promotion, evaluation, setting objectives, and trend analysis. Prerequisite: graduate standing.

5640. Community College. 3. Concerns the philosophy, organization, program, and administration of the community college. Prerequisite: graduate standing and consent of instructor.

5680. Issues in Higher Education. 3. Through examination of historical foundations and current trends, ADED 5680 delves into pressing issues in the academy, including but not limited to topics of tenure, governance, professional colleges, access and equity, curriculum and international needs. Prerequisite: graduate standing.

5710. International and Comparative Education. 3. Introduces foundations and theories of international and comparative education, explores education from global and comparative perspectives. Topics: Historical development, definitions and purposes, current practices and issues of international and comparative education; governmental and non-governmental roles, impact of globalization, technology, economic development, and cultural dimensions as applied to educational contexts. Prerequisite: graduate standing.

5880. Special Problems in Adult Education. 1-6 (Max. 9). Provides a broad perspective through selected reading material. Wherever possible, the student collects and uses original information from an adult education/instruc-
4340. Administration of the School Library-Media Center. 3. Deals with finance, housing, personnel, the collection, records and services of the school library media center. Instruction in the use of the library and publicity or educational interpretation concerning the library are also discussed. Dual listed with LIBS 5340. Prerequisite: LIBS 4320, 4380, major in educational administration. (Offered based on sufficient demand and resources)

4360. Reference and Bibliography. 3. An introduction to the basic materials used in reference and information services. The philosophy of reference services is presented with particular attention to the needs of schools, community colleges and public libraries. Dual listed with LIBS 5360. Prerequisite: 20 hours of general education (liberal arts). (Offered based on sufficient demand and resources)

4380. Cataloging and Classification. 3. Introduction to the theories and practices of cataloging and classification. Emphasis is on the Dewey Decimal system; subject cataloging from the Sears headings; descriptive cataloging of monographs, serials, and non-print materials; filing rules. Practice in cataloging and classification of materials. Dual listed with LIBS 5380. Prerequisite: 20 hours of general education (liberal arts). (Offered based on sufficient demand and resources)

4520. Library Practice. 2-8 (Max. 8). Provides an overview of library organization, administration and service by capitalizing upon the utilization of practical experiences in dealing with everyday problems of the library. Application of principles learned in the various library courses will be stressed. Students must contact department the semester prior to enrollment for authorization to enroll in the course. This course serves as student teaching experience for students wishing to be endorsed in library science. Prerequisite: LIBS 4340.

5320. Selection of Instructional Materials. 3. A study of basic principles and practices in the selection of print and non-print materials for utilization in school and public libraries. Emphasis is given to the evaluation of materials in light of community needs and principles of intellectual freedom. Dual listed with LIBS 5320. Prerequisite: 20 hours of general education (liberal arts). (Offered based on sufficient demand and resources)

5340. Administration of the School Library-Media Center. 3. Deals with finance, housing, personnel, the collection, records and services of the school library media center. Instruction in the use of the library and publicity or educational interpretation concerning the library are also discussed. Dual listed with LIBS 4340. Prerequisite: LIBS 4320/5320, 4380/5380, or major in educational administration.

5360. Reference and Bibliography. 3. An introduction to the basic materials used in reference and information services. The philosophy of reference services is presented with particular attention to the needs of schools, community colleges and public libraries. Dual listed with LIBS 4360. Prerequisite: 20 hours of general education (liberal arts).

5380. Cataloging and Classification. 3. Introduction to the theories and practices of cataloging and classification. Emphasis is on the Dewey Decimal system; subject cataloging from the Sears headings; descriptive cataloging of monographs, serials, and nonprint materials; filing rules. Practice in cataloging and classification of materials. Dual listed with LIBS 4380. Prerequisite: 20 hours of general education (liberal arts).

5440. Information Technology. 3. Provides information to help learners efficiently access information electronically. Philosophical, ethical, and management issues as well as technical information on the various mechanisms for electronic access now and in the near future are presented. The analysis of needs combined with knowledge of electronic tools for the purpose of efficiently meeting the information needs of clientele is stressed, as well as knowledge of the appropriate use of electronic products for more specific problems/projects. Cross listed with ADED 5440. Prerequisite: graduate standing and/or consent of instructor.

5520. Teaching the Use of the Library. 2. Methods for teaching students basic techniques for effective use of library media center resources. Integration of library media center instruction with the total instructional program is emphasized. Relationship between stages of cognitive and other development and appropriate learning activities. Prerequisite: LIBS 4320/5320 and LIBS 4380/5380.

5870. Seminar. 1-3 (Max. 6). Advanced students in Library Science work on current issues and problems in library service, management, literature, or uses of technology in library settings in a critical context. Prerequisite: Course work in library science at the 4000/5000 level; graduate status and/or consent of instructor.

5900. Practicum in College Teaching. 1-3 (Max. 3). Work in classroom with a major professor. Expected to give some lectures and gain classroom experience. Prerequisite: graduate status.

5920. Continuing Registration: On Campus. 1-2 (Max. 16). Prerequisite: advanced degree candidacy.

5940. Continuing Registration: Off Campus. 1-2 (Max. 16). Prerequisite: Advanced degree candidacy.
5959. Enrichment Studies. 1-3 (Max. 99). Designed to provide an enrichment experience in a variety of topics. Note: credit in this course may not be included in a graduate program of study for degree purposes. Prerequisite: graduate standing.

5960. Thesis Research. 1-12 (Max. 24). Designed for students who are involved in research for their thesis project. Also used for students whose coursework is complete and are writing their thesis. Prerequisite: enrollment in a graduate degree program.

5980. Dissertation Research. 1-12 (Max. 48). Designed for students who are involved in research for their dissertation project. Also used for students whose coursework is complete and are writing their dissertation. Prerequisite: enrollment in a graduate degree program.

5990. Internship. 1-12 (Max. 24). Prerequisite: Graduate standing.

Counseling

Counselor education curricula experiences concentrate on the integration of helping skills, theory and practice. The programs utilize a personalized, developmentally oriented focus and prepare professional counselors for entry into school, mental health, and higher education settings.

The undergraduate counseling courses are designed to achieve the following objectives:
- enhance self-awareness
- facilitate effective relationship skills
- increase leadership knowledge and skills
- assist learners in maximizing their potential

Graduate Study

Counselor education offers a two-year (61-65 semester hours) master’s degree program for practice in schools, colleges, universities, and community agencies. The Council for Accreditation of Counseling and Related Educational Programs (CACREP), the national accrediting body recognized by the Council for Higher Education Accreditation, has conferred accreditation to the following M.S. specializations in counseling: school counseling, and mental health counseling. The Ph.D. program in Counselor Education and Supervision is also CACREP accredited. Some courses are offered for undergraduates interested in school counseling, group work, leadership, and student affairs work. Undergraduates interested in preparing for entry into graduate work in counseling are invited to consult with program faculty prior to graduation. Program information is available on the Web site.

Degrees Offered

M.S. in Counseling, Option:
- Mental Health Counseling
- School Counseling
- Ph.D. in Counselor Education and Supervision

Program Specific Admission Requirements

For master’s applicants:
- Summary of academic background
- Professional resume
- Self-statement
- Three letters of recommendation

For doctoral applicants:
- Professional resume
- Self-statement
- Program information form
- Three letters of recommendation

Prior to full admission, all students are required to complete a background check.

Program Specific Graduate Assistantships

Assistantships are usually available for doctoral students. Master’s students sometimes qualify for assistantships. Please contact the program at (307) 766-2366 for assistantship opportunities.

Program Specific Degree Requirements

Professional Master’s Program
Minimum requirements:
- same for all options
- 61 hours of graduate credit to include
- 40 hours of core courses
- 21 hours of graduate coursework specific to chosen option
- Planning, development, and production of a Plan B portfolio project guided by the committee chair and graduate committee
- Students complete the CAPP program in lieu of a program of study

Program Core Requirements

Core Courses
- CNSL 5310 Pre-Practicum I Counseling
- CNSL 5210 Group Experience
- CNSL 5060 Counseling Ethics & Prof. Issues
- CNSL 5650 Counseling Theory
- CNSL 5170 Career Theory
- CNSL 5350 Multicultural Counseling
- CNSL 5110 Group Procedures
- CNSL 5180 Assessment in Counseling
- CNSL 5200 Couple & Family Theory
- CNSL 5140 Counseling and Addictions
- CNSL 5320 Practicum in Counseling & Guidance
- CNSL 5870 Human Development
- CNSL 5150 Consultation
- EDRE 5530 Intro to Research
- CNSL 5640 Diagnosis & Devol. Psych
- CNSL 5580 Supervised Internship

Core Subtotal: 49

School Counseling
- CNSL 5120 School Counseling
- CNSL 5330 Counseling Children & Adol.
- CNSL 5340 Play Therapy
- CNSL 5610 Adv. Practice in Group & Fam. Counseling

Subtotal: 12

Mental Health Counseling
- CNSL 5130 Mental Health Counseling
- CNSL 5610 Adv. Practice in Group & Fam. Counseling
- CNSL 5330 Counseling Children & Adol.
- CNSL 5340 Play Therapy

Subtotal: 12

Minimum Total Credit Hours: 61

Program Core Requirements:

Core Courses

Doctor of Philosophy in Counselor Education and Supervision

Doctoral students are required to have completed a minimum of a 48-hour Master’s degree from a program of study equivalent to a CACREP accredited Masters program in Counselor Education. These requirements are based upon the 2009 CACREP Standards.

Learning Outcome Areas

Advanced Foundations

Ph.D. students with a 48-hour CACREP equivalent Master’s degree are required to complete 12 semester hours of courses beyond their Master’s preparation (in consultation with their adviser and committee). Ph.D. students with a 60-hour CACREP equivalent Master’s program can petition up to 12 hours of their Master’s coursework to fulfill this requirement.

Counseling and Supervision

CNSL 5860 Doctorate Practicum in Counseling
- CNSL 5865 Supervision Theory
- CNSL 5875 Doctorate Practicum in Supervision

Teaching, Leadership and Advocacy

CNSL 5880 Doctoral Seminar
- PRST 5900 Practicum in College Teaching
- PRST 5990 Internship
Research and Scholarship

12 credits chosen from the following (or equivalent) in consultation with major adviser and graduate committee.

EDRE 5600 Ed Res 1: Descriptive.............. 3
EDRE 5610 Ed Res 2: Group Comp............. 3
EDRE 5620 Ed Res 3: Correlation Res........ 3
EDRE 5630 Ed Res 4: Multivariate Res........ 3
EDRE 5640 Intro to Qual Res.................. 3
EDRE 5650 Adv. Qual Res..................... 3

Dissertation

EDRE 5660 Dissertation/Thesis Prospectus
Writing.....................................  3
PRST 5890 Directed Professional Stds ....... 12

Total 72

Counseling (CNSL)

USP Codes are listed in brackets by the 1991 USP code followed by the 2003 USP code (e.g. [M2\(\bullet\)QB]).

1000. Relationship Skills: Counseling in Action. 3. [(none)\(\bullet\)I, L] Content-based course that focuses on the critical-thinking skills necessary to understand, analyze, and produce knowledge within the framework of educational inquiry; introducing students to the role of counseling in diverse settings. Themes discussed include classroom human relations skills, counseling in a diverse society, legal and ethical issues in human relations fields, and various specialties in the practice of counseling.

2200. Introduction to Student Leadership. 2. [(none)\(\bullet\)CS, L] Acquaints student leaders with skills and competencies necessary for successful service in the university community. (Normally offered each fall semester)

2300. Counseling Skills for the Helping Professions. 3. Presents instruction and practice in basic counseling and communication skills. Emphasizes listening, responding, encouraging and initiating change in interpersonal communication through mediation and conflict resolution. Prerequisite: sophomore standing; permission of Coordinator of Counselor Education program.

2800. Undergraduate Seminar in:... 1-3 (Max. 9). Reserved for academic course work related to student interest in classes associated with examining the discipline of counseling from many varied perspectives. Prerequisite: Declared major in the social sciences, human services, or education.

3010. Student Leadership Strategies. 2. Develops skills and competencies requisite to effective leadership. Provides student leaders with skills they will profit from, both while enrolled at the university and later in their chosen careers. (Normally offered each spring semester)

4040. Interpersonal Relationship Skills. 3. Designed to help students and administrators develop their human relation skills to improve interpersonal effectiveness and communication as related to generic life skills. Dual listed with CNSL 5040. Prerequisite: 12 hours in education/psychology.

4410. Elementary and Middle School Guidance. 2. Primarily for teachers, teachers-in-training, administrators, and other educators. Covers individual and group guidance and counseling strategies in the elementary and middle school. Emphasizes the role of teachers and other educators in providing guidance, counseling and experiences for children to promote their social, emotional and psychological growth. Dual listed with CNSL 5410. Prerequisite: junior standing; 6 hours of education and/or behavioral sciences and graduate standing to receive graduate credit.

4520. Fundamentals of Counseling (B) 3. Students learn some of the skills of counseling and develop an understanding of elementary principles of counseling theory, as well as a better understanding of themselves in relation to other people. Dual listed with CNSL 5520. Prerequisite: junior standing; 6 hours of education or psychology and graduate standing to receive graduate credit. (Offered on campus and online all semesters)

4620. Organization and Administration in Student Affairs. 3. An introduction to college student affairs practice, specifically exploring issues related to the organization and administration of student personnel services. Explores the history, the philosophy, and the skills utilized in student personnel services with the context of various higher education institutions and settings. Dual listed with CNSL 5620. Prerequisite: department consent.

5010. Introduction to Addictions. 2. Introduces students to the many facets of addictions by providing a general overview of the impact of alcohol, drugs, and other addictions issues on individuals seeking counseling. Prerequisite: graduate standing.

5020. Workshop. 1-4 (Max. 99). Usually offered only during summer sessions, this course provides an opportunity for special consideration on particular areas of counseling or pupil personnel services. Prerequisite: graduate standing, nine hours of education or behavioral science.

5030. Short Course. 1-2 (Max. 12). Provides opportunities for intensive study of some specific topic or set of topics in personnel work, to meet the special needs of a group of students with common interests. No more than six hours may be applied to any one degree program. Prerequisite: graduate standing and 6 hours in education and/or behavioral sciences.

