## **EDUCATION**

School of Education 907-474-7341 www.uaf.edu/educ/

## **BA Degree and Post-baccalaureate Licensure**

Minimum Requirements for Degree: 128 credits; Post-baccalaureate secondary licensure (Grades 7 – 12): 31 credits; Music Education: 33 credits (See the BM in Music Education).

Art K - 12 licensure: 34 credits

The University of Alaska Fairbanks complies fully with the institutional reporting requirements mandated in Title II of the Higher Education Act Amendments of 1998. Please contact the School of Education for a copy of the report.

The UAF School of Education prepares students from across Alaska, as well as from other states and nations, to work in urban and rural Alaska and to work with multicultural and minority — especially Alaska Native — students. To fulfill our commitment to enhancing educational opportunities for the state's rural and Native populations, faculty actively and knowledgeably utilize educational technology to deliver all School of Education programs to students in most areas of the state.

The School of Education offers bachelor's degrees in arts and sciences and elementary education; and post-baccalaureate programs in elementary education, secondary education, counseling, curriculum and instruction, and special education.

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, school counselors and special education teachers. Courses are available on-site and by distance delivery through the Kuskokwim, Bristol Bay, Interior-Aleutians, Chukchi, and Northwest 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 Certification and Advising Office.

Candidates for elementary and secondary licensures are required to have use of/own a laptop computer: elementary, before enrolling in ED F329 and F344; secondary, before the fall semester. Computers may be of any type but must have capacities that enable candidates to meet School of Education requirements. Laptop requirements and purchase information can be viewed by accessing the "Technology Requirement" link at the website of the School of Education, www.uaf.edu/educ/. If you have questions about how a laptop purchase will fit in with your current financial aid package, please contact the UAF Financial Aid Office.

## **Licensure Information**

UAF education programs are approved by the Alaska State Board of Education and accredited by the National Council for the Accreditation of Teacher Education. For information about these programs, contact one of the UAF School of Education academic advisors.

Certification is awarded by the Alaska Department of Education and Early Development in Juneau. Therefore, students must meet all requirements specified by EED at the time of their application for the teaching certificate. In addition to completing an approved teacher training program, the State of Alaska requires that all initial applicants provide evidence of passing scores on one of various state identified skills tests; the UAF School of Education requires Praxis I for this purpose. For additional information, see the Alaska State Department of Education and Early Development website.

## BA Degree, Elementary Education (K - 12)

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 standards, the Alaska Teacher Standards, the Alaska Student Content and Performance 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. Candidates serving internships are charged a \$150 fee per semester.

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

## **Transition/Admission Requirements**

BA in elementary education students should enroll in the School of Education's recommended sequence of core and major course requirements during their first two years. By following the sequence recommended in Transition One (see School of Education website), students will be knowledgeable about their status relative to their progress toward meeting the criteria for admission to the professional internship year. To make certain that students will be able to receive the support necessary to prepare for the internship year, all BA in Elementary Education students are required to submit Praxis I scores (passing scores are not required until applying to the internship year) to the School of Education prior to enrolling in EDSE F316, and Praxis II (test 0014) test scores must be submitted with the Intern Year Admission packet. 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 as described in Transition Two. Declaring a BA major in elementary education does not guarantee admission 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 Feb. 1. Faculty in the School of Education consider multiple criteria in making valid and reliable judgments about each applicant's knowledge, skills, and professional characteristics prior to approval for the year-long internship in a classroom with elementary children.



