UAF serves students from all of Alaska as well as from other states and nations. It is particularly committed to enhancing educational opportunities for the state’s rural and Native populations. UAF education programs prepare educators to work in urban and rural Alaska and to work with multicultural and minority—especially Alaska Native—students.

Through its rural campuses, the university is responsive to local and regional needs, including open educational access to its programs. Special strengths exist in the use of educational technology which provides distance delivery of selected programs to many areas of the state.

The School of Education offers two degrees: a bachelor of arts in elementary education and a master of education. The school also offers post-baccalaureate course work and internship experiences preparing candidates for Alaska state licensure in teaching (Type A).

The UAF School of Education is approved by the Alaska Department of Education and Early Development to recommend its students for Alaska licensure as elementary and secondary teachers and school counselors. Education programs are offered and faculty are located on the Fairbanks campus and at the branch campus centers, in keeping with the university’s commitment to preparing educators for rural Alaska. Courses are available on-site and by distance delivery through the Kuskokwim (Bethel), Bristol Bay (Dillingham and Naknek), Interior-Aleutians (Unalaska and rural education centers throughout the Interior), Chukchi (Kotzebue), and Northwest (Nome) campuses, as well as on the Fairbanks campus. Faculty research in cross-cultural studies, curriculum and instruction, language and literacy, and small rural schools supports the mission of the School of Education.

Priority for enrollment in field-based courses is given to rural students formally admitted to degree and licensure programs. All inquiries should be addressed to one of the rural campuses or to the School of Education’s Student Services Office.

Licensure Information

UAF education programs are approved by the Alaska State Board of Education as meeting National Association for State Directors of Teacher Education and Certification (NASDTEC) standards. For information about these programs, contact the Student Services Office in the UAF School of Education, or contact the rural faculty at the nearest campus.

Certification is awarded by the Alaska Department of Education and Early Development in Juneau. Therefore, students must meet all requirements specified by AK-DOEED at the time of their application for the teaching certificate. In addition to completing an approved teacher training program, as of December 1, 1998, the state of Alaska requires that all initial applicants for a regular Type A certificate provide evidence of passing Alaska qualifying scores on the Praxis I, Academic Skills Assessment including the Pre-Professional Skills Test (PPST), and/or the Computer-Based Academic Skills Assessment (CBT).

DOEED also requires the completion of 3 credits of approved coursework in Alaska Studies and 3 credits in multicultural or cross-cultural education in order to receive an initial five-year teaching license. A two-year provisional license can be obtained without meeting this requirement. Contact the School of Education’s Student Services Office for a current list of approved courses.

B.A. Degree, Elementary Education

Students in the bachelor of arts in Elementary Education degree program are assessed relative to national and state standards, including National Council for Accreditation of Teacher Education (NCATE) standards, the Alaska Teacher Standards, the Alaska Student Content Standards, and the Alaska Standards for Culturally Responsive Schools. Course work provides students on the Fairbanks campus and in remote sites with the experience necessary to be eligible for an elementary teacher license. The integrated major/minor degree requirements are designed to prepare students to meet standards that recognize, respect and build upon Alaska’s cultural, linguistic and geographic factors.

The interdisciplinary degree requirements provide breadth in the content areas necessary for successful teaching at an elementary level. They provide depth in the opportunities to connect theory and practice in real classroom, school, and community contexts. Students completing this degree benefit from collaborative efforts with academic departments across campus and from School of Education partnerships with a wide range of Alaska’s rural and urban schools and districts.

The degree has four central components: (1) subject area course work in the designated UAF core requirements; (2) additional subject area course work in those areas important for successful teaching at an elementary level; (3) an integrated set of education courses and fieldwork in schools and the community to provide the foundation for a successful professional internship year; and (4) a capstone year-long school internship with a mentor teacher, with concurrent enrollment in professional course work that focuses on the integration and application of theory, research, and practice in real school environments. Students follow the calendar of the school or district in which they complete their internship.

Degree and program requirements include multiple types of ongoing assessments throughout the programs. There is a strong emphasis on performance assessment and portfolio development and evaluation relative to national and state standards.