5040. Relationship Skills. 3. Designed to help students and administrators develop their human relation skills to improve interpersonal effectiveness and communication as related to generic life skills. Dual listed with CNSL 4040. Prerequisite: 12 hours of education and/or psychology.

5060. Counseling Ethics and Professional Issues. 3. Designed to provide students with a philosophical base for making ethical decisions in the professional situations they encounter. In addition, it involves a chance to discuss many specific ethical and professional issues that are commonly encountered in the profession. Prerequisite: program admission or consent of instructor.

5100. Addictions and Diversity. 3. Focuses on increasing students’ understanding of diversity issues in the prevention and treatment of alcohol, drug abuse, and other addictions. Prerequisite: six hours in administration of justice, psychology, sociology, or social work at the 4000 or 5000 level.

5110. Group Procedures. 3. Designed as an introduction to group work used in various organizational settings. Basic group techniques and procedures are covered using lecture/discussion methods, video, observation, and participation in practicing group leadership skills. Participation in a group experience during the course is required. Prerequisites: CNSL 4520/5520, six semester hours of education and/or psychology, consent of instructor, and graduate standing.

5120. School Counseling. 3. Provides specialized training for individuals preparing to be school counselors at levels K-12. Prerequisite: graduate standing.

5130. Mental Health Counseling. 3. Encompasses specific counseling and professional development issues encountered by licensed counselors working in mental health agencies or private practice. Understanding the nature of the clientele and the issues, strategies for resolving client difficulties, collaborative practice, ethics, advocacy, knowledge and skills related to diversity and social justice are considered. Prerequisites: enrollment in Counselor Education program, successful completion or enrollment in CNSL 5060, 5650 and 5310.

5140. Counseling & Addictions. 3. Focuses on students acquiring specialized knowledge of assessment and multi-disciplinary treatment of chemical and other addictions. Prerequisite:...
six hours in administration of justice, psychology, sociology, or social work at the 4000 or 5000 level.

5145. Dual Diagnosis: Counseling Implications. 3. Designed to prepare counselors to assess, diagnose, and treat co-morbid substance abuse/dependence and other Axis I mental health problems for persons seeking counseling. Offered satisfactory/unsatisfactory only. Prerequisite: graduate standing or mental health practitioner.

5150. Organizational Leadership and Consultation. 3. Focuses on providing participants with an understanding of the role of the consultant and program management in working with schools, families and community organizations. Emphasis is on principles, methods, and models of consultation and management. Student application within a chosen professional area will be encouraged. Prerequisite: graduate standing, eight hours in counseling and consent of instructor.

5160. Etiology of Alcohol and Drug Dependency. 3. An introduction to issues pertaining to the etiology of alcohol and drug dependency. Emphasis is on genetic, psychological and sociocultural causes of chemical addiction. Cross listed with PSYC 5160. Prerequisite: PSYC 2210, CNSL 4520/5520 or equivalent.

5170. Career Lifespan. 3. Offers an overview of human lifespan functioning with a primary focus on psychosocial development and counseling and career development across the lifespan. Additionally, this course presents the opportunity to examine the role of career and its influences on personal development. Prerequisite: none.

5180. Assessment in CNSL. 3. Emphasis is on counselor development for facilitating client self-understanding through the application of various assessment procedures and knowledge about educational information systems and tools. Prerequisite: graduate standing, 15 hours in education and/or behavioral sciences.

5200. Couple and Family Theory. 3. Provides students with a foundation in conceptualizing and working with couple and family systems. Areas to be addressed include the history of couple and family counseling, ethical issues, professional orientation and an introduction to major systems theories. Participants are expected to explore their own family of origin. Prerequisite: admission to program.

5210. Group Experience. 1. Designed to provide a structured growth group experience through both in-class experience and reading. It is designed for students involved in human relationship fields. In-class groups are led by advanced group counseling students under the supervision of the faculty instructor. Prerequisite: graduate standing and consent of instructor.

5250. Theories of Student Development. 3. Philosophical views, theories and models for the design, structuring and development of comprehensive programs of college student personnel services are investigated. Roles, functions and contributions are studied as are institutions context and environment in which student personnel services function. Prerequisite: graduate standing or permission of instructor.

5300. Couple and Family Ethics. 1. Provides in-depth exploration of ethical issues in working with couples and family systems. Designed to complement 5060 which provides a foundation in ethics. Prerequisite: graduate standing.

5310. Pre-Practicum. 3. The first semester of a one-year sequence focused on learning, developing and practicing the fundamental process of counseling. Students do role-playing and have supervised experience with clients in a laboratory setting. Individual supervision is provided. Individual, live and observation of supervision is extensive. Prerequisite: graduate standing, program approval.

5320. Practicum. 3. Second course in a two semester sequence which includes class work, supervised counseling with clients in laboratory, extensive individual, group, live and observational supervision. Prerequisites: graduate standing, CNSL 5310, program approval.

5330. Counseling Children and Adolescents. 3. Students increase knowledge and skills in the processes of counseling children and adolescents. Prerequisite: six hours in education and/or behavioral sciences.

5340. Play Therapy. 3. Provides students with an overview of the field of play therapy. The historical roots of play therapy and the importance of play in child development will be explored. Various play therapy theories and techniques for assessment and intervention and professional issues will be surveyed. Prerequisite: CNSL 5330.

5350. Multicultural Counseling. 3. Increases counselor competency and skills with diverse clients. Prerequisite: admission to the UW counseling program.

5400. Advanced Methods in Couple and Family Therapy. 3. Provides advanced training in couple and family counseling, with an emphasis on the linkage between prominent systemic and non-systemic theories/models and relevant, effective and innovative intervention techniques. Serves as a link between theory (CNSL 5200) and practice (CNSL 5600). Prerequisite: graduate standing and CNSL 5200.

5410. Elementary and Middle School Guidance. 2. An introduction primarily for teachers, teachers-in-training and counselors, covering individual and group guidance and counseling techniques in the elementary and middle school. Emphasis is placed on the role of teachers and counselors in providing guidance, counseling, and experiences for children to promote their social, emotional, and psychological growth. Dual listed with CNSL 4410. Prerequisite: 6 hours of education and/or behavioral sciences and graduate standing.

5490. Individual Problems. 1-6 (Max. 6). Provides flexible credit for students who wish to undertake intensive study of a special problem identified in a regular classroom or area of study not currently covered by a regular class. Prerequisites: consent of instructor and department, and graduate standing.

5500. Couples and Marriage Therapy. 3. Provides participants with knowledge and skills specific to working with couples and partners in the areas of relationship and marital therapy. A variety of methods are used to support participants in becoming more effective in working with both “traditional” and “non-traditional” relationships in addressing issues of intimacy. Prerequisite: CNSL 5200.

5510. Trends and Issues. 1-4 (Max. 4). This course is used from time to time as a systematic means for students to explore a developing trend or issue related to personnel services. Students make in-depth studies of one or more issues, trends, practices, and applications, under the supervision of one or more instructors. Prerequisite: graduate standing, and 15 hours in education and/or behavioral sciences.

5520. Fundamentals of Counseling. 3. Beginning course in the basis and process of counseling. Exposes students to some of the skills of counseling and enables them to develop an understanding of the elementary principles of counseling theory as well as a better understanding of themselves in relation to other people. Dual listed with CNSL 4520. Prerequisite: 6 hours of education or psychology and graduate standing.

5580. Supervised Internship. 1-6 (Max. 16). Provides a capstone clinical experience, preparing graduates to enter the practice of counseling PK-12 schools, mental health settings, and student affairs services in higher education. Students engage in professional counseling activities at approved placement sites. Prerequisites: graduate standing, CNSL 5310, 5320 and consent of the designated field setting authority.

5610. Advanced Practice in Group and Family Counseling. 3. Designed to provide a theoretical framework for understanding
5865. Supervision Theory. 3. Provides students with the theoretical, knowledge and research base of clinical supervision as it relates to the counseling profession. Prerequisite: CNSL 5860.

5870. Seminar. 1-6 (Max. 12). Advanced students work together intensively on current issues and problems and participate in systematic, critical interpersonal evaluation. Seminars are organized with various patterns of emphasis and provide for a variety of small group experiences related to curricular areas within the department. Prerequisites: consent of instructor and graduate standing.

5873. Research in Counselor Education. 3. Study of research in the field, including development of knowledge and skills in analyzing, designing and conducting research in typical field settings. Prerequisite: graduate standing, and 15 hours in education and/or behavioral sciences.

5875. Doctoral Practicum in Supervision. 1-6 (Max. 6). Designed to provide the prospective counseling educator or supervisor with an understanding of the learning process in counseling and the supervisory behaviors required for improving the competencies and professional growth of counselors. Specialized knowledge, skills, and attitudes related to the act of supervising are supplemented by various methods and techniques such as videotape, films, film-tape synchronization, simulation material, role-playing, group dynamics, communication games, interpersonal recall, interaction and content analysis, and microcounseling. Prerequisite: CNSL 5860, graduate standing, and consent of instructor.

5959. Enrichment Studies. 1-3 (Max. 99). Designed to provide an enrichment experience in a variety of topics. Note: credit in this course may not be included in a graduate program of study for degree purposes.

### Instructional Technology

The curriculum in instructional technology is designed to assist professionals in effectively developing, implementing, and evaluating systems, tools, strategies, and environments that enhance learning. Graduates from the program secure employment in PK-12 classrooms; school media and technology centers, and school district administrative offices; public, corporate, and government centers and training agencies; college and university faculty and administrative positions; design and development labs; product support teams; and consulting firms.

### Degrees and Certificates Offered

Students who major in education with an option in instructional technology may choose one of the following certificate or degree programs: Master of Science in Education (M.S.), Doctor of Education (Ed.D) or Doctor of Philosophy (Ph.D.), Online instruction Certificate program (does not lead to a master’s degree). The program Web site (http://www.uwyo.edu/profstudies/) provides additional information.

### Program Specific Admission Requirements

Candidates for graduate degrees in education with an option in instructional technology must complete university admission requirements and submit additional application materials listed on the program Web site. A bachelor’s degree is required for admittance to the M.S. program. A master’s degree is required for Ed.D. and Ph.D. programs. Candidates for Ed.D. and Ph.D. programs may also participate in an interview during the selection process.

Candidates for the University Graduate Certificate in Online Instruction must file a university application with the Admissions Office, if not concurrently enrolled in a graduate program at the University of Wyoming. In addition, candidates must complete a selection process which may include assessment in the following areas: bachelor’s degree in education related area from an accredited institution, three letters of recommendation, and personal statement.
Program Specific Degree Requirement

Online Instruction Certificate Program

The certificate program consists of 12 credit hours of coursework. It is a post-baccalaureate, credit-bearing certificate program that includes four online courses: ITEC 5030, Introduction to Online Teaching; ITEC 5020, Technology and Distance Education; ITEC 5160, Introduction to Instructional Design (with an emphasis on online learning environments); and ITEC 5510, Instructional Telecommunications.

Master of Science (M.S.) Program

The M.S. program gives students the foundations to design, develop, implement, and evaluate instructional resources and systems in professional learning environments. Students examine the history of technology-based training, instructional design, and distance education to understand current trends and procedures in the field. They then apply this knowledge through the design and development of novel training solutions targeted to diverse professional settings (e.g., K-12 education, corporate and government centers, design and development labs, higher education).

Through these experiences, students learn how to identify gaps in desired and current practice, design training solutions to eliminate or bridge those gaps, develop tools and methods to implement solutions, and evaluate and revise methods for continued success. Emphasis is placed on instructional systems that use both face-to-face and distance delivery methods. Students can complete all of their coursework online with the exception of a campus visit for their final defense in the Capstone course.

The M.S. is a 36-credit hour program and includes the following requirements:

**Plan A (Thesis)**

- Program core graduate credits: 24
- Electives: 6 credits
- EDRE 5530, Introduction to Research
- EDRE 5550, Action Research (3 credits)
- PRST 5960, Thesis Research (3 credits)

**Plan B (Non-Thesis)**

- Program core graduate credits: 24
- Electives: 6 credits
- EDRE 5530, Introduction to Research or EDRE 5550, Action Research (3 credits)
- ITEC 5090, Masters Capstone course (3 credits)

Plan B (Non-Thesis)

Program Specific Degree Requirement

Doctor of Education (Ed.D.) Program

**Residency requirement:** Two spring residencies that last between 1-3 days on campus

The Ed.D. is the terminal professional degree in education designed for students who desire to improve their professional practice as educators. The program moves beyond the foundations of distance education, instructional design, and technology integration to focus on advanced application and research. Students apply design, development, and evaluation principles to explore authentic challenges and develop real solutions in diverse settings (e.g., K-12 education, corporate and government centers, and higher education institutions). Through these experiences, students learn how to use advanced research methods to explore workplace problems, design and deliver solutions, and implement and evaluate change. Emphasis is placed on in-depth mentoring and collaboration, advanced research, development of real-world applications, and training solutions offered through both face-to-face and distance delivery platforms.

The Ed.D. program requires a minimum of 81 credit hours beyond the bachelor’s degree, of which 36 hours must be taken from the student’s chosen field. Candidates may, with the approval of the committee, transfer up to 30 credit hours from previous graduate-level coursework in a closely related field. The program is delivered online with the exception of some advanced research courses and the spring residencies.

- Program knowledge base: 48 credits
- Research: 9 credits
- Professional Writing: 6 credits
- Electives: 12 credits
- Dissertation: 6 credits

Program Specific Degree Requirement

Doctor of Philosophy (Ph.D.) Program

**Residency requirement:** Four consecutive full-time semesters on campus

The Ph.D. program prepares students for careers in academia. The program consists of: (1) systematic inquiry and research; (2) focused courses and professional experiences in education and related fields; and (3) teaching and other related activities tailored to individual career goals. Students work closely with an advisor and faculty committee to select courses, conduct research, and develop professional experiences.

Effective preparation for the Ph.D. stems from collaborative research and inquiry into topics of mutual interest by students and faculty. The program is structured around a cognitive apprenticeship model. Students spend a major portion of their program working with faculty members on shared research and scholarship.