Students must submit the following information to the School of Education by Feb. 1:

- 1. Copies of transcripts from all institutions attended. Evidence of plan of completion of all BA degree in elementary education degree courses by August 1st (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 in all required education and math courses. Students with less than a 2.75 overall GPA may be considered for conditional admission in special circumstances.
- 2. Alaska Passing scores from the Praxis I exams in reading, writing and math, and Praxis II exam (test 0014 or 5014).
- 3. Two letters of reference that address qualifications and potential as a teacher.
- 4. A current and complete resume/curriculum vitae.
- 5. Two one-page essays on topics determined by the School of Education.
- 6. Completed Elementary Teacher Education Academic Analysis and Life/Work Form to provide information on breadth and depth of prior course work and/or documented life experiences relative to ten Alaska Student Content Standard areas.
- A one-to-two-page autobiographical sketch (appropriate for presenting to prospective principals and mentor teachers).
- 8. Extemporaneous writing sample. Contact the School of Education advising office for date, time and location information.
- 9. Evidence of successful experiences in teaching and learning situations.
- Evidence of ability to work collaboratively and respectfully in cross-cultural contexts.
- 11. Completed Alaska Student Teacher Authorization Packet (including fingerprint cards and criminal background check. Forms are available from the School of Education).
- 12. Complete an interview, when requested.
- 13. 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 — BA Degree (Elementary)

- 1. Complete the general university requirements. (See page 131. As part of the core curriculum requirements, complete the following with a C or higher: ANTH/SOC F100X, HIST F100X, PS F100X, MATH F107X or MATH F161X, ART/MUS/THR F200X, BIOL F100X or BIOL F104X, CHEM F100X or PHYS F115X\*\*. 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 F200X and the core ethics requirements.)\*
- Complete the following BA degree and program (major) requirements earning a C or higher:\*

	e e	
a.	Complete the following mathematics requirements:*	
	MATH F205—Mathematics for Elementary School	
	Teachers I	3
	MATH F206—Mathematics for Elementary School	
	Teachers II	3
b.	Complete one of the following:*	
	GEOS F101X—The Dynamic Earth	4
	GEOS F120X—Glaciers, Earthquakes and Volcanoes: Past,	
	Present and Future	4

c.	Complete the following social sciences requirements:*	
	ANTH F242—Native Cultures of Alaska	
	ED/PSY F245—Child Development	3
	GEOG F101—Expedition Earth: Introduction to Geography (3)	2
	or GEOG F203—World Economic Geography (3) HIST F131—History of the U.S	
	HIST F461W—History of Alaska (3)	3
	or HIST F115—Alaska, Land and Its People (3)	3
ı		,
a.	Complete the following humanities requirements:*	
	i. ENGL F271—Introduction to Creative Writing — Fiction (3)	
	or ENGL F272—Introduction to Creative Writing — Poetry (3)	
	or ENGL F273— Introduction to Creative	
	Writing —Non-Fiction	
	or ENGL F314W,O/2—Technical Writing (3)	
	or JRN F311W—Magazine Article Writing (3)	3
	ii. ED F486O/2—Media Literacy (3)	
	or JRN F308—Film and TV Criticism	3
	iii. ED/LING F100—Language, Linguistics and Education (3)	,
	or LING F101—Nature of Language (3)	3
	ED F329—Teaching with Technology	3
t.	Complete the following education requirements:*	
	ED F110—Becoming a Teacher in the 21st Century	
	ED F201—Introduction to Education ED F204—Literature for Children	
	EDSE F316—Introduction to Special Education for	3
	Elementary Classroom Teachers	3
	EDSE F320—Adapting and Accommodating Instruction for	,
	Students with Disabilities	3
	ED F330—Assessment of Learning	
	ED F350—Communication in Cross-Cultural Classrooms (3)	
	or ED/ANS F420—Alaska Native Education (3)	
	or ED/ANS F461—Native Ways of Knowing (3)	
	ED F344W—Foundations of Literacy Development	
g.	Complete the following professional internship year with integrate	d
	course work (first semester):*	
	ED F411—Reading, Writing, Language Arts: Methods and Curricu	
	Development	3
	ED F412W—Integrated Social Studies and Language Arts:	2
	Methods and Curriculum Development	2
	ED F466—Internsing and Conadorative Student Teaching  ED F467—Synthesizing the Standards I	
	ED F478—Math Methods and Curriculum Development	3
	ED F479—Science Methods and Curriculum Development	
h	Complete the following professional internship year with integrate	
11.	course work (second semester):*	u
	ED F414—Art, Music and Drama in Elementary Classrooms	3
	ED F417—Physical and Health Education for	
	Elementary Teachers	3
	ED F468O—Internship and Student Teaching	
	ED F469—Synthesizing the Standards II	
	ED F476—Assessment of Literacy Development	
i.	Minimum credits required12	
•	Students must earn a C grade or better in all required courses.	