Admission Requirements

Students admitted to the B.A. degree program in Elementary Education have the opportunity to enroll in subject area courses and education courses that provide a foundation for participation in the final Professional Internship year. However, prior to enrollment in professional-year courses and prior to receiving an internship placement in a classroom, all students must submit the materials listed below and meet admission requirements. Declaring a B.A. major in Elementary Education does not guarantee acceptance to the Professional Internship year.

Internships begin in August or September on the date when teachers return to school (this varies across districts). Since internship placements are arranged with principals and mentor teachers in the spring, all materials necessary for determining admission to the School of Education must be submitted by February 1. In making valid and reliable judgments about each applicant’s knowledge, skills, and dispositions prior to approval for the year-long internship in a classroom with elementary children, faculty in the School of Education consider multiple criteria.
Students must submit the following information to the School of Education’s Student Services Office by February 1:

1. Copies of transcripts from all institutions attended.
2. Evidence of completion of all B.A. degree in Elementary Education degree courses (except for those required in the Professional Internship Year), with a minimum of a 2.75 overall GPA, a 2.0 in each major academic area, and a C or better in the UAF Core communication courses and all required education and math courses. Students with less than a 2.75 overall GPA may be considered for conditional admission in special circumstances.
3. Alaska passing scores from the Praxis I exams in reading, writing, and math.
4. Two letters of reference that address qualifications and potential as a teacher.
5. A current and complete resume/curriculum vitae.
6. Two one-page essays on topics determined by the School of Education.
7. Completed Elementary Teacher Education Academic Analysis and Life Experiences/Work Form and the Life Experiences Form to provide information on breadth and depth of prior coursework and/or documented life experiences relative to ten Alaska Student Content Standard areas.
8. A one-to-two-page autobiographical sketch (appropriate for presenting to prospective principals and mentor teachers).
10. Evidence of technology competence at a level appropriate for the year-long internship.
11. Evidence of successful experiences in teaching and learning situations based on evaluations from teachers or community members who participated in applicant’s previous classroom and community fieldwork experiences.
12. Evidence of ability to work collaboratively and respectfully in cross-cultural contexts.
13. Completed Alaska Student Teacher Authorization Packet (including fingerprint cards and criminal background check. Forms are available from the School of Education).
14. Interview, when appropriate.
15. Interns will be required to submit negative TB test results to their placement school. Some school districts may require interns to pass a general physical exam and require additional shot records.

Note: Students are admitted for a specific academic year and must reapply if they do not enroll in the year in which they were reviewed.

**Major—B.A. Degree**

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete the following*: ANTH/SOC 100X, HIST 100X, PS 100X, MATH 107X* or 161X*, ART/MUS/THR 200X, BIOL 100X or 104X, CHEM 100X or PHYS 115X**. Students who choose the language option to meet core perspectives on the human condition requirements can submit their language credits only for the ENGL/FL 200X and the core ethics requirements.)
2. Complete the following B.A. degree and program (major) requirements:
   a. Complete the following mathematics requirements:* MATH 203—Mathematics for Elementary School Teachers I ........ 3
      MATH 206—Mathematics for Elementary School Teachers II .... 3
   b. Complete 1 of the following:
      GEOS 100X—Introduction to Earth Science ....................... 4
      GEOS 125X—Humans, Earth and the Environment ................. 4
      PHYS 116X—Physical Science II ................................. 4
   c. Complete the following social sciences requirements:
      ANTH 242—Native Cultures of Alaska ............................. 3
      GEOG 101—Introductory Geography (3) or GEOG 203—World Economic Geography (3) ................................. 3
      HIST 131—History of the U.S. ........................................ 3
      HIST 461W—History of Alaska (3) or HIST 115—Alaska, Land and Its People (3) .................. 3
      PSY 101—Introduction to Psychology .............................. 3
      PSY 245—Child Development ....................................... 3
   d. Complete the following humanities requirements:
      ENGL 271—Introduction to Creative Writing—Fiction (3) or ENGL 272—Introduction to Creative Writing—Poetry (3) or ENGL 314W/O/2—Technical Writing (3) or JRN 311W—Magazine Article Writing (3) .................... 3
      ENGL 306—Survey of American Literature: Beginnings to the Civil War (3) or ENGL 307—Survey of American Literature: Civil War to Present (3) or ENGL 308—Survey of British Literature: Beowulf to the Romantic Period (3) or ENGL 309—Survey of British Literature: Romantic Period to the Present (3) or complete another literature-focus course (3) ............... 3
      JRN 466—Media Literacy (3) or JRN 308—Film and TV Criticism (3) .......................... 3
      LING 101—Nature of Language (3) or LING 303W/O—Language Acquisition (3) .................. 3
   e. Demonstrate competence in technology skills through School of Education assessment) or completion of ED 429—Computer Application in the Classroom ........................................... 3
   f. Complete the following education requirements:* ED 110—Becoming a Teacher in the 21st Century ................................................. 1
      ED 201—Introduction to Education ................................. 3
      ED 204—Literature for Children .................................... 3
      ED 330—Assessment of Learning .................................. 3
      ED 350—Communication in Cross-Cultural Classrooms (3) or ED/ANS 420—Alaska Native Education (3) or ED/ANS 461—Native Ways of Knowing (3) .................. 3
      ED 410W—Foundations of Literacy Development ................. 3
      EDSE 422—Curriculum and Strategies II: High Incidence ....... 3
      EDSE 482—I nclusive Classrooms for All Children ............ 3
   g. Complete the following professional internship year with integrated course work (first semester):
      ED 411—Reading, Writing. Language Arts: Methods and Curriculum Development .......................... 3
      ED 412W—Integrated Social Studies and Language Arts: Methods and Curriculum Development .......................... 3
ED 466—Internship and Collaborative Student Teaching .............. 3
ED 467—Portfolio Development I ............................................. 1
ED 470—Mathematics and Science: Methods and Curriculum Development ......................................................... 4