The Ph.D. program requires a minimum of 81 credit hours and includes the following requirements:

- Professional courses: 15 credits
- Program knowledge base: 30 credits
- Research: 15 credits
- Electives: 9 credits
- Dissertation: 12 credits

Candidates may, with the approval of the committee, transfer up to 30 credit hours from previous graduate-level coursework in a closely related field.

For additional information about specific required courses for graduate degrees in education with an option in instructional technology, please visit the program Web site.

**Instructional Technology (ITEC)***

USP Codes are listed in brackets by the 1991 USP code followed by the 2003 USP code (e.g. [M2(QL)]).

**1000. Visual Literacy for Life and Learning.** 4. ([none]Q[1, L]) Engages students in the discussion and practice of communicating with visual resources. Students do not need to be artistic to succeed. Emphasis is placed on 1) using visuals for communication in formal and informal educational environments, and 2) the responsible use of visuals as discerning global citizens.

**2360. Teaching with Technology.** 1-3 (Max. 3). ([none]Q[1, L]) Introduction to effective utilization of computers and other instructional technologies for instruction; software/hardware selection; integrated, professional and instructional applications as applied to all areas and levels of P-12 education. Prerequisites: minimum 2.5 cumulative UW GPA and declared major in Education. (Offered fall, spring and summer)

**4010 [4120]. Instructional Technology.** 3. An introductory survey course in instructional technology. Covers psychological principles in communication theory, message design and instructional theory with emphasis on the application of technology toward achieving communications objectives. Includes hands-on experience with current presentation tools and techniques for a variety of instructional deliveries. Dual listed with ITEC 5010. **Prerequisite:** junior standing.
College of Education

4030. Introduction to Online Teaching. 3. Includes basic theory, techniques, strategies of teaching and managing the online environment. Covers foundations and domains of online teaching. Emphasizes online learning issues, topics, and practices. Builds a knowledge base in topics such as the selection and integration of distance learning technologies in teaching and providing learner support. Dual listed with ITEC 5030. Prerequisite: senior standing or 12 hours of education.

4220. Materials Production I. 2. The first in a series of laboratory experiences aimed at providing teachers, administrators and production specialists with skills in the design and production of instructional materials. Focuses on the basic processes (i.e., mounting, lettering, coloring, illustration, converting and duplicating). A materials fee will be assessed. May be used toward the practical and applied arts requirement. Prerequisite: ITEC 4120. (Offered based on sufficient demand and resources)

4340 [4400]. Integrating Computer-Based Technologies in Teaching: _____. 1-3 (Max. 6). Equips students with information, skills and insights necessary for successful integration of computer-based technologies into classroom teaching. Content includes modeling of techniques, teaching strategies and appropriate applications of computer-based technologies in specific content areas and consideration of computer-related issues facing educators. Prerequisite: ITEC 2360 or equivalent.

4360. Advanced Instructional Computing. 3. For graduate students and teachers interested in learning how to appropriately use microcomputers (CBE, CAI, CBI and CMI) in the classroom and as a tool in their disciplines. Methods of using microcomputers to improve learning, retention, motivation and higher order thinking skills are examined. Systems for classroom management and criteria for selection of hardware and software are covered. A variety of software will be evaluated and used in content specific areas. Prerequisite: graduate standing.

4740. Field Studies In ______. 1-5 (Max. 12). This course is offered only through extension services. It is broad and flexible and can be utilized in numerous situations to meet local needs. Credit in this course is not applicable toward advanced degrees. Prerequisite: junior standing. (Please note that any course offered by the College of Education with the number 4740 is not applicable toward advanced degrees)

4880. Individual Problems. 1-3 (Max. 9). A course providing flexible credit for seniors who are interested in investigating problems in instructional technology. Prerequisite: 12 hours of education and consent of instructor.

5010. Instructional Technology. 3. An introductory survey course in instructional technology. Covers psychological principles in communication theory, message design and instructional theory with emphasis on the application of technology toward achieving communications objectives. Includes hands-on experience with current presentation tools and techniques for a variety of instructional deliveries. Dual listed with ITEC 4010. Prerequisite: junior standing.

5020. Technology and Distance Education. 3. A survey of the uses of telecommunication systems and other technologies in distance education. Covers instructional strategies, management concerns, and special issues associated with distance learning programs. Prerequisite: graduate standing and consent of instructor.

5030. Introduction to Online Teaching. 3. Includes basic theory, techniques, strategies of teaching and managing the online environment. Covers foundations and domains of online learning. Emphasizes online learning issues, topics, and practices. Builds a knowledge base in topics such as the selection and integration of distance learning technologies in teaching and providing learner support. Dual listed with ITEC 4030. Prerequisite: senior standing or 12 hours of education.

5070. Trends In Instructional Technology. 1-3 (Max. 6). Provides reading, discussion, research and the opportunity to critically appraise potential methods, software, and hardware in the field of educational communications and technology. Prerequisite: 12 hours of education, graduate standing, and consent of instructor.

5090. Masters Capstone. 4. Capstone is designed to provide a forum in which to apply theories, principles, and skills to the kinds of situations adult educators may encounter in practice. It provides a vehicle to document the successful completion of general and degree specific competencies and to examine and critique current scholarship in adult education. Students complete the requirements of the Plan B process. Cross listed with ADED 5090. Prerequisite: graduate standing.

5120. Media Workshop. 1-6 (Max. 6). Specialized experience in selected areas such as computer technology, multi-image, slide/tape, audio and instructional design. Emphasizes experimental use of materials and development of learning software. The workshop is provided on demand and is flexibly organized and scheduled to meet prevailing needs. Prerequisite: ITEC 4220.

5160. Introduction to Instructional Design. 3. An introduction to theory and practice of instructional design. Intensive study of the instructional design process and application of the process to solve an instructional problem. Prerequisite: graduate standing.

5320. Visual Literacy. 3. Visual literacy refers to a group of vision-competencies a human being can develop by seeing, and at the same time, integrating with other sensory experiences. Concerned with techniques for developing these competencies and methods by which such development can be encouraged in others. Prerequisite: graduate standing.

5350. Photo Instructional Materials. 3. An introduction to fundamental photographic procedures that teachers, administrators, and others can apply to solve communication problems. Includes the selection of cameras, films, and the appropriate utilization of these and other photographic equipment often found in today’s schools and other social institutions. Laboratory time is expected to extend beyond scheduled class hours. A materials fee will be assessed. Prerequisite: ITEC 4120 and 4220.

5470. Instructional Video. 3. An introductory course for teachers, media specialists, administrators, and others interested in planning, producing, and using instructional video. Prerequisites: graduate standing and consent of instructor.

5480. Short Course. 3. Used to provide offerings in special topics in instructional technology on the basis of need. Prerequisites: graduate standing and consent of instructor.

5510. Instructional Telecommunications. 3. An introduction to the instructional applications of telecommunications in public schools, media centers, libraries, and post-secondary institutions. Covers the uses of voice, data, and video transmission for instructional application. Prerequisites: graduate standing and consent of instructor.

5550. Theory of Change. 3. Explores the literature and research base within the theories, models, and processes of change, the diffusion of innovations, and the human side of educational reform. Learners explore practical applications of theoretical and research findings to behavioral change, diffusion of innovations, and principles and practices of planned change. Prerequisite: graduate standing.

5560. Design and Development of Instructional Systems. 3. Advanced study in instructional systems theory and design. Study and application of instructional design mod-
els used in education and training. \textit{Prerequisite: ITEC 5160, graduate standing, and consent of instructor. Previous course work in educational psychology/learning theory is desirable.}

5580. Supervised Internship. 1-8 (Max. 12).

An internship experience may be required as part of the planned program in instructional technology. A maximum of eight hours may be counted in meeting the minimum requirements of a graduate degree, but additional credit may be taken beyond this limit for the recording of appropriate supervised experience. This course may not be substituted for practice public school teaching or vice versa. \textit{Prerequisite: 12 hours of ITEC, consent of instructor and graduate standing.}

5660. Interactive Learning Systems. 1-3 (Max. 6).

Covers all of the necessary elements to design and evaluate effective and efficient interactive learning systems. \textit{Prerequisites: ITEC 5160 or equivalent, graduate standing, and consent of instructor. Previous course work in educational psychology/learning theory is desirable.}

5760. Instructional Design Applications.

3. Students engage in the application of principles of instructional design in a real-world setting. Students will be involved in classroom and field experience. \textit{Prerequisite: ITEC 5160 or 5560.}

5850. Issues, Practices, and Research in Instructional Technology.

3. A survey course covering issues, practices, and associated research in instructional technology. \textit{Prerequisite: graduate standing.}

5870. Seminar. 1-3 (Max. 6).

Advanced students in education work together, intensively, on current issues and problems relevant to instructional technology, and participate in systematic, critical interpersonal evaluations. \textit{Prerequisite: graduate standing and consent of instructor.}

5880. Special Problems. 1-6 (Max. 9).

Provides a broad perspective through selected reading material and, wherever possible, the student collects and uses original information from a practical school situation. All work is done independently under the direction of a faculty member. As many conferences are held as necessary to assure successful completion of the project. \textit{Prerequisites: graduate standing and consent of instructor and consent of department.}

5890. Directed Professional Study. 1-6 (Max. 9).

Similar to ITEC 5880 and provides additional opportunity for students to pursue advanced degree work through independent research. Projects are done under the direction of a graduate faculty member. \textit{Prerequisites: graduate standing and consent of instructor and consent of department.}

5900. Practicum in College Teaching. 1-3 (Max. 3).

Work in classroom with a major professor. Expected to give some lectures and gain classroom experience. \textit{Prerequisite: graduate standing.}

5920. Continuing Registration: On Campus. 1-2 (Max. 16).

\textit{Prerequisite: advanced degree candidacy.}

5940. Continuing Registration: Off Campus. 1-2 (Max. 16).

\textit{Prerequisite: advanced degree candidacy.}

5959. Enrichment Studies. 1-3 (Max. 99).

Designed to provide an enrichment experience in a variety of topics. 
Note: credit in this course may not be included in a graduate program of study for degree purposes.


Designed for students who are involved in research for their thesis project. Also used for students whose coursework is complete and are writing their thesis. \textit{Prerequisites: enrollment in a graduate degree program.}

5980. Dissertation Research. 1-12 (Max. 48).

Designed for students who are involved in research for their dissertation project. Also used for student whose coursework is complete and are writing their dissertation. \textit{Prerequisite: enrollment in a graduate degree program.}

5990. Internship. 1-12 (Max. 24).

\textit{Prerequisite: graduate standing.}

\section*{Leadership}

The curriculum in educational leadership is designed to prepare superintendents, principals, supervisors for public schools and leaders for organizations to perform duties of a specialized nature and to function effectively in a leadership capacity. The program provides sufficient breadth to give candidates for advanced degrees ample opportunity to develop essential competencies.

\section*{Degrees and Certificates Offered}

Students who major in education with an option in educational leadership may choose one of the following certificate or degree programs: Principal Endorsement certificate program for eligibility of K-12 Principal endorsement (does not lead to a master’s degree), Master of Arts in Education, Doctor of Education, Doctor of Philosophy. Additional information may be found on the Educational Leadership program webpage, (www.uwyo.edu/edleadership/).

\section*{Program Specific Admission Requirements}

Candidates for a master’s degree in education with a specialization in educational leadership, in addition to the admission requirements of the university, must complete a selection process which may include assessment in the following areas: teaching experience, a writing sample, and faculty interview.

Candidates for the doctor of education and the doctor of philosophy degree, in addition to the admission requirements of the university, must complete a selection process which may include the following prerequisites and assessment in the following areas: hold a master’s degree, writing sample, and faculty interview.

Candidates for the University Graduate Certificate in School Principalship must file a university application with the Admissions Office, if not concurrently enrolled in a graduate program at the University of Wyoming. In addition, candidates must complete a selection process which may include assessment in the following areas: master’s degree in an education related area from an accredited institution, writing sample, and faculty interview.

Candidates for the School District Superintendent University Graduate Certificate must file a university application with the Admissions office, if not concurrently enrolled in a graduate program at the University of Wyoming. In addition, candidates must have a master’s degree and be asked to produce a writing sample and participate in an interview with faculty.

\section*{Program Specific Degree Requirements}

\textbf{Principal Endorsement Certificate program}

The endorsement/certificate is 21 credits which includes the four core classes, 3 credits each: EDAD 5010, Leadership for Curriculum Development; EDAD 5020, Leadership for School Organization; EDAD 5030, Leadership for Communication & Personnel Development; EDAD 5040, Leadership for Instruction; EDAD 5580, Supervised Internship, 6 credits, and EDRE 5530 Intro to Research, 3 credits.

\section*{Program Specific Degree Requirements}

\textbf{Master’s program}

The master’s is a 33 credit program which includes the four core classes, 3 credits each: EDAD 5010, Leadership for Curriculum Development; EDAD 5020, Leadership for School Organization; EDAD 5030, Leadership for Communication & Personnel Development; EDAD 5040, Leadership for
Professional Studies

Instruction; EDAD 5580, Supervised Internship, 6 credits, EDEX 5720, Special Education Law, 3 credits, EDAD 5050, Leadership for Democratic Schools, 3 credits; EDAD 5150, Assessment, Accountability, and Student Learning, EDCI 5790 Advanced Instructional Strategies, 3 credits, EDRE 5530 Intro to Research, 3 credits; and EDAD 5060, Capstone for Educational Leadership, 3 credits.