#### Minor

#### General

The General Education minor is designed for any student interested in education issues who does not intend to pursue a license in elementary or secondary education.

#### Elementary\*

The elementary education minor is designed for students who intend to pursue a license in elementary education. Students who complete ED F110, F201, F330, F344 and EDSE F482 with grades of C or better will be allowed to substitute this sequence for ED F624, F625 and F626 in the post-baccalaureate elementary licensure program available on the UAF campus.

## Secondary\*

The secondary education minor is designed for students who are interested in pursuing careers as middle school and/or high school (grades 7-12) teachers. Students must complete all course work with grades of C or better.

1.	Complete the following:	
	EDSC F110—Becoming a Middle/High School Teacher	1
	PSY F240—Lifespan Development Psychology (3)	
	or ED/PSY F245 Child Development (3)	3
	EDSC F205—Introduction to Secondary Education (3)	
	or EDSC F415—Foundations of Modern	
	Educational Practice (3)	3
	EDSC F458—Classroom Organization and Management	3
	EDSC F407—Developing Literacy in the Content Areas	
	EDSC F482—Inclusive Classrooms for All Children (3)	
	or EDSC F414—Learning, Development and Special	
	Needs Instruction (3)	
	or EDSE F422—Curriculum and Strategies II:	
	High Incidence (3)	3
2.	Minimum credits required	16
*	Practicum may be required in each education course.	

## **Secondary Post-Baccalaureate Licensure Program**

Program delivery is offered in Fairbanks and in areas served by the College of Rural and Community Development (CRCD) campuses and their service areas with the exception of the Aleutian-Pribilof Center.

This is an intensive, classroom-based secondary licensure program (31 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 F457—Multicultural Education and School-Community Relations, and is a fundamental component of the course work within the program. When funding is available, all secondary Fairbanks candidates participate in a rural practicum.

Student outcomes for the program are based on the Standards for Alaska's Teachers located at: www.eed.state.ak.us/standards/pdf/teacher.pdf.

Students must apply to graduate with a certificate of completion through the Office of Admissions and the Registrar, Graduation Services. At the end of the program, if students have successfully met all of the program requirements, they will be eligible to apply for an Alaska initial teaching license.

Candidates who enter the Secondary Post-Baccalaureate Licensure program are required to have use of/own a laptop computer before they begin their internships in the fall semester of their professional year. Candidates are expected to be proficient in Windows Office software including, but not limited to, word processing, spreadsheets, and presentation software.

## **Program Options**

#### **Fast Track Option**

The Fast Track Option is an intensive three-semester program that allows candidates (one year unpaid interns) to complete the secondary licensure program as full-time students in 12 months. Candidates take classes "summer-fall-spring." The academic year-long internship is completed during the fall and spring semesters.

## **Two-Year Option**

The Two-Year Option allows candidates (two-year unpaid interns) to complete the secondary post-baccalaureate licensure program as part-time students over a period of 18 – 24 months. The last semester of the program requires full-time placement at a public school site.

## **Teaching While Training Option**

The Teaching While Training Option is for candidates (teacher interns) who have secured a teaching position with an Alaskan School District. Generally, this option is available only to those candidates in areas of teacher shortage. Candidates complete the secondary post-baccalaureate licensure program over a period of 24 months.