h. Complete the following professional internship year with integrated course work (second semester):
ED 310—Art, Music and Drama in Elementary Classrooms ........ 2
ED 327—Physical Education and Health in Elementary Classrooms ................................................................. 2
ED 468O—Internship and Student Teaching .............................. 6
ED 469—Portfolio Development II ........................................... 2

3. Minimum credits required .................................................. 127

* Student must earn a C grade or better in each core communications, mathematics and education course.
** If PHYS 115X is completed for the core, a student cannot take PHYS 116X to fulfill the science requirement in the major.

Minor—General Education
The General Education minor consists of two options. Option A is an education minor designed for students who intend to pursue a license in elementary education. Students who complete the Option A with a grade of C or better for each course, will be allowed to substitute this minor for ED 624, 625 and 626 in the post-baccalaureate Elementary Teacher Partnership Licensure (ETEP) Program available on the UAF campus.

Option B is designed for any student interested in education issues who does not intend to pursue a license in elementary education.

**Practice required in each course.
**Practicum may be required in each education course.
 *** Contact the School of Education’s Student Services Office for list of approved elective courses.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>ED 110</td>
<td>Becoming a Teacher in the 21st Century</td>
<td>1</td>
</tr>
<tr>
<td>ED 201</td>
<td>Introduction to Education</td>
<td>3</td>
</tr>
<tr>
<td>ED 204</td>
<td>Literature for Children</td>
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</tr>
<tr>
<td>ED 330</td>
<td>Assessment of Learning</td>
<td>3</td>
</tr>
<tr>
<td>ED 350</td>
<td>Communication in Cross-Cultural Classrooms (3) or ANS/ED 420—Alaska Native Education (3)</td>
<td>3</td>
</tr>
<tr>
<td>ED 410</td>
<td>Foundations of Literacy Development</td>
<td>3</td>
</tr>
<tr>
<td>EDSE 482</td>
<td>Inclusive Classrooms for All Children</td>
<td>3</td>
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2. Minimum credits required ........................................... 19

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PSY 240</td>
<td>Lifespan Developmental Psychology (3)</td>
<td>3</td>
</tr>
<tr>
<td>ED 350</td>
<td>Communication in Cross-Cultural Classrooms (3) or ANS/ED 420—Alaska Native Education (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

3. Minimum credits required ........................................... 19

Elementary Post-Baccalaureate Licensure Program
This program is offered through the Elementary Teacher Education Partnership (ETEP) program in Fairbanks and through the Rural Educator Preparation Partnership (REPP) program through distance delivery.