Program Specific Degree Requirements
School District Superintendent Endorsement Certificate Program

The school district superintendent certificate program is a 26 credit hour program designed for students who seek district superintendent endorsement in the State of Wyoming. Required courses are:
EDAD 5850 Educational Leader as Direction Setter ........................................3
EDAD 5720 Educational Leaders as Change Agent ...........................................3
EDAD 5800 Educational Leader as Resource Manager ....................................3
EDAD 5750 Educational Leader for the Board and Community ............................3
EDAD 5650 Educational Leader as Communicator ..........................................3
EDAD 5700 Educational Leader for Instruction .............................................3
EDAD 5600 Educational Leader as Manager of Human Resources ....................3
EDAD 5870 School Law ...............................................................................3
EDAD 5580 Internship ..................................................................................3

Program Specific Degree Requirements
Doctor of Education (Ed.D.) program

The Ed.D. program is 50 credits which is added to credits from a master’s degree in an education related field for a minimum of 80 credit hours. There are 8 core classes:
EDAD 5850 Educational Leader as Direction Setter ........................................3
EDAD 5720 Educational Leader as Change Agent ...........................................3
EDAD 5800 Educational Leader as Resource Manager ....................................3
EDAD 5750 Educational Leader for the Board and Community ............................3
EDAD 5650 Educational Leader as Communicator ..........................................3
EDAD 5700 Educational Leader for Instruction .............................................3
or
EDCI 5870 Learning Theories .......................................................................3
EDAD 5600 Educational Leader as Manager of Human Resources ....................3
EDAD 5870 School Law ...............................................................................3
or
EDAD 5050 Leadership for Democratic Schools ..............................................3
Two additional required courses:
EDAD 5150 Assessment, Accountability, and Student Learning ..............................3
or
EDCI 5600 Diversity ....................................................................................3
EDAD 5580 Internship ..................................................................................2
Research courses totaling 12 credits:
Research (included in master's) ......................................................................3
EDRE 5600 Ed Research 1: Descriptive Research ............................................3
EDRE 5610 Ed Research 2: Group Comparison ..............................................3
EDRE 5620 Ed Research 3: Correlation .........................................................3
and
EDAD 5980 Dissertation Research ..................................................................6
EDRE 5660 Dissertation/Thesis Prospectus Writing ........................................3

Cannot be used to meet research hour requirements for UW graduate degrees

Program Specific Degree Requirements
Doctor of Philosophy (Ph.D.) program

Minimun of 79 total credits required in the following areas:
Core courses (minimum of 9 credits)
All PhD option areas require EDCI 5870, Intro to Doctoral Studies. In addition, doctoral students, with direction from their committees, will choose a minimum of two additional courses from the remaining five core courses:
PRST 5900 (Practicum in College Teaching)
EDCI 5600 (Diversity)
EDCI 5810 (Writing for Publication)
EDCI 5730 (Learning and Cognition)
EDAD 5720 (Leader as Change Agent)
EDRE 5660 (Dissertation/Thesis Prospectus Writing)

Notes:
These requirements for a PhD in Education are minimum requirements only. Students should check specific program options for additional requirements, including admissions criteria. Options approved prior to May 2009 may have different requirements.

Educational Administration (EDAD)
1000. Schools and Democracy. 1.
[none]◆◆◆1 Content-based course focuses on critical-thinking skills necessary to understand, analyze, and produce knowledge within the framework of educational inquiry; introducing students to the themes of the agenda of the National Network for Educational Renewal which focuses on the purpose of schools in America.

5010. Leadership for Curriculum Development. 3.
Focuses on leadership skills that support curriculum and curriculum development in student learning and achievement. Key topics include: K-12 curriculum alignment; incorporating standards and community values; curriculum development, implementation, and evaluation; equity and access for diverse learning needs; and effective communication about curriculum. Prerequisite: Admission to program or consent of instructor.

5020. Leadership for School Organization. 3.
Focuses on organizational leadership. Topics include: history of organizational leadership, leadership styles, change process, strategic planning, federal, state, and local governance as well as politics, power and policy, and school operations, to include budget, facilities, scheduling, recruitment, selection and induction.

5030. Leadership for School and Community Relations. 3.
Focuses on the leadership role of the principal in building relations with students, staff, family, and community. Topics include school culture and climate, community and family involvement, public relations.
and communications, student discipline, and crisis management. **Prerequisite:** admission to program or consent of instructor.

5040. **Leadership for Instruction.** 3. Focuses on the principal as instructional leader. Topics include: developing a school vision of learning; employing effective instructional strategies, supervision and evaluation of teacher performance; integration of supervision, evaluation, and student achievement with professional development and professional learning communities, and instructional trends and issues within diverse learning communities. **Prerequisite:** Admission to program or consent of instructor.

5050. **Leadership for Democratic Schools.** 3. Designed to increase awareness of future school leaders of the principles of equity and excellence in education focused on democratic practices. Topics include democratic educational practices, ethical leadership, renewal of public schools, and educational leadership in urban, suburban, and rural communities, and in ethnically and socio-economically diverse settings. **Prerequisite:** graduate standing.

5060. **Capstone in Educational Leadership.** 3. Designed to assist the student in the creation of their master's program final project, which will be used as the written demonstration of mastery of the course outcomes as well as meeting the educational leadership (ELCC) standards. **Prerequisite:** complete Core (EDAD) courses.

5070. **Educational Trends.** 1-6 (Max. 8). Provides reading, discussion, research, appraisal of new methods, materials, equipment procedures, and experimental programs concerned with the improvement of professional education as it pertains to educational administration. The maximum allowable credit applies to the total offerings under this number. **Prerequisite:** graduate standing, teaching experience, 12 semester hours in education.

5100. **Human Relationships in Educational Leadership.** 6. Designed to encourage students to gain a deeper understanding of their own beliefs and an understanding of leadership issues through concentrated study as members of a cohort group with a team of faculty. **Prerequisite:** admission to Principal Preparation Program and graduate study.

5150. **Assessment, Accountability, and Student Learning.** 3. Focuses on the knowledge and skills necessary to lead schools in the alignment of standards, assessment, and instruction. Topics include analysis and interpretation of assessment results and educational data, recent history and current context of educational accountability in Wyoming, role of assessment and accountability in improving student learning. **Prerequisite:** graduate standing.

5200. **Educational Leadership and Organizational Management.** 3. Designed to encourage students to gain a deeper understanding of the principal as an organizational manager. Topics include school law, budgeting, facilities planning, climate and policy development. **Prerequisites:** admission to Principal Preparation Program and graduate standing.

5300. **Educational Leadership and Personnel Development.** 3. Designed to encourage students to gain a deeper understanding of the principal as a personnel developer. Topics include empowerment, staff development, supervision of instruction, evaluation and team building skills. **Prerequisites:** admission to Principal Preparation Program and graduate standing.

5400. **Instructional Leadership.** 6. Designed to develop instructional leadership in aspiring principals. Topics include situational leadership, quality schools, outcome-based education, curriculum development, assessment of learning and instruction, technology, change and effective schools. **Prerequisites:** admission to the Principal Preparation Program and graduate standing.

5410. **Short Course in Educational Administration.** 1-6 (Max. 6). Used for special topics in educational administration on the basis of need. **Prerequisites:** six hours of education and/or consent of instructor.

5420. **School Administration Workshop.** 1-5 (Max. 5). Workshop designed mainly for the experienced school administrator who desires to acquire the latest information about developments in various areas of education. It is devoted to the intensive study of major problems and issues confronting school administrators. **Prerequisites:** 12 hours of educational administration and graduate standing and/or consent of instructor.

5490. **Directed Professional Study.** 1-6 (Max. 9). Similar to EDAD 5880 and provides additional opportunity for a student to pursue advanced graduate work through independent research. Projects are done under the direction of a graduate faculty member. **Prerequisite:** consent of instructor and department, and graduate standing.

5500. **Communication in Educational Leadership.** 3. Designed for students to attain the knowledge and skills and to develop the attitudes congruent with the principal as an effective communicator. Topics include inter- and intra-personal communication skills, school and community relations, analysis of school and community power bases and group process skills. **Prerequisites:** admission to Principal Preparation Program and graduate standing.

5550. **Supervised Internship in Educational Administration.** 1-8 (Max. 12). Expand student knowledge by providing an intensive clinical experience in educational administration along with other activities that involve practical experiences with peers and with practising K-12 administrators. **Prerequisite:** Admission into the UW Educational Leadership Principal Certificate, Master's or EdD Doctoral program.

5600. **Educational Leader as Manager of Human Resources.** 3. Focuses on linking theory related to organizations (including Bureaucracy Theory), decision-making and organizational effectiveness with effective practices in management of organizational personnel. **Prerequisite:** graduate standing.

5650. **Educational Leader as Communicator.** 3. Focuses on inter- and intra-personal communication skills; group facilitation; organization and community public relations; parent and community involvement; negotiation; and conflict management. **Prerequisite:** graduate standing.

5700. **Educational Leader For Instruction.** 3. Focuses on the study of curriculum development and implementation, instructional practice, assessment and staff development. **Prerequisite:** graduate standing.

5720. **Educational Leader as Change Agent.** 3. Focuses on the study of change theory, change processes, change dynamics, decision-making models, and implementation of change in the organization setting. **Prerequisite:** graduate standing.

5750. **Educational Leader for the Board and Community.** 3. Concentrates on the administrator as the leader of an organization's board and community. **Prerequisite:** graduate standing.

5800. **Educational Leader as Resource Manager.** 3. Focuses upon the successful management and operation of the organization's fiscal resources, facilities, and support services. Includes work in the areas of transportation, food service, funding and budget, compensation, facilities, legal issues, calendar, special education, and policy influence. **Prerequisite:** graduate standing.

5820. **Educational Leader as Developer of Human Resources.** 3. Focuses on linking the literature and theory of motivation, decision-making, team building, and organizational effectiveness to the implementation of effective practices in the areas of personnel empowerment. **Prerequisite:** graduate standing.
5850. Educational Leader as Direction Setter. 3. Investigates how the educational leader can effectively create a futuristic vision and mission for the organization after assessing the existing culture and climate, and organizational readiness for change. Prerequisite: graduate standing.

5870. Seminar in Legal Issues. 1-6 (Max. 8). Advanced students in education work together intensively on current issues and problems relevant to educational administration and participate in systematic, critical interpersonal evaluation. Eight hours are permitted on a doctoral program. Prerequisite: consent of instructor and graduate standing.

5880. Special Problems. 1-6 (Max. 9). Provides a broad perspective through selected reading material and wherever possible the student collects and uses original information from a practical school situation. All work is done independently under the direction of a faculty member. As many conferences are held as necessary to assure successful completion of the project. Prerequisite: consent of instructor and department, and graduate standing.

5959. Enrichment Studies. 1-3 (Max. 99). Designed to provide an enrichment experience in a variety of topics. Note: credit in this course may not be included in a graduate program of study for degree purposes. Prerequisite: advanced degree candidacy.

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### Educational Research

The educational research faculty offer ten courses on a regular basis in educational research. These courses are open to graduate students throughout the college and the university. In addition, we offer two minors in educational research, one is qualitative research methods and one in quantitative research methods. Students currently enrolled in any UW master's or doctoral program are eligible for these minors. Both minors require students to complete 16 credit hours, a trial research project, and a co-teaching experience in educational research.

#### Educational Research (EDRE)

5000. Educational Research. 3. 5530. Introduction To Research. 3. Basic concepts of educational research design, statistics, and measurement. The focus of the course is on reading and critiquing research articles, both quantitative and qualitative, and includes an introduction to statistics. Students learn to conduct a review of the literature relevant to a specific research problem. Prerequisite: graduate standing.

5580. Supervised Internship. 1-8 (Max. 12).

5600. Educational Research I: Descriptive Research. 3. Basic concepts of educational survey research design, statistics, and measurement. The focus is on descriptive statistics (measures of central tendency, variability, percent and frequency distribution, bivariate correlation, graphical displays, testing hypotheses about proportions). Students develop questionnaires and plan, conduct, and report on a survey study. Prerequisite: EDRE 5530.

5610. Educational Research II: Group Comparison Research. 3. Concepts of experimental and ex post facto research designs, statistics, and measurement. The focus is on inferential statistics. Students construct attitude scales and other instruments used in research and they plan, conduct, and report on a group comparison study. Prerequisites: EDRE 5530 and 5600.

5620. Educational Research III: Correlational Research. 3. Concepts of correlational research, statistics, and measurement. Focus is on the design and analysis of results from correlational studies. Statistical topics include MANOVA, multiple regression, factor analysis, and discriminant analysis. Includes measurement topics in classical measurement theory and additional topics in validity and reliability. Plan, conduct, and report on a correlational study. Prerequisites: EDRE 5530, 5600, and 5610.

5630. Educational Research IV: Multivariate Research. 3. An advanced educational research, statistics, and measurement course. Design and analysis of results from studies with several dependent and independent variables. Includes multivariate statistics such as MANOVA, discriminant analysis, canonical correlation, multidimensional scaling, structural equation modeling, logit regression. Measurement topics include generalizability theory, item response theory, equating, and standard setting. Prerequisites: EDRE 5530, 5600, 5610, and 5620.

5640. Introduction to Qualitative Research. 3. Research methods course provides an introduction to the use of qualitative or interpretive research methods in the collection and analysis of data. Students will examine primary research as well as secondary research sources which represent a variety of theoretical and methodological viewpoints. Prerequisites: graduate standing and EDRE 5530.

5650. Advanced Qualitative Research Methods. 3. Students examine the role of theory in qualitative research; develop expertise in particular qualitative research designs; study and practice data collection and analysis methods; examine and practice writing reports of results. Students engage in a fieldwork project. Prerequisites: EDRE 5530 and 5640.

5660. Dissertation/Thesis Prospectus Writing. 3. Prepare graduate students to plan, develop, and write research proposals suitable for a dissertation/thesis. In consultation with the committee chair, students will focus on their own problem for research, conduct a literature review, choose appropriate methods for investigating the problem, and write a research proposal. Prerequisites: at least two of the following: EDRE 5530, EDRE 5550, EDRE 5600, EDRE 5610, EDRE 5620, EDRE 5640, EDRE 5650 or consent of instructor.

5670. Mixed Methods Research. 3. Provide an overview of mixed methods research to graduate students who are already familiar with quantitative and qualitative research. Specifically, they will learn the definition, history and foundations, and specific types of mixed methods designs. Students will plan a mixed methods research study. Prerequisites: EDRE 5600 and EDRE 5640; or consent of instructor.

5870. Seminar. 1-8 (Max. 8).

5880. Special Problems. 1-6 (Max. 9).

5890. Directed Professional Study. 1-6 (Max. 9).

5959. Enrichment Studies. 1-3 (Max. 99). Designed to provide an enrichment experience in a variety of topics. Note: credit in this course may not be included in a graduate program of study for degree purposes.