## **Admissions Process and Requirements**

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

Submit the following information to the UAF Office of Admissions:

- 1. UAF undergraduate application and application fee.
- Official transcript of bachelor's degree from accredited institution, minimum GPA of 2.75. Applicants who have attended more than one university should include transcripts from all universities.



Submit the following information to the School of Education:

- A personal statement of 500 800 words explaining your motivation for becoming a teacher. Describe how your academic qualifications and work experiences have prepared you for a career in teaching. Elaborate on your personal strengths, including your ability to work collaboratively with others. Describe your experiences with adolescents in instructional and supervisory capacities. Explain why you believe you can help young people of all cultures be successful in school.
- 2. A vitae/resume.
- 3. Three current letters of reference that address qualifications and potential as a teacher.
- 4. Extemporaneous writing sample. Contact the School of Education Advising Office for date, time and location information.
- Alaska Passing scores from the Praxis I exam in reading, writing and mathematics.
- 6. Academic Content Testing
- a. Content Area Exams: Candidates must submit a score report from the relevant content knowledge Praxis II Subject test for each content area the applicant expects to reach. The scores must meet the score set by the State of Alaska (www.eed.state.ak.us/TeacherCertification/pdf/Content\_Area\_Exams\_2008.pdf). World language applicants should contact the School of Education for additional information prior to taking any Praxis II tests for their world language content area. In addition, world language applicants must complete the world language exams.
- b. World language exams: Applicants applying to teach a world language are required to submit Praxis II scores in the target language AND are required to submit scores for the ACTFL Oral Proficiency Interview (OPic) and Writing Proficiency Test (WPT). Applicants must meet the Advanced Low rating for both tests (www.languagetesting.com). In the target language, write a 2 3 page, well-organized, coherent response to one of three prompts (contact School of Education Secondary Program for additional information).
- Demonstrated evidence of content competency in one of the UAFapproved secondary endorsement areas (www.uaf.edu/educ/ secondary/endorsement\_areas/).
- a. The applicant holds a degree in an approved UAF secondary endorsement area **or**;
- b. Those applicants who do not hold a degree in the academic content area that they expect to teach, must have documentation of content competency reviewed by a Secondary Program faculty review team prior to application to program. Additional course work may be required to enter the program.
- 8. Initial Content Preparation complete checklist of each content area you expect to teach (www.uaf.edu/educ/secondary/admissions/).
- 9. Applicants must submit a placement packet. Contact the School of Education for specific guidelines. The School of Education determines placement approval, change or termination.
- 10. All applicants will be required to interview with secondary faculty as part of the admission process.

## **Application Review Process**

Applications are due March 1 and are reviewed thereafter for admission into 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 a 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 multiple measures is used to assess personal characteristics, communication skills and basic skills 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 disposition, 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.

Following are specific criteria for entry to the secondary teaching internship:

- successful completion of summer program courses;
- approval of faculty to enter the Secondary Education Internship;
- some school districts may require candidates to pass a general physical exam and require additional shot records; and
- State of Alaska Certificate of Authorization, fingerprint cards and money order in the amount of \$60 payable to the School of Education by June 1 (this fee is non-refundable once submitted to the state). The UAF School of Education provides these materials, which will then be submitted to the State of Alaska for a criminal background check. Fees are subject to change.

## **Professional Field Experiences**

The Secondary Post-Baccalaureate Licensure Program includes a comprehensive internship experience in an educational setting. Internship placements are arranged and supervised by university faculty in partnership with the principal and staff from the public school. University course work and classroom practice are closely linked and communication about performance in both the course work and classroom practice is shared among the partners. Internships follow the K-12 school year calendar and not the university academic year calendar.

Performance in the internship must meet stated competencies and individual outcomes. Performance evaluations determine the candidate's progress toward meeting the State of Alaska Standards for Alaska's Teacher and the International Society for Technology in Education's National Education Technology Standards and Performance Indicators for All Teachers and performance guidelines of Specialty Performance Organizations.