The elementary teacher post-baccalaureate program is an intensive, year-long program designed to provide students with the course work and internship experience necessary to meet the Alaska Teacher Standards and be eligible for licensure as a elementary teacher in Alaska. This classroom-based program is built upon the principle of partnership—a cooperative effort between interns, mentor teachers, and university faculty partners. Students have the option of completing the program at the undergraduate or graduate level. Students choosing the graduate option begin the program in the summer with a 9-credit block of courses. Please refer to the graduate degree section of this catalog for application and admission procedures and general information.

Students who choose to complete the licensure requirements at the undergraduate level can complete the undergraduate courses ED 110, 201, 330, 410, and EDSE 482 and use these to fulfill the summer requirements. During the academic year of the school district, all students complete two semesters of integrated university courses and internship.

At the end of the school year, if students have successfully met all of the program requirements, they will be eligible to apply for an Alaska Type A Elementary License. Students who have completed the Alaska Studies and the Multicultural Education/Cross-Cultural Communication courses required by the Alaska Department of Education will be eligible for a five-year license. Others will be eligible for a two-year provisional license.

Undergraduate Admission and Application Information
It is recommended that students submit applications before December 15 to provide time to complete prerequisites if necessary. Applications will be reviewed as submitted. Deadline is March 1.

Admission includes meeting (1) the undergraduate admission process; and (2) the School of Education admission requirements.

Submit the following directly to the UAF Office of Admissions and a copy to the School of Education:

1. Official transcript of bachelor’s degree from an accredited institution, minimum grade point average of 2.75, undergraduate application and $40 application fee.

Submit the following information directly to the School of Education:

1. Alaska passing scores from the Praxis I exam in reading, writing and mathematics.

2. Completed academic analysis form to provide information on breadth and depth of prior course work relative to 10 Alaska Student Content Standard areas. Additional course work may be required. If additional course work is required, it must be completed prior to beginning the program.

3. Extemporaneous writing sample, autobiography, evidence of technology competence, evidence of successful paid or volunteer teaching/learning experience, evidence of successful cross-cultural experience.

4. Completed Alaska Department of Education and Early Development authorization packet (fingerprint cards and criminal background check). Packet is available from the School of Education. Contact the School of Education for additional information.

5. Interns will be required to submit negative TB test results to their placement schools. Some school districts may require interns to submit a physical examination form.
Program Requirements

1. During the summer semester complete the following 9 graduate level credits; or complete ED 110, 201, 330, 410 and EDSE 482 prior to August 1st of the internship year.

   ED 624—Foundations of Education in Alaska: From Segregation to Standards* ................................................. 3
   ED 625—Exceptional Learners and Child Development: Individual and Cultural Characteristics ........................................ 3
   ED 626—Teaching Reading, Writing and Language Arts .......... 3
   ED 627—Teaching Social Studies and Language Arts: Methods and Curriculum Development .............................................. 3
   ED 466—Iternship and Collaborative Student Teaching .......... 3
   ED 467—Portfolio Development ........................................ 1
   ED 478—Integrated Mathematics and Science: Methods and Curriculum Development ..................................................... 4

   ED 411—Reading, Writing, Language Arts: Methods and Curriculum Development ..................................................... 3
   ED 412W—Integrated Social Studies and Language Arts: Methods and Curriculum Development .............................................. 3
   ED 468O—Internship and Student Teaching ............................................... 6
   ED 469O—Portfolio Development ........................................... 2

2. Complete the following professional internship year with integrated course work. (fall and spring semester):

   Fall Semester
   ED 310—Art, Music and Drama in the Elementary Classroom...... 2
   ED 327—Physical Education and Health Education for Elementary Teachers ................................................................ 2
   ED 468O—Internship and Student Teaching ............................................... 6
   ED 469O—Portfolio Development ........................................... 2

   Spring Semester
   ED 310—Art, Music and Drama in the Elementary Classroom...... 2
   ED 327—Physical Education and Health Education for Elementary Teachers ................................................................ 2
   ED 468O—Internship and Student Teaching ............................................... 6
   ED 469O—Portfolio Development ........................................... 2