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### Special Education

The special education programs are designed to prepare teachers to work with students with varied learning and behavior needs. Students may choose from one of two programs: a master of arts in education with an option in special education or a special education endorsement program leading to eligibility for K-12 special education generalist endorsement through the Wyoming Professional Teaching Standards Board (does not lead to a master's degree).

#### Program Specific Admission Requirements

In addition to meeting the admission requirements of the university, candidates must also provide a current resume, a copy of current Wyoming Teaching Certificate, a signed Special Education Program Prospectus, a writing sample, three letters of recommendation,
and undergraduate and graduate transcripts. A bachelor's degree, with a minimum cumulative GPA of 3.25, from an accredited institution is also required. Please see the Special Education website for more details on these requirements.

Program Specific Degree Requirements

Students may choose to complete the program on a part-time or full-time basis. All Special Education courses are offered either online or through video-conferencing sites within Wyoming only.

Program Courses

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<th>Course</th>
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<td>EDEX 5100</td>
<td>Introduction to Special Education Law</td>
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<td>EDEX 5071</td>
<td>Special Education Intervention</td>
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<td>EDEX 5080</td>
<td>Special Education Law (Special Education)</td>
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<td>EDEX 5355</td>
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K-12 Endorsement/Certificate Program

The special education endorsement program requires a total of 31 credit hours and does not require a culminating activity. EDEX 5150/EDRE 5530/EDRE 5550 are not required for this program.

Master's Program

The Master's degree program requires a culminating activity. This activity may take a variety of forms but is either a Plan A (thesis) or a Plan B (project).

Students completing a Plan A will write a thesis that involves conducting a qualitative or quantitative study. This culminating activity should add new information and content to the field and is primarily for students who wish to learn more about the research process or who wish to continue their education toward a doctoral degree. The student’s committee must approve the culminating activity as well as the topic. If a student chooses to write a Plan A paper, they must take either EDEX 5150 or EDRE 5550 and then also EDRE 5530 plus 4 additional thesis credit hours. The program requires 41 total credit hours.

Students completing a Plan B have several options from which to choose their culminating activity. These include: a topical paper, an action research or case study investigation, an oral examination, the development of a complete grant application, or the development of a professional product (e.g. curriculum). The student’s committee must approve the culminating activity as well as the topic. If a student chooses to write a Plan B paper, the student can choose between EDEX 5150 (Classroom Research), EDRE 5530 (Introduction to Research), or EDRE 5550 (Action Research). The program requires 34 total credit hours.

Special Education Director Endorsement Program

Students who successfully complete a University of Wyoming Principal's Certificate in Education Leadership and a University of Wyoming Master's Degree in Education (Special Education) can apply for endorsement as a Director of Special Education through Wyoming Professional Teaching Standards Board.

Program Details

The endorsement program requirements are available by completing both the Special Education Master’s program and the Educational Leadership Principal Certificate program. The program is offered through the UW Outreach School using distance delivery such as video-conferencing, online, intensive weekends, or combinations of delivery methods. Upon completion of this program students are eligible to apply to the Wyoming Professional Teaching Standards Board for endorsement as a Director of Special Education.

Applicants who hold a BA/BS degree and have a Wyoming teaching certificate, or have submitted an application for a Wyoming teaching certificate, are eligible to apply for admission to this graduate program. Applicants who do not have a Special Education background will need to take a Special Education foundation course prior to beginning the program coursework.

Students expecting to obtain this endorsement must complete both the Special Education Master’s courses and also the Educational Leadership Certification courses.

Exceptional Children (EDEX)

USP Codes are listed in brackets by the 1991 USP code followed by the 2003 USP code (e.g. [M24•QB]).

1000. Hot Topics in Special Education. 1. Academic, content-based course designed for first-year students, focuses on the critical thinking skills necessary to understand, analyze, and produce knowledge within the framework of educational inquiry. Serves as an introduction to the intellectual community of the university. Themes discussed focus on special education issues as they relate to ourselves, our schools, and our place in the community. Prerequisites: none.

1010. Overview of Special Education. 3. Provides prospective special education teachers an overview and a broad knowledge base of the special education field. Prerequisite: consent of instructor.

2120. Special Education Intervention Process. 3. Introduces special education and education intervention and management model. Discusses models designed to prepare generalist and multidiscipline special education practitioners to conduct systematic and successful intervention with learning and/ or behavior problems. Prerequisites: overall GPA 2.5 and consent of instructor.

2350. Prescriptive Teaching Practicum. 1-8 (Max. 8). Encompasses live, on-going, supervised practicum experience with regular students and students with special needs. Heavily emphasizes observation and direct instructional involvement with students with a range of special needs. Prerequisites: overall GPA 2.5 and consent of instructor.

2484. Introduction to Special Education. 3. Designed to meet the needs of education majors for a required course in special education. Prerequisite: EDST 2450 and an institutional GPA of 2.50 or higher.

3230. Direct Instruction. 3. Applies specific instructional delivery skills to a variety of educational settings and disabilities. Prerequisite: consent of instructor.

3430. Special Education Curriculum Materials. 3. Involves assessment, adaptation and application of curriculum materials in the education of students with special needs. Prerequisites: 2.5 overall GPA, 2.5 GPA in major, junior standing and consent of instructor.

3440. Special Education Assistive Technology, Case Management, and Transition. 3. Addresses a variety of assistive technology applications for use with individuals with disabilities. Discusses case management techniques and transition components in special education. Prerequisites: overall GPA 2.5, 2.5 GPA in major, consent of instructor.

3470. Special Education Law. 3. Provides prospective special education teachers and support personnel with overview of important case and statutory law in special education. Prerequisites: 2.5 overall GPA, 2.5 GPA in major, junior standing and consent of instructor.

3550. Mental Disabilities. 3. Provides general information and assessment/teaching techniques used with children with mental
2.5 overall GPA, 2.5 GPA in major, junior standing and consent of instructor.

3560. Behavior Management. 3. Provides systematic and measurable approaches for the management of behavior and motivation of hard-to-teach students and students with special needs. Prerequisites: 2.5 overall GPA, 2.5 GPA in major, junior standing and consent of instructor.

3660. Educational and Psychological Assessment. 3. Introduces students to specific psycho-educational and curriculum-based measures, procedures and instruments as they relate to teaching and programming for students with disabilities. Emphasis is placed on both formal and informal assessment tools. Prerequisites: 2.5 overall GPA, 2.5 GPA in major, junior standing, consent of instructor and unit coordinator.

4190. Identification and Education of Gifted and Talented Students. 3. Provides students with the means to identify gifted and talented students to derive maximum benefit from educational programs. Prerequisites: 2.5 overall GPA, 2.5 GPA in major and consent of instructor.

4380. Special Education Teaching Practicum. 4. Encompasses live, on-going, supervised practicum experience with regular students and students with special needs. Emphasizes observation and direct instructional involvement with range of students with special needs in a variety of settings. Prerequisites: 2.5 GPA and consent of instructor.

4500. Residency in Teaching. 1-16 (Max. 24). Comprises the final professional academic semester of the teacher education program. A full-time residency, including a period of being intensively mentored and coached, a period of independent teaching and a period of team teaching. Available for S/U only. Cross listed with EDEL 4500 and EDSE 4500. Prerequisites: 2.75 cumulative GPA, 2.5 GPA in major content courses, completion of all content courses, successful completion of Phase IIIa specific pedagogy and practicum, complete review of the prospective teacher’s record. 

4570. Learning Disabilities. 3. Relates theoretical and practical aspects of learning disabilities to the classroom, teaching, various treatment techniques, as well as curriculum match and materials. Prerequisites: 2.5 overall GPA, 2.5 GPA in major, junior standing and consent of instructor.

4590. Emotional Disabilities. 3. Relates theoretical and practical aspects of emotional disturbance to classroom teaching, curriculum match and materials. Prerequisites: 2.5 overall GPA, 2.5 GPA in major, junior standing and consent of instructor.

4740. Field Studies in _______. 1-12 (Max. 12). Offered only through the office of Graduate and Continuing Professional Education. Broad and flexible; can be utilized in numerous situations to meet local needs. Credit in this course is not applicable toward advanced degrees. Prerequisite: consent of instructor.

4770. Consultant Teacher Strategies. 3. Represents an opportunity for students to examine and explore consultation concepts in the field of special education. Prerequisites: 2.5 overall GPA, 2.5 GPA in major, junior standing and consent of instructor.

4880. Parent and Paraprofessional Training. 3. Provides special education teachers specific techniques for training parents and paraprofessionals in the area of special education. Prerequisites: 2.5 overall GPA, 2.5 GPA in major, junior standing and consent of instructor.

4970. Seminar in Field Experiences. 1-5 (Max. 5). Encompasses teaching strategies and problems for special education majors. Prerequisite: consent of instructor.

5000. Collaboration and Professional Interdisciplinary Relationships. 3. Represents an opportunity for students to examine and explore a range of consultant concepts in the field of Special Education. Prerequisite: Admission to the program or consent of instructor.

5070. Trends In Special Education. 1-8 (Max. 8). Designed to provide experience with timely special education issues. Prerequisite: consent of instructor and graduate standing.

5071. Teaching Students with Mild and Moderate Disabilties. 3. Relates the theoretical, research, and practical aspects of mild-moderate disabilities to the student, teacher, classroom, parents, paraprofessionals, and other school personnel and community agencies, all in an effort to help understand and remediate student instructional and behavioral presenting problems. Prerequisite: Admission to program or consent of instructor.

5080. Teaching Students with Severe and Low Incidence Disabilities. 3. Designed to provide teachers with the repertoire of instructional, curricular, and behavior analytic skills needed to effectively serve students with severe and low-incidence disabilities. An emphasis on inclusive education and promoting access to the general curriculum will be stressed. Prerequisite: Admission to program or consent of instructor.

5100. Special Education Practicum I. 3. Designed to allow the student to practice skills and competencies reflected in the Council for Exceptional Children standards. The activities are designed to follow the Wyoming Teaching Standards for Special Education Certification. Prerequisite: Admission to program or consent of the Instructor.

5110. Positive Behavior Support and Management. 3. Relates the theoretical, research, and practical strategies of behavior change models to students, teachers, parents, and paraprofessionals, in order to understand and remediate student behavior presenting problems, to include the application of systematic Behavior Management plans, BIPs, FBAs, BSPs, and school wide PBIS. Prerequisites: Admission to program or consent of instructor; EDEX 5071.

5120. Academic Instruction in General Education for Students with Disabilities. 3. Offers teachers appropriate practices and procedures for accommodating children with disabilities in their general education classroom. The focus is on moving from academic and nonacademic assessments to appropriate teaching and learning in the general education classroom environment. Prerequisite: Admission to program or consent of instructor.

5150. Research Applications in the Classroom. 3. Methodology for conducting applied research projects in classroom settings will be discussed. A variety of “classroom-friendly” experimental designs will be examined. In particular, the value of single-subject research in evaluating educational programs and serving as a rigorous, experimentally sound methodology are discussed. Prerequisite: Admission to program or consent of instructor.

5200. Special Education Practicum II. 3. Designed to allow the student to practice skills and competencies reflected in the Council for Exceptional Children standards. The activities are designed to follow the Wyoming Teaching Standards for Special Education Certification. Prerequisite: Admission to program or consent of instructor; EDEX 5100.

5250. Assistive Technology and Transition. 2. Addresses assistive technology considerations for students with disabilities. Assessment, planning, selection, use, and evaluation of options will be emphasized. Prerequisites: Admission to program or consent of instructor.

5260. Transition Planning. 2. Examines the transition and post-high school options available for students with disabilities and in accordance with the requirements of the Individuals with Disabilities Education Act. Emphasis will be placed on assessment, planning, and evaluation of the transition components. Prerequisite: Admission to program or consent of instructor.
5300. Foundations Of Special Education. 3. Part of the graduate Diagnostic-Prescriptive Teaching training program. Course content involves the application of prescriptive teaching and programming strategies which permit formal and informal assessment of, and the systematic intervention with, learning or behavior problems. Prerequisite: graduate standing.

5355. Assessment. 3. Involves the history, ethics, data collection procedures, psychometric understanding, and interpretation of selected formal and informal psycho-educational tests; the relationship to a comprehensive evaluation and IDEA eligibility requirements; and the application of assessment results to the practical remediation of student instructional and behavioral presenting problems. Prerequisite: Admission to program or consent of instructor.

5370. Improvement of Instruction in Special Education. 1-8 (Max. 8). Designed to enhance problem solving ability regarding special education practices. Prerequisite: consent of instructor.

5410. Short Course. 1-12 (Max. 12). Provides the opportunity for intensive study of specific topics in special education. Prerequisite: consent of instructor and graduate standing.

5490. Individual Problems. 1-6 (Max. 6). Provides flexible credit for students who wish to study a special problem related to prescriptive intervention. Prerequisite: 12 hours of education and consent of instructor.

5550. Supervised Internship. 1-8 (Max. 12). An internship experience may be required as part of the planned program in special education for the master’s, education specialist, or doctoral degrees. Prerequisite: 8 hours of graduate level special education courses in the College of Education, consent of department head, and graduate standing.

5680. Prescriptive Teaching Practicum. 1-8 (Max. 8). Graduate practicum/internship, the content of which involves supervised education experience in a special education classroom. Prerequisites: graduate status and consent of instructor.

5720. Special Education Law. 3. Provides prospective special education teachers and support personnel with overview of important case and statutory law in special education. Prerequisite: Admission to program or consent of instructor.

5730. Severe and Profound Handicaps. 3. Relates current research and practice to the systematic assessment, education and management of individuals who are severely and/or profoundly disabled. Prerequisite: 3 semester hours of graduate course work in special education, 3.0 graduate GPA, and consent of instructor and department head.

5790. Administration of Special Education. 3. Relates current research and practice to the administration of special education programs. Prerequisite: 3 semester hours of graduate course work in special education, 3.0 graduate GPA, and consent of instructor and department head.

5870. Seminar. 1-6 (Max. 6). Represents an opportunity for students to examine and explore advanced concepts of prescriptive teaching. Prerequisites: consent of instructor and graduate standing.