It is expected that candidates will demonstrate appropriate professional characteristics with respect to their actions, attitudes and performance. Teacher candidates are required to adhere to the characteristics of professionalism as published in the Secondary Post-Baccalaureate Licensure Handbook, and to abide by the State of Alaska Code of Ethics of the Education Profession. Unacceptable academic performance, an unprofessional attitude, unsatisfactory field reports, violation of professional ethics, or other factors may result in removal from the field experience and denial of the Institutional Recommendation for teacher certification.



Internship placements are made in partnership with participating school districts, which may request additional information and/or preparation from candidates according to the district's established policies and practices. Because cooperating districts also determine the number of placements available for candidates, placement may become competitive if the number of applicants exceeds the number of spaces. Districts also reserve the right to refuse or terminate placements when candidates do not meet a minimum standard of performance. Thus, while the University will make every effort to identify appropriate field experiences, admission to the Secondary Post-Baccalaureate Licensure program does not guarantee an internship placement.

## **Program Requirements**

teaching content areas.

Complete the following for secondary licensure:
EDSC F402—Methods of Teaching in the Secondary School3
EDSC F407—Reading Strategies for Secondary Teachers3
EDSC F414—Learning, Development and Special
Needs Instruction (3)
or EDSE F422/622—Curriculum and Strategies II: High
Incidence (3)
or EDSE F482—Inclusive Classrooms for All Children3
EDSC F415—Foundations of Modern Educational Practices (3)
or EDSC F205—Introduction to Secondary Education (3)3
EDSC F431—Secondary Instruction and Assessment in the Content
Area (3)*
or EDSC F432—English/Language Arts Secondary
Instruction and Assessment (3)*
or EDSC F433—Mathematics Secondary
Instruction and Assessment (3)*
or EDSC F434—Science Secondary Instruction
and Assessment (3)*
or EDSC F435—Social Studies Secondary Instruction
and Assessment (3)*
or EDSC F436—Art Secondary Instruction and Assessment (3)
or EDSC F437—World Language Secondary Instruction
and Assessment (3)
EDSC F442—Technology Applications in Education1
EDSC F443—Technology Applications in Education II2
EDSC F457—Multicultural Education and
School-Community Relations4
EDSC F458—Classroom Organization and Management3
EDSC F471—Secondary Teaching: School Internship I
and Seminar
EDSC F472—Secondary Teaching: School Internship II
and Seminar
Minimum credits required31 – 37

Candidates must take the section or course that corresponds with their major

#### K - 12 Art Licensure Program

Offered on the Fairbanks campus only, this is an intensive, class-room-based K-12 art licensure program (34 credits) that prepares post-baccalaureate candidates for K-12 teaching positions. The program is specifically designed to prepare candidates to teach in multicultural settings in Alaska. The content will specifically identify and discuss current issues of art education and applying Alaska Content/Performance Standards and Frameworks as well as National Standards for Art Education.

At the end of the program, if students have successfully met all of the program requirements, they will be eligible to apply for an Alaska initial teaching license and will receive certificates of completion from UAF.

Candidates who enter the K - 12 Art Licensure program are required to have use of/own a laptop computer before they begin their internships in the fall semester of their professional year.

For program options and professional field experiences information, please see information listed in the catalog (page 48) for the Secondary Post-Baccalaureate Licensure program.

### **Admission Process and Requirements**

Applicants will follow the admission process and requirements listed in the catalog (page 48) for the Secondary Post-Baccalaureate Licensure Program, with the exception that applicants must have a bachelor's degree in art from an accredited university or college. Applicants should be aware that additional content course work may be required, depending on content of degree. Additional course work, as determined by the appropriate departments, may mean a delay of program admission until requirements are fulfilled.