3. Minimum credits required .............................................................. 35-39

Secondary Post-Baccalaureate Licensure Program

Offered in Fairbanks or by distance delivery through the Rural Educator Preparation Partnership Program (REPP), this is an intensive, classroom-based secondary licensure program (33 credits) that prepares post-baccalaureate candidates for secondary (grades 7-12) teaching positions. The program is specifically designed to prepare candidates to teach in multicultural settings in Alaska. Content that addresses multicultural issues in general, and Alaska rural issues in particular, is contained specifically in EDSC 457, Multicultural Education and School-Community Relations, and is a fundamental component of the course work within the program. In a year when funding is available, a rural practicum is required of all secondary candidates completing their program. Upon request and successful completion of a yearlong internship, course work and state of Alaska licensure requirements, candidates are recommended for a teaching license. Candidates who have completed a state of Alaska approved Alaska Studies course will be eligible for a five-year Type A license. Others will be eligible for a two-year Type A provisional license. The program is accredited by NASDTEC and under NASDTEC standards until 2006.

Admissions Process and Requirements

Admission to the undergraduate secondary post-baccalaureate licensure program includes meeting requirements of the undergraduate admission process and the School of Education. Students will take their courses at the undergraduate (400) level and will NOT be able to apply these courses towards a Master of Education degree.

Submit the following information directly to UAF Office of Admissions:

1. UAF undergraduate application and application fee

   2. Official transcript of bachelor's degree from accredited institution, minimum grade point average of 2.75

   Submit the following information directly to the School of Education:

1. Alaska Passing scores from the Praxis I exam in reading, writing and mathematics.

2. Three current letters of reference that address qualifications and potential as a teacher.

3. A personal statement indicating reasons for becoming a teacher, assessment of academic and personal strengths relative to future teaching plans, description of direct experience with adolescents in supervisory or instructional capacities, and reason for selecting the secondary post-baccalaureate licensure program.

4. Extemporaneous writing sample. Contact the School of Education Advising Office for date, time, and location information.

5. Demonstrated evidence of technology competence or completion of ED 429, Computer Applications in the Classroom, or an equivalent course approved by the School of Education.

6. Demonstrated evidence of completion of degree in a content area suitable for teaching in a public secondary school as determined by the School of Education/Appropriate Academic Department.
   a. Additional content courses may be recommended or required for placement in a secondary internship. Candidates should seek early advising regarding content requirements.
   b. All candidates applying for admission to the secondary post-baccalaureate licensure program in Spring 2006 or later, will be required to meet new undergraduate degree requirements as listed in admission checklists.
   c. Evaluation of transcript for equivalency of an academic major may be requested.
   d. Candidates may request an evaluation for content equivalency from the School of Education in interdisciplinary social studies and interdisciplinary English/language arts.
   e. Praxis II passing scores as set by the state of Alaska (currently available in mathematics, English, general science, French and German) may be used to support competency in these areas.
   f. The Department of Education and Early Development will, upon request, add additional endorsement areas based on an 18 credit minor posted on an interns’ transcript.

7. Applicants must submit a placement packet, contact School of Education for specifics. The School of Education determines placement approval, change or termination.

Application Review Process

Applications are due on March 1 and are reviewed thereafter for admission in the summer semester. Applications of outstanding candidates may be considered through spring semester. A candidate may be admitted, not admitted, or admitted with stipulations. Stipulations are specified when additional development in particular area(s) is needed before beginning a secondary post-baccalaureate program.

The UAF School of Education coordinates with appropriate academic departments the review and evaluation of the candidate's qualifications, professional experiences and academic performance
based on the contents of his/her application. The secondary post-baccalaureate program is a selective teacher education program. A comprehensive system including more than one measure is used to assess the personal characteristics, communication skills, and basic skills proficiency of candidates preparing to teach. Multiple assessment measures include a review of transcripts, content area strengths and/or Praxis II scores, personal statement and/or writing proficiency exams, Praxis I scores and letters of reference. A personal interview will be required as part of the admission process.

Upon Acceptance to the Program

The School of Education has a systematic procedure for monitoring the progress of education students from admission through completion of their professional education program to determine if they should continue the program, be advanced to the secondary teaching internship, and eventually be recommended for a teaching license. In assessing candidate progress in knowledge, skills and dispositions, faculty will review grades, observations, faculty recommendations, demonstrated academic competence, and recommendations from the appropriate professionals in the schools. Systematic approaches are used to assist education candidates who are making unsatisfactory progress in their programs, but still maintain potential for successful completion.