5880. Special Problems. 1-6 (Max. 9). Prerequisite: consent of instructor and graduate standing.

5890. Directed Professional Study. 1-9 (Max. 9). Represents an opportunity to explore a wide range of special problem topics within the scope of diagnostic-prescriptive teaching. Prerequisites: consent of instructor and graduate standing.

5950. Enrichment Studies. 1-3 (Max. 99). Designed to provide an enrichment experience in a variety of topics. Note: credit in this course may not be included in a graduate program of study for degree purposes.

Professional Studies (PRST)

5880. Special Problems. 1-9. Provides a broad perspective through selected reading material. Wherever possible the student collects and used original information from a practical work situation. All work is done independently under the direction of a faculty member. A minimum of three conferences are held as necessary to assure successful completion of the project. Prerequisites: consent of instructor and department head, and graduate standing.

5890. Directed Professional Study. 1-9. Similar to PRST 5880. Provides additional opportunity for students to pursue advanced graduate work through independent research. Projects are done under the direction of a graduate faculty member. Prerequisite: graduate standing.

900. Practicum in College Teaching. 1-3 (Max. 9). Work in classroom with a major professor. Expected to give some lectures and gain classroom experience. Prerequisite: graduate standing.


5960. Thesis Research. 1-12 (Max. 99). Designed for students who are involved in research for their thesis project. Also used for students whose coursework is complete and are writing their thesis. Prerequisites: enrolled in a graduate degree program.

5980. Dissertation Research. 1-12 (Max. 99). Graduate level course designed for students who are involved in research for their dissertation project. Also used for students whose coursework is complete and are writing their dissertation. Prerequisite: enrolled in a graduate level degree program.

5990. Internship. 1-12 (Max. 99). Prerequisite: graduate standing.

Department of Secondary Education

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Department Head: Leslie Rush

Professors:

VICTORIA RIDGEWAY GILLIS, B.S. North Georgia College 1968; M.A.T. Emory University 1969; Ph.D. University of Georgia 1994. Associate Professor of Secondary Education 2012.

LARRY L. HATFIELD, B.S. University of Minnesota 1962; M.A. Western Michigan University 1966; Ph.D. University of Minnesota 1969; Professor of Secondary Education 2009.

TIMOTHY F. SLATER, B.S. Kansas State University 1989; B.S. Ed. 1989; M.S. Clemson University 1991; Ph.D. University of South Carolina 1993; Professor of Secondary Education 2008.

Associate Professors:


LESLIE RUSH, B.S. Texas A&M—Commerce 1984; M.Ed. 1996; Ph.D. University of Georgia, 2002; Associate Professor of Secondary Education 2008, 2002.

Assistant Professors:

ANDREA C. BURROWS, B.S. University of Central Florida 1992; M.S. Florida State University 1994; Ed.D. University of Cincinnati 2011; Assistant Professor of Secondary Education 2012.
J. CHRIS HAYNES, B.S. Tarleton State University 1986, 1991; M.S. Tarleton State University 2007; Ph.D. Oklahoma State University 2010; Assistant Professor of Secondary Education 2012.

Assistant Lecturer:
ROD THOMPSON, B.A. University of Nebraska at Kearney 1991; M.A. University of Northern Iowa 1998; Assistant Lecturer 2012, 2009.

Temporary Assistant Professor:

The undergraduate degree program in secondary education includes course work in the University Studies Program and additional content areas along with a sequence of professional education courses and field experiences with classroom teachers. Students select a concentration from agriculture, art, English, industrial technology, mathematics, modern languages, science, or social studies.

Masters and Doctoral degrees in education are available. The Secondary Education Department joins with the departments of Educational Studies and Elementary and Early Childhood Education to offer graduate programs in Curriculum and Instruction. Additional information can be found on the Curriculum and Instruction Department’s web page (www.uwyo.edu/c_i).

Secondary Education (EDSE)

USP Codes are listed in brackets by the 1991 USP code followed by the 2003 USP code (e.g. [M2✿QB]).

1000. Exploring Hot Topics in Secondary Education. 2. [(none)✿1, L] Academic, content-based course designed for first year students. Focuses on critical-thinking skills necessary to understand, analyze, and produce knowledge within the framework of educational inquiry. Themes include diversity and other issues found in Secondary Education (e.g. High Stakes testing, inclusion, or school violence). Faculty member’s expertise areas within secondary education will determine appropriate themes.

1010 [EDCI 1010]. Field Experience for Prospective Elementary and Secondary Teachers. 1-4 (Max. 4). Introductory course in teacher education. Provides an overview of the theory and practice of what is required to become and be a teacher. An initial practicum is included. Cross listed with EDEL 1010. Prerequisite: sophomore standing. (Offered fall, spring and summer)

2000 [EDCI 2000]. Undergraduate Seminar in ____. 1-2 (Max. 8). Designed to discuss strategies and instructional activities used in content courses the students take and to be a linkage between what the prospective teachers study and what they will teach. It provides the opportunity to discuss appropriate activities, strategies and programs in a teaching area related to the content area being studied. Cross listed with EDEL 2000. Prerequisite: consent of instructor.

3010 [EDIE 3010]. Contemporary Philosophies in Industrial Education. 1-3 (Max. 3). Provides industrial education students with a sound contemporary philosophy for curriculum development and instructional planning. Emphasis is placed on current programs, philosophies, history, youth group development and advisory committee activities. Prerequisite: 8 credit hours of education course work. (Offered through UW/CC)

3020. Facilities and Advisory Management. 2-4 (Max. 4). Students engage in identifying RFP applications and applies for grants that are geared toward the Technical classroom as well as the process of assembling and managing an advisory committee, a required component of all CTE programs. Prepares Technical Teachers for the non-teaching requirements associated with the CTE programs. Prerequisite: junior standing in Technical Education.

3030. Construction Technology. 3. Introduces students to the principles and practices of the construction industry, through a combination of classroom and laboratory experiences. In addition, this course outlines the construction content area as taught in the industrial technology classroom and emphasizes development of curricula materials. Prerequisite: 12 hours of technical content courses from an approved list. (Offered through UW/CC)

3040 [EDIE 3040]. Energy and Power Technology. 3. A conceptual analysis and synthesis of energy requirements and sources, with emphasis on alternate energy systems. Analysis of energy conversion and the application of mechanical, fluid, thermal and electrical power systems. Prerequisite: PHYS 1050 or 1110. (Offered through UW/CC)

3050 [EDIE 3050]. Communications Technology. 3. Designed to give students knowledge and experience in the major concepts of graphic communications, including: communication, design, image generation and production practices of modern industry. Also covers curricular and pedagogical concerns related to teaching communications technology at the secondary school level. Prerequisite: 12 credit hours of technical content courses from an approved list. (Offered through UW/CC)

3270. Subject Matter Specific Methods I: Secondary English Education. 3-6 (Max. 6). Introduction of content and pedagogy in English Education. Prerequisite: grade of C or better in EDST 2480.

3271. Subject Matter Specific Methods I: Secondary Mathematics Education. 3-6 (Max. 6). Introduction of content and pedagogy in Mathematics Education. Prerequisite: grade of C or better in EDST 2480.

3272. Subject Matter Specific Methods I: Art Education K-12. 3-6 (Max. 6). Introduction of content and pedagogy in Art Education K-12. Prerequisite: grade of C or better in EDST 2480.

3273. Subject Matter Specific Methods I: Secondary Social Studies Education. 3-6 (Max. 6). Introduction of content and pedagogy in Secondary Social Studies Education. Prerequisite: grade of C or better in EDST 2480.

3274. Subject Matter Specific Methods I: Music Education K-12. 3-6 (Max. 6). Introduction of content and pedagogy in Music Education. Prerequisite: grade of C or better in EDST 2480.

3275. Subject Matter Specific Methods I: Secondary Science Education. 3-6 (Max. 6). Introduction of content and pedagogy in Science Education. Prerequisite: grade of C or better in EDST 2480.

3276. Subject Matter Specific Methods I: Secondary Modern Language Education. 3-6 (Max. 6). Introduction of content and pedagogy in Modern Language Education. Prerequisite: grade of C or better in EDST 2480.

3277. Subject Matter Specific Methods I: Secondary Industrial Technology Education. 3-6 (Max. 6). Introduction of content and pedagogy in Industrial Technology Education. Prerequisite: grade of C or better in EDST 2480.

3278. Subject Matter Specific Methods I: Secondary Agriculture Education. 3-6 (Max. 6). [(none)✿WC] Introduction of content and pedagogy in Agriculture Education. Prerequisite: grade of C or better in EDST 2480.

3540 [EDCI 3540]. Teaching Reading and Study Strategies in the Content Areas. 2-4 (Max. 4). Provides students majoring in secondary education programs with a knowledge of reading factors as they relate to various disciplines. Content includes estimating students’ reading ability, techniques for vocabulary development, questioning strategies,
and developing reading related study skills. Prerequisites: junior standing and minimum 12 hours in discipline area.

3550 [EDCI 3550]. Methods of Teaching: _____ 2-5 (Max. 10). Develops an understanding of methods common to all disciplines. Through reflective inquiry and problem solving students will become involved in teaching practices and techniques. Cross listed with EDEL 3550. Prerequisites: EDST 3000, junior class standing, 2.5 minimum cumulative GPA, must maintain grade of C or better in major. (Offered fall, spring and summer)

3610 [EDIE 3610]. Manufacturing Technology. 4. Introduction to the concepts, materials and processes of modern manufacturing systems. Develops skills related to product development, machine tool operation, manufacturing systems and process control. Correlates course content with instructional practices related to manufacturing learning situations in the secondary classroom. Prerequisites: 12 credit hours of technical content courses from an approved list. (Offered through UW/CC)

4000 [EDUC 4000]. Becoming a Reflective Practitioner: Practicum. 2. Part of Phase IIIa of the teacher education program. Practicum experience is integral to EDSE 4250 and must be taken concurrently. Cross listed with EDEL 4000. Prerequisites: 2.5 cumulative GPA, successful completion of EDST 3000 (grade, interview and portfolio).

4010. Middle Level Practicum. 2. Incorporates classroom instruction and field experiences dealing with middle level classroom management, lesson planning/delivery in the context of early adolescent intellectual, physical and psychological domains. Emphasizes grades 5-8. S/U only. Prerequisites: EDST 3000, EDCI 4400 (or concurrent enrollment) 2.5 GPA.

4070 [EDAS 4070, EDVE 4070]. Educational Trends in _____ 1-3 (Max. 6). Provides reading, discussion, research and appraisal of new methods, materials, equipment and experimental programs concerned with improvement of education as it pertains to areas of secondary education: agricultural, art, English, mathematics, middle school, modern language, science, and social studies education. The maximum allowable credit applies to the total offerings under this number. Prerequisite: 6 hours of education.

4250 [EDUC 4250]. Becoming a Reflective Practitioner: Specific Pedagogy in English. 5-8 (Max. 8). [W3\(\bullet\) (none)] Comprised of content and pedagogy in the student’s major teaching field, English education. Must be taken in conjunction with EDSE 4000. Prerequisites: 2.5 minimum cumulative GPA, 2.5 minimum GPA in major, successful completion of outcomes in EDST 2000 and 3000, successful completion of specific content courses required in the major and concurrent enrollment in EDSE 4000 is expected.

4251 [EDUC 4251]. Becoming a Reflective Practitioner: Specific Pedagogy in Mathematics. 5-8 (Max. 8). [W3\(\bullet\) (none)] Comprised of content and pedagogy in mathematics. Must be taken in the same semester as the 2 semester hour course, EDSE 4000. Prerequisites: 2.5 minimum cumulative GPA, successful completion of EDST 3000, and concurrent enrollment in EDSE 4000 is expected. (Offered fall semester)

4252 [EDUC 4252]. Becoming a Reflective Practitioner: Specific Pedagogy in Art Education K-12. 5-8 (Max. 8). [W3\(\bullet\) (none)] Comprised of content and pedagogy in the student’s major teaching field, art education. Must be taken in the same semester as the 2 semester hour course, EDSE 4000. Prerequisites: 2.5 minimum cumulative GPA, 2.5 GPA in major, successful completion outcomes in EDST 2000 and 3000, successful completion of specific content courses required in the major and concurrent enrollment in EDSE 4000. (Offered fall semester)

4253 [EDUC 4253]. Becoming a Reflective Practitioner: Specific Pedagogy in Social Studies Education. 5-8 (Max. 8). [W3\(\bullet\) (none)] Comprised of content and pedagogy in the student’s major teaching field, social studies education. Must be taken in the same semester as the 2 semester hour course, EDSE 4000. Prerequisites: 2.5 minimum cumulative GPA, 2.5 GPA in major, successful completion outcomes in EDST 2000 and 3000, successful completion of specific content courses required in the major and concurrent enrollment in EDSE 4000. (Offered fall semester)

4254 [EDUC 4254]. Becoming a Reflective Practitioner: Specific Pedagogy in Music. 8. [W3\(\bullet\) W/C, D] Comprised of content and pedagogy in the student’s major teaching field. Must be taken in the same semester as the 2 semester hour course, EDSE 4000. Prerequisites: 2.5 minimum cumulative GPA, 2.5 GPA in major, successful completion outcomes in EDST 2000 and 3000, successful completion of specific content courses required in the major and concurrent enrollment in EDSE 4000. (Offered fall semester)

4255 [EDUC 4255]. Becoming a Reflective Practitioner: Specific Pedagogy in Science. 5-8 (Max. 8). [W3\(\bullet\) (none)] Comprised of content and pedagogy in the student’s major teaching field, English education. Must be taken in conjunction with EDSE 4000. Prerequisites: 2.5 minimum cumulative GPA, 2.5 minimum GPA in major, successful completion outcomes in EDST 2000 and 3000, successful completion of specific content courses required in the major and concurrent enrollment in EDSE 4000 is expected. (Offered fall semester)

4256 [EDUC 4256]. Becoming a Reflective Practitioner: Specific Pedagogy in Modern and Classical Languages. 5-8 (Max. 8). [W3\(\bullet\) (none)] Designed to provide an introduction to curriculum and instructional processes in multiple secondary school subjects. General and discipline-specific issue and methods will be addressed. Prerequisites: 2.5 minimum cumulative GPA, 2.5 GPA in major, successful completion outcomes in EDST 2000 and 3000, successful completion of specific content courses required in the major and concurrent enrollment in EDSE 4000 is expected. (Offered fall semester)