Specific criteria for entry to the secondary teaching internship are:

* Successful completion of summer program courses.
* Approval of faculty to enter the Secondary Education Internship.
* Candidates will be required to submit negative TB test results to their placement schools. Some school districts may require candidates to submit a physical examination form.
* State Alaska Certificate of Authorization, fingerprint cards and money order in the amount of $56 to the School of Education by June 1st (this fee is non-refundable once submitted to the state of Alaska). These materials will be submitted to the state of Alaska for a criminal background check. Fees are subject to change. These materials will be provided to the student.

Program Requirements

1. Complete the following for secondary licensure:
   - EDSC 402—Methods of Teaching in the Secondary School ........3
   - EDSC 407—Reading Strategies for Secondary Teachers ............3
   - EDSC 414—Learning, Development & Special Needs Instruction 3
   - EDSC 415—Foundations of Modern Educational Practices ........3
   - EDSC 424—Culturally Responsive Small School Programs for Alaska ...
   - EDSC 431—Secondary Instruction and Assessment in the Content Area (3 credits)*
     or EDSC 432—English/Language Arts Secondary Instruction and Assessment (3 credits)*
     or EDSC 433—Mathematics Secondary Instruction and Assessment (3 credits)*
     or EDSC 434—Science Secondary Instruction and Assessment (3 credits)*
     or EDSC 435—Social Studies Secondary Instruction and Assessment ................................................................3*
   - EDSC 442—Portfolio Preparation: Integrating Theory and Practice .................................................................3
   - EDSC 457—Multicultural Education and School-Community Relations .................................................................3
   - EDSC 458—Classroom Organization and Management ..............3
   - EDSC 471—Secondary Teaching: School Internship I and Seminar .................................................................3
   - EDSC 472—Secondary Teaching: School Internship II and Seminar .................................................................3
   - 2. Minimum credits required .........................................................33

   *Candidates must take the section or course that corresponds with their major teaching content areas.

General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.

COMMUNICATIONS (9)

Complete the following:
- ENGL 111X ..........................................................(3) ___
- ENGL 211X OR 213X ...........................................(3) ___
- COMM 131X OR 141X ...........................................(3) ___

LIBRARY & INFORMATION SKILLS (0–1)

Complete the following:
- LS 100X OR 101X .................................................(0–1) ___

OR Successful completion of library skills competency test.

PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:
- ANTH 100X OR SOC 100X ...........................................(3) ___
- ECON/PS 100X .........................................................(3) ___
- HIST 100X ..............................................................(3) ___
- ART/MUS/THR 200X, HUM 201X OR ANS 202X .......(3) ___
- ENGL/FL 200X ........................................................(3) ___
- PHIL 322X, NRM 303X, COMM 300X, PS 300X OR JUST 300X .........................................................(3) ___

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

MATHEMATICS (3–4)

Complete 3–4 credits from the following:
- MATH 107X ..........................................................(3) ___
- MATH 131X (except for BBA) ......................................(3) ___
- MATH 161X ..........................................................(3) ___
- MATH 200X ..........................................................(4) ___
- MATH 201X ..........................................................(4) ___
- MATH 202X ..........................................................(4) ___
- MATH 262X ..........................................................(4) ___
- MATH 272X ..........................................................(3) ___

NOTE: Additional 3 cr of math needed for degree requirements.

NATURAL SCIENCES (8)

Complete 8 credits from the following:
- ATM 101X ..........................................................(4) ___
- BIOL 103X OR 104X ..............................................(4) ___
- BIOL 105X—106X ...................................................(8) ___
- BIOL 111X—112X ...................................................(8) ___
- CHEM 100X ..........................................................(4) ___
- CHEM 103X—104X ...................................................(8) ___
- CHEM 103X—106X ...................................................(8) ___
- GEOG 205X ..........................................................(4) ___
- GEOS 100X OR 120X OR 125X ................................(4) ___
- GEOS 101X—112X ...................................................(8) ___
- MSL 111X ............................................................(4) ___
- PHYS 102X OR 175X ..............................................(4) ___
- PHYS 103X—104X ...................................................(8) ___
- PHYS 211X—212X ...................................................(8) ___
- PHYS 211X—213X ...................................................(8) ___
- PHYS 212X—213X ...................................................(8) ___