4257. Specific Pedagogy in Industrial Technology Education. 8. [W3\(\bullet\) (none)] Comprised of content and pedagogy in the student’s major teaching field, industrial technology education. Prerequisites: 2.5 minimum cumulative GPA, 2.5 GPA in major, successful completion outcomes in EDST 2000 and 3000, successful completion of specific content courses required in the major and concurrent enrollment in EDSE 4000. (Offered through UW/CC)

4260 [EDUC 4260]. Becoming a Reflective Practitioner: Specific Teaching Methods for Applied Science and Technology. 5-8 (Max. 8). [W3\(\bullet\) (none)] Comprised of content and pedagogy in the student’s major teaching field. Concurrent enrollment in EDSE 4000 practicum as stated in college guidelines is expected. Prerequisites: acceptance into the Wyoming Teacher Education Program, satisfactory score on the CAT, 2.5 GPA, class status and completion of certain classes as noted in this bulletin. (Offered fall semester)

4261 [EDUC 4261]. Becoming a Reflective Practitioner: Specific Pedagogy in Business and Marketing. 8. [W3\(\bullet\) (none)] Comprised of content and pedagogy in the student’s major teaching field, business and marketing education. Must be taken in the same semester as the 2 semester hour course, EDSE 4000. Prerequisites: 2.5 minimum cumulative GPA, 2.5 GPA in major, successful completion outcomes in EDST 2000 and 3000, successful completion of specific content concepts of physical sciences with processes as a vehicle to learn about the natural discussion, lesson planning, use of appropriate technology, appraisal of new trends in science education and considerable time implementing ideas in the secondary classroom. Prerequisites: 2.5 minimum cumulative GPA, 2.5 GPA in major, successful completion outcomes in EDST 2000 and 3000, successful completion of specific content courses required in the major and concurrent enrollment in EDSE 4000. (Offered fall semester)
prerequisites: Grade of C or better in EDSE 3270, Grade of C or better in EDST 3000, 2.75 minimum cumulative GPA, 2.5 minimum GPA in major content courses, Grade of C or better in specific content courses required in the major.

4271. Subject Matter Specific Methods II: Secondary Mathematics Education. 3-6 (Max. 6). [none] Advanced content and pedagogy in Mathematics Education. Prerequisites: Grade of C or better in EDSE 3270, Grade of C or better in EDST 3000, 2.75 minimum cumulative GPA, 2.5 minimum GPA in major content courses, Grade of C or better in specific content courses required in the major.

4272. Subject Matter Specific Methods II: Art Education K-12. 3–6 (Max. 6). [none] Advanced content and pedagogy in Art Education. Prerequisites: Grade of C or better in EDSE 3272, Grade of C or better in EDST 3000, 2.75 minimum cumulative GPA, 2.5 minimum GPA in major content courses, Grade of C or better in specific content courses required in the major.

4273. Subject Matter Specific Methods II: Secondary Social Studies Education 3-6 (Max. 6). [none] Advanced content and pedagogy in Social Studies Education. Prerequisites: Grade of C or better in EDSE 3272, Grade of C or better in EDST 3000, 2.75 minimum cumulative GPA, 2.5 minimum GPA in major content courses, Grade of C or better in specific content courses required in the major.

4274. Subject Matter Specific Methods II: Music Education K-12. 3-6 (Max. 6). Advanced content and pedagogy in Music Education. Prerequisites: Grade of C or better in EDSE 3274, 2.75 minimum cumulative GPA, 2.5 minimum GPA in major content courses, Grade of C or better in specific content courses required in the major. Pass Piano Proficiency (may be done this semester, but must be passed before student teaching). Completed Portfolio reviewed and accepted by music education committee. WB completed (2nd level writing course) with Grade of C or better.

4275. Subject Matter Specific Methods II: Secondary Science Education. 3-6 (Max. 6). [none] Advanced content and pedagogy in Science Education. Prerequisites: grade of C or better in EDSE 3275, grade of C or better in EDST 3000, 2.75 minimum GPA, 2.5 minimum GPA in major content courses, grade of C or better in specific content courses required in the major.

4276. Subject Matter Specific Methods II: Secondary Modern Language Education 3-6 (Max. 6). [none] Advanced content and pedagogy in Modern Language Education. Prerequisites: Grade of C or better in EDSE 3276, Grade of C or better in EDST 3000, 2.75 minimum cumulative GPA, 2.5 minimum GPA in major content courses, Grade of C or better in specific content courses required in the major.

4277. Subject Matter Specific Methods II: Secondary Industrial Technology Education. 3-6 (Max. 6). [none] Advanced content and pedagogy in Industrial Technology Education. Prerequisites: grade of C or better in EDSE 3277, grade of C or better in EDST 3000, 2.75 minimum GPA, 2.5 minimum GPA in major content courses, grade of C or better in specific content courses required in the major.

4278. Subject Matter Specific Methods II: Secondary Agriculture Education. 3-6 (Max. 6). Advanced content and pedagogy in Agriculture Education. Prerequisites: grade of C or better in EDSE 3278, grade of C or better in EDST 3000, 2.75 minimum GPA, 2.5 minimum GPA in major content courses, grade of C or better in specific content courses required in the major.

4279. Subject Matter Specific Methods II: Biological Science Methods for Agricultural Education Major. 3. Provide meaningful learning in preparation for a professional career in a secondary school setting, teaching life science courses in addition to agriculture classes. Students will be engaged as active participants in discussions and hands-on science activities. The course is designed to offer experiences to enhance pedagogical content knowledge as well as skills to successfully make science education accessible for all students. Special attention will be given to creating a learning environment that fosters the development of inquiry skills and safety both in the classroom and field settings. Prerequisites: Grade of C or better in EDST 3000, 2.75 minimum GPA in major content courses, grade of C or better in specific content courses required in the major.

4740 [EDCI 4740]. Field Studies in ______. 1-5 (Max. 12). Offered only through extension services. Broad and flexible and can be utilized in numerous situations to meet local needs. Credit in this course is not applicable toward advanced degrees. Cross listed with EDEL 4740. Offered S/U only. Prerequisite: 6 hours of education. (Offered based on sufficient demand and resources)

4975. [EDCI 4975] Independent Study. 1-3 (Max. 6). Primarily for upper-division students who can benefit from independent study with minimal supervision. Given to allow interested students to pursue specific aspects of curriculum and instruction. Cross listed with EDEL 4975. Prerequisites: 12 hours of education courses and consent of instructor.

Agricultural Education

This curriculum provides a diversified background of technical and professional agricultural subjects necessary to prepare teachers of agricultural education for service in the public middle, secondary and post-secondary schools. Courses listed below are taken in the Secondary Education Department.

Agricultural Education (EDAG)

USP Codes are listed in brackets by the 1991 USP code followed by the 2003 USP code (e.g. [M2QB]).

3160 [EDAS 3160, EDVE 3160]. Principles of Agricultural Education. 3. Explores the background, scope and content of agricultural education. Specific competencies required for teacher certification including history, philosophy and trends, successful program planning, applied sciences, organization/utilization of advisory groups, adult education, curriculum, career counseling, computer applications, cooperative and SAE programs, facilities and advising the FFA. Prerequisites: junior standing. (Offered spring semester)

3170 [EDAS 3170, EDVE 1050]. Agricultural Structures Systems. 3. Prepares preservice teachers for the many skills and types of materials involved in structural systems as applied to agriculture. Includes competencies in planning structure sites, surveying, foundations, selection of materials, construction, and building utilities and conveniences.
4760 [EDAS 4760, EDVE 4760]. Coop- erative Work Experience Programs and Student Organizations. 3. Prepares educators and administrators to plan, organize, implement and evaluate cooperative work experience programs, to design curriculum and to advise student vocational organizations. Prerequisite: 6 hours of education courses. (Normally offered spring semester)

4780 [EDAS 4780, EDVE 4780]. Education-Industry Experience. 1-16 (Max. 16). Provides opportunity for students to extend their program beyond the campus. Develops work experience programs for students based upon their area of interest and specialization. Prerequisite: consent of instructor and department head.

4970 [EDAS 4970, EDVE 4970]. Individual Problems. 1-3 (Max. 6). Provides flexible credit for seniors who may need credit for graduation, or for students who wish to undertake intensive study of a special problem identified in a regular class. Offered in areas of vocational education, vocational agriculture, family and consumer sciences, and trade and industrial education. Prerequisite: 12 hours of education courses.

Industrial Technology Education

Industrial technology education is a comprehensive, action-based teacher education program concerned with technical means, their evolution, utilization and significance with industry, its organization, personnel, systems, techniques, resources and products and their social and cultural impact. This program is offered at UW/CC-Casper.

Industrial Technology Education (EDIE)

USP Codes are listed in brackets by the 1991 USP code followed by the 2003 USP code (e.g. [M24●QB]).

1020. Wood Materials and Processes. 3. Permits the student to acquire a technical knowledge about these industrial, nonmetallic fiber materials. Emphasis is placed on their characteristics and the processes that are applied in modifying them for industrial use. Prerequisite: EDIE 1030.

3000 [3570]. Machine Tool and Casting Technology. 3. This precision-machining and metals-casting course is designed to advance the student's knowledge of industrially-accepted metal removal practices and foundry techniques. Metals casting and machine tool operations are combined to form the integral part of the laboratory learning experience in conjunction with individually directed research and development in the area of materials and processes. Prerequisite: EDIE 2160.

3060 [2020]. Industrial Graphics. 3. Prepares pre-service teachers with concepts and knowledge of the application of graphic standards and conventions and of these as communications languages in a variety of industrial applications. It is intended to extend the knowledge and skills of industrial technology teacher education and students.

3065 [2040]. Construction Graphics. 3. Designed for industrial technology teacher education students to learn designing, construction and functional planning principles, communication conventions, and drafting techniques as related to residential and/or small commercial structures and the construction industry. The purpose is to develop competence in and the concepts of communication processes in the construction industry so that students will be prepared to teach these competencies. Prerequisite: EDIE 3060.

3070 [4560]. Metallic and Plastics Materials Testing for Teachers. 3. Provides pre-service industrial education students with a broad background in the strength and use of metals and plastics common to industry. The student applies theoretical principles to actual testing situations as well as learn how to teach their future students in this area. In addition, students develop experience in the various processes common to the industrial use of metals and plastics. Prerequisite: EDIE 1030, MATH 1050.

3190 [2190]. Wood Fabrication Technology. 3. Permits the student to achieve technical specialization. Emphasis is placed on the construction and manufacturing processes that are applied to these nonmetallic fiber materials for the production of components and finished products. Prerequisite: EDIE 1020.

3550. Electronic Circuits. 3. A study of DC, AC and transistor circuits. Emphasis on circuit design, construction and testing. Use of common electrical equipment for circuit testing.

4050 [2250]. Graphics Communications. 3. Designed to give the student a knowledge of and experience in the major concepts of graphic communications: (1) communication, (2) design, (3) image generation, (4) pre-production and production and, (5) binding, finishing and packaging. Prerequisite: EDIE 3050.

4070. Educational Trends in ______. 2 (Max. 6). Provides reading, discussion, research and the appraisal of new methods, ma-
terials, equipment and experimental programs concerned with the improvement of education as it pertains to the areas of vocational education; agriculture education, family and consumer sciences education, and trade and industrial education. Each department in the college may make offerings under this number, but the maximum allowable credit for each department is 6 semester hours. **Prerequisite:** EDIE 2020, 2040.

**4300 [3500]. Computer-Aided Drafting.** 3.
Allows students to develop computer-aided drawings. It is designed primarily for new users of computer-aided drafting, although experienced users will find it to be a class in which additional skills can be developed. **Prerequisite:** EDIE 2020, 2040.

**4570. Electronics Communications.** 3.
Conceptual analysis and applications of analog and digital communications systems. Includes AM, FM, TV, fiber optics and computer communications systems. **Prerequisite:** EDIE 3550.

**4740. Field Studies in Industrial Education.** 1-5 (Max. 12).
Provides an opportunity for teachers in the field to advance their study of selected topics for the improvement of instruction and/or programs and is offered through extension services. Topics are selected to meet the needs and interests of teachers in the geographical area where the course is to be offered. The instructional method is adapted to the nature of the topic and participants enrolled. Credit in this course is not applicable toward advanced degrees. **Prerequisites:** 6 semester hours of education courses and/or consent of instructor.

**4970. Individual Problems.** 1-3 (Max. 6).
This course provides flexible credit for seniors who may need credit for graduation, or for advanced students who wish to undertake intensive study of a special problem identified in a regular class. The course is offered in the area of industrial education. **Prerequisite:** consent of department head.

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**Earth System Science Program**

**6072 Engineering Building, 755-4955**
**FAX: (307) 766-2635**
**Web site: www.uwyo.edu/ESS**
**Director: Robert D. Kelly**

**Earth System Science (ESS)** is an interdisciplinary, science-oriented, undergraduate program focusing on the interactions between the various components composing the Earth system: the biosphere, geosphere, lithosphere, hydrosphere, atmosphere, and anthrosphere. Students earning a BS degree in ESS are required to declare a Concentration in one of the participating programs, which include Anthropology, Atmospheric Science, Biology, Botany, Geography, Geology and Geophysics, Secondary Education, and Soil Science. This list will expand as the program grows. ESS is administered under a committee of Deans, and the program Departments reside in the Colleges of Agriculture, Arts and Sciences, Education, and Engineering. The program is currently administered in Atmospheric Science. See the Atmospheric Science section under the College of Engineering and Applied Science for more information.

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**Science and Mathematics Teaching Center**

**453 Wyoming Hall, 766-6381**
**FAX: (307) 766-3792**
**Web site: smtc.uwyo.edu**
**Director: Robert Mayes**
**Outreach Coordinator: Sylvia Parker**

The Science and Mathematics Teaching Center (SMT) is an intercollegiate, interdisciplinary program committed to excellence in science, mathematics, and technology education. Governed jointly by the Colleges of Education and Arts & Sciences, the SMT, in cooperation with the Wyoming Department of Education and the Professional Teaching Standards Board (PTSB), serves as a science and mathematics education resource and professional development center for the state. The affiliate faculty for SMT is comprised of faculty members from the College of Education, the College of Arts and Sciences, the College of Agriculture and Natural Resources, and the College of Engineering and Applied Science.

The SMT provides extensive off-campus professional development that serves Wyoming communities, administrators, teachers, students and school districts. SMT in-service and extension courses, workshops, institutes and conferences are provided with the principal purpose of improving science and mathematics teaching in Wyoming.

MST includes a master's program for secondary mathematics teachers offered online and in summer which is a collaborative program between UW and the University of Northern Colorado. NED is designed for students pursuing careers as environmental and natural science educators in non-public school settings, though there is a certification option for students in the program. A Ph.D. in Science Education or Mathematics Education is available through the College of Education.

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The SMT offers three graduate degree program options: the Master of Science Teaching (MST), designed for secondary teachers; the Master of Science of Natural Science in Middle Level Math (MMA) or Middle Level Science (MSC), designed for elementary, middle, and general science and mathematics teachers; and the Master of Science in Natural Science (NED), designed for students that are completing the first year of their graduate program at Teton Science School.

**Program Specific Admission Requirements**

**Master of Science in Natural Science - Middle Level Math/Middle Level Science/Natural Science Education**

In addition to the minimum requirements set forth by the University of Wyoming, the Science and Mathematics Teaching Center also requires:

- Acceptance to the University of Wyoming
- The student has a valid teaching certification (this requirement is waived for Natural Science Education students);
- The student has a composite score of 900 on the verbal and quantitative sections of the GRE general test or a score of 15 out of 20 on the SMT GRE Alternative Portfolio;
- SMT Writing Sample;
- Natural Science Education students only - acceptance in the Teton Science School Residency Program.

**Master of Science in Teaching**

In addition to the minimum requirements set forth by the University of Wyoming, the Science and Mathematics Teaching Center also requires:

- The student has a current teaching certification or will take courses leading to certification in conjunction with the master’s program;
- Acceptance into the University of Wyoming;
- The student has a composite score of 900 on the verbal and quantitative sections of the GRE general test or a score of 15 out of 20 on the SMT GRE Alternative Portfolio (this requirement is waived for Mathematics Education Master’s program offered through the Math Teacher Leadership Center);
- SMT writing sample.
Program Specific Graduate Assistantships

The SMTC has two graduate assistantships awarded on a competitive basis, as well as grant-funded graduate assistantships.

Program Specific Degree Requirements
Master of Science in Natural Science, Middle Level Math/Middle Level Science
Plan B (non-thesis)

The university requirement for Plan B is 30 hours of coursework. The program requires at least 24 hours in mathematical sciences, biological sciences, or physical sciences. Of these, 15 hours must be natural sciences courses and 9 credit hours must be from appropriate science and mathematics courses in other departments.

The M.S. in natural science is intended for individuals teaching at the elementary or middle school level in science or mathematics.

The environment and natural resources graduate major or minor is an option for this program.

Master of Science in Teaching Plan B (non-thesis)

The university requirement for Plan B is 30 hours of coursework. The program requires at least 24 hours in the teaching area or areas. A program designed for one teaching area must include 18 hours in that content area; a program designed for two teaching areas must include 12 hours in each content area. A program may include hours from other colleges if specifically approved by the supervising departments. Courses offered by the SMTC do not constitute a separate area in themselves, but may be applied to an appropriate area. A program designed for two teaching areas must be approved by the heads of both departments and the graduate committee for this program may include one member from each department.

Students who are interested in interdisciplinary degree option areas, such as biology, earth system science, environmental science, or earth and space science, will work with their graduate committee to tailor a program of study which meets the guidelines for the M.S.T.

The environment and natural resources graduate minor is an option for M.S.T. candidates.

The M.S.T. is intended for individuals teaching at the secondary level.

Natural Science (NASC)

USP Codes are listed in brackets by the 1991 USP code followed by the 2003 USP code (e.g. [M2^4QB]).

1001. Quantitative Reasoning. 1. Focuses on quantitative reasoning defined broadly as viewing the world through a mathematical perspective. Prerequisite: none. Must apply to FIG.

4790. Topics in Natural Science. 1-6 (Max. 10). Presents selected science topics to acquaint teachers or prospective teachers with new concepts, materials or techniques, as introduced in various new school curricula. Topics may include earth science for the middle school, computer learning and/or elementary school environmental science. Includes laboratory. Prerequisite: junior standing.

4800. Field Studies in Natural Science. 1-6 (Max. 10). Explores topics best studied in the field, on location, or otherwise outside the traditional classroom. Topics may include grassland ecosystem, geology field trips for elementary children and/or schoolyard study areas. Includes laboratory. Prerequisite: junior standing.

5110. Physical Science in Global Context, MSC. 3. One in a series of three courses investigating earth as a system. Examines the global dynamics of energy, hydrocarbon combustion, and the physics and chemistry of water. Investigates relationships between energy transformations and pollutants. Consider environmental limitations of fresh water availability and the buffering effect of sea and fresh water. Prerequisites: graduate standing and teaching certification in elementary, middle school or general science; or, graduate standing and concurrent enrollment in a program leading to teacher certification in Elementary, middle school or general science education.

5120. Earth Science in Global Context, MSC. 3. One in a series of three courses investigating earth as a system. Emphasizes the lithosphere and atmosphere and their interactions with the hydrosphere and biosphere. Examines the interplay between tectonic processes, earth’s radiation balance, ocean processes, ozone depletion and the greenhouse effect. Includes evaluation of methods of measuring and monitoring these phenomena. Prerequisites: graduate standing and teaching certification in elementary, middle school or general science; or, graduate standing and concurrent enrollment in a program leading to teacher certification in elementary, middle school or general science education.

5130. Life Science in Global Context, MSC. 3. One in a series of three courses investigating earth as a system. Examines ecosystem composition and processes, and biological responses to changes in ecosystem parameters. Examines terrestrial and aquatic communities, photosynthesis, energy flow, biogeochemical cycles, global climate change, climate warning, deforestation, population ecology, DNA/RNA structure, function, genetic engineering and forensic applications. Prerequisites: graduate standing and teaching certification in elementary, middle school or general science education.

5140. Numbers, Operations, and Patterns for the Middle-Level Learner, MMA. 3. Provides working middle-level mathematics teacher opportunities to understand and discuss numbers, their representations, and operations on them, from an abstract perspective that includes elegant proof. Also emphasized is the role of language and purpose in composing definitions. Cross listed with MATH 5140. Prerequisites: admission to a UW graduate program, either degree or non-degree seeking status, and acceptance into the Middle-level mathematics program.

5160. Social and Historical Issues in Mathematics and the Middle-Level Learner, MMA. 3. Empowers teachers of middle-level mathematics to design more engaging experiences. Emphasizes the historical context for the development of mathematics, especially its symbols, tools, personalities, and classic problems. Cross listed with MATH 5160. Prerequisites: admission to a UW graduate program.
5140. Science as a Social Product. 3. The role of science in society. Emphasis on the social construction of scientific knowledge and the impact of science on society. Crosslisted with EDCI 4540. Prerequisites: Consent of Instructor.

5150. Authentic Research Methodologies. 3. The design and conduct of research in science education. Focus on qualitative and quantitative methods, including both qualitative and quantitative research designs. Crosslisted with EDCI 5150. Prerequisites: Consent of Instructor.

5180. Advanced Study in Science Education. 3-6. Advanced study designed to prepare students for careers in science education research, or for the study of science education. Crosslisted with EDCI 5180. Prerequisites: Consent of Instructor.

5190. Mathematics of Change and the Middle-Level Learner, MMA. 3. Students gain a solid understanding of data and functions in the service of calculus. Hands-on, project-driven, and focused on the essential concepts of functions and calculus and their role in middle-level mathematics. Prerequisites: Consent of Instructor. Crosslisted with MATH 5190.

5200. Classroom Assessment in Middle-Level Science, MSC. 2. Deals with the design, construction, and testing of curriculum materials to bring the spirit of scientific inquiry to elementary school pupils. Research to be conducted in the Science and Mathematics Teaching Center. Prerequisite: NASC 5690.


5210. Using Instructional Technology for Middle-Level Mathematics, MMA. 3. Covers the use of technology appropriate to middle-level mathematics teaching, such as microworlds, geographic information systems, spreadsheets, and other content appropriate technologies. Crosslisted with EDCI 5210. Prerequisite: Admission to the SMTC Program.

5225. Assessment for Middle-Level Mathematics, MMA. 3. Middle-level Mathematics Initiative teacher participants examine, analyze, and implement a variety of assessments that are aligned with standards and instruction appropriate to the middle-level math learner. Crosslisted with EDCI 5225. Prerequisite: Admission to the SMTC Program.

5300. Classroom Assessment in Middle-Level Science, MSC. 2. Deals with the design, construction, and testing of curriculum materials to bring the spirit of scientific inquiry to elementary school pupils. Research to be conducted in the Science and Mathematics Teaching Center. Prerequisite: NASC 5690.

5320. Plan B Research in Science/Mathematics Classroom, MSC. 3. A course to give graduate students in education, or in service teacher, an in-depth view of the new materials for teaching science in elementary schools. Prerequisite: Consent of instructor.

5510. Integrated Instructional Strategies, MSC. 2. Appropriate instructional strategies are discussed and modeled for aligning standards, expectations, and experiences in an integrated science environment. Emphasis is given to unique characteristics of each strategy, including a review of research on the effectiveness of each strategy on student achievement and attitudes. Prerequisite: Graduate standing and concurrent enrollment in a program leading to teacher certification in elementary, middle school or general science; or graduate standing and concurrent enrollment in a program leading to teacher certification in elementary, middle school or general science education.

5600. Mathematics and Statistics in Science Teaching, MSC. 2. Provides science teachers with the knowledge and experience necessary to help students use statistics in the scientific process. Activities emphasize a hands-on inductive approach closely related to the school science curriculum. Important statistical ideas and methods are studied as they arise naturally in the biological, physical, and earth sciences. Prerequisite: Graduate standing and teaching certification in elementary, middle school or general science; or graduate standing and concurrent enrollment in a program leading to teacher certification in elementary, middle school or general science education.

5610. Field Studies in Environmental Education, NED. 4. Expands student's knowledge of ecological and physiological animal and plant adaptations to environmental conditions, the use of teaching methods and tools of naturalists, the range of resources available for designing and evaluating curriculum, and promotes an appreciation and understanding of the diversity of environments. Contains 4 modules. Prerequisite: Graduate standing; must be accepted into the Teton Science School Program and matriculating at the TSS site.

5620. Advanced Elements of Field Ecology Course Design, NED. 5 (Max. 6). Addresses designing field ecology courses that include research, outdoor leadership, and natural history components. Opportunities are provided to gain deeper understanding of key natural history and ecology concepts of the bioregion; practical strategies for teaching these concepts in field programs; and to formally present student work. Prerequisite: Graduate standing; must be accepted into the Teton Science School Program and matriculating at the TSS site.

5625. Place-Based Education - Teton Science School. 3. Introduces graduate students at Teton Science Schools to the theory and practice of place-based education. The design of the course exposes students to the historical, political, and eco-social underpinnings of place-based education while supporting students in developing thoughtful place-based pedagogies. Prerequisite: Graduate student status.

5630. Teaching Practicum-Teton Science School. 2-4 (Max. 6). To improve teaching methods and techniques and expand professional skills. Integrates the foundation of Teton Science Schools, applies coursework content understanding and develops leadership. The course is intended to challenge previously held instructional beliefs and nurture an evolving set of skills and instructional identity. Not equivalent to EDSE 4500 or EDCI 5990 or EDEL 4500. Prerequisite: Current enrollment at Teton Science School.

5640. Introduction to Field Science Teaching. 3. Designed to introduce graduate students at Teton Science Schools to the field of environmental education and instructional concepts for teaching environmental science in the outdoors. Learn field science content, principals of connecting to place, teaching techniques, and learning theories related to environmental education and field science teaching. Prerequisite: Current enrollment at Teton Science School.

5650. Place-Based Learning. 3. Place-based learning is explored and related to cognitive development, assessment, and education for a democracy. The focus is on science and mathematics and how to use “place” to provide meaningful learning experiences for students while making contributions to the community. Students develop a local place-based project. Prerequisites: None.
5700. Seminar in Science for Secondary School Teachers. 1-6 (Max. 6). A course to give graduate students in education, or in-service teachers, an in-depth view of the new materials for teaching science in secondary schools. **Prerequisite:** consent of instructor.

5770. Investigation in Natural Science for Secondary Teachers. 1-5 (Max. 10). Deals with the design, construction, and testing of curricula materials to bring the spirit of scientific inquiry to secondary school students. Research to be conducted in the Science and Mathematics Teaching Center. **Prerequisite:** consent of instructor.

5900. Practicum in College Teaching. 1-3 (Max. 3). Work in classroom with a major professor. Expected to give some lectures and gain classroom experience. **Prerequisite:** graduate status.

5920. Continuing Registration: On Campus. 1-2 (Max. 16). **Prerequisite:** advanced degree candidacy.

5940. Continuing Registration: Off Campus. 1-2 (Max. 16). **Prerequisite:** advanced degree candidacy.

5959. Enrichment Studies. 1-3 (Max. 99). Designed to provide an enrichment experience in a variety of topics. Note: credit in this course may not be included in a graduate program of study for degree purposes. S/U only. **Prerequisite:** graduate standing.

5960. Thesis Research. 1-12 (Max. 24). Designed for students who are involved in research for their thesis project. Also used for students whose coursework is complete and are writing their thesis. **Prerequisite:** enrollment in a graduate degree program.

5961. Plan B Project. 1-4 (Max. 4). Limited to those students enrolled in a Plan B graduate program. Students should be involved in non-course scholarly activities in support of their Plan B project. **Prerequisites:** must be enrolled in Plan B program and have departmental approval.

5990. Internship. 1-12 (Max. 24). **Prerequisite:** graduate standing.