### **Program Requirements**

Complete the following:	
EDSC F415—Foundations of Modern Educational Practices (3)	
or EDSC F205—Introduction to Secondary Education (3)	3
EDSC F414—Learning, Development and Special Needs	
Instruction (3)	
or EDSE F422—Curriculum Strategies II: High Incidence (3)	
or EDSE F482—Inclusive Classrooms for All Children (3)	3
PSY F240—Lifespan Development (3)	
or (preferred) PSY F245—Child Development (3)	3
EDSC F402—Methods of Teaching in the Secondary School	3
EDSC F436—Secondary Art Instruction and Assessment	3
ED F453/ART F459—Secondary Internship	3
EDSC F458—Classroom Organization and Management	3
ED F449—Elementary Art Methods	3
ED F452/ART F458—Elementary Internship	3
EDSC F457—Multicultural Education and	
School-Community Relations	4
EDSC F442—Technology Applications in Education	3
Minimum credits required	34



# **Baccalaureate Core Requirements**

Communication
ENGL F111X—Introduction to Academic Writing(3)     ENGL F190H may be substituted.
Complete one of the following:  • ENGL F211X—Academic Writing about Literature(3)  • ENGL F213X—Academic Writing about the Social and Natural Sciences(3)
Complete one of the following:  COMM F131X—Fundamentals of Oral Communication: Group Context(3)  COMM F141X—Fundamentals of Oral Communication: Public Context(3)
9
Perspectives on the Human Condition 18 Credits
Complete all of the following four courses:  • ANTH F100X/SOC F100X—Individual, Society and Culture
Complete one of the following three courses:  • ART/MUS/THR F200X—Aesthetic Appreciation: Interrelationship of Art, Drama and Music
Complete one of the following six courses:       (3)         • BA F323X—Business Ethics

Or complete 12 credits from the above courses plus one of the following:

- Two semester-length courses in a single Alaska Native language or other non-English language
- Three semester-length courses (9 credits) in American Sign Language taken at the university level.

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Mathematics	3 Credits
Complete one of the following:	
MATH F103X—Concepts and Contemporary Applications of	
Mathematics	(3)
MATH F107X—Functions for Calculus*	
• MATH F161X—Algebra for Business and Economics**	
STAT F200X—Elementary Probability and Statistics	
* No credit may be earned for more than one of MATH F107X o	r F161X.
Or complete one of the following:*	
MATH F200X—Calculus I**	
MATH F201X—Calculus II	(4)
MATH F202X—Calculus III	(4)
MATH F262X—Calculus for Business and Economics	(4)
MATH F272X—Calculus for Life Sciences	(4)
* Or any math course having one of these as a prerequisite	
** No credit may be earned for more than one of Math F200X, F2	62X or F272.

Natural Sciences	Credits
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• ATM F101X—Weather and Climate of Alaska       (4)         • BIOL F100X—Human Biology	Complete any two (4-credit) courses.		
BIOL F101X—Biology of Sex       (4)         BIOL F103X—Biology and Society       (4)         BIOL F104X—Natural History       (4)         BIOL F115X—Fundamentals of Biology I       (4)         BIOL F116X—Fundamentals of Biology II       (4)         BIOL F120X—Introduction to Human Nutrition       (4)         BIOL F213X—Human Anatomy and Physiology I       (4)         BIOL F214X—Human Anatomy and Physiology II       (4)         CHEM F100X—Chemistry in Complex Systems       (4)         CHEM F103X—Basic General Chemistry       (4)         CHEM F104X—Beginnings in Biochemistry       (4)         CHEM F105X—General Chemistry       (4)         CHEM F106X—General Chemistry       (4)         GEOS F111X—Earth and Environment: Elements of Physical Geography       (4)         GEOS F100X—Introduction to Earth Science       (4)         GEOS F101X—The Dynamic Earth       (4)         GEOS F106X—Life and the Age of Dinosaurs       (4)         GEOS F125X—Humans, Earth and Life       (4)         GEOS F125X—Humans, Earth and Environment       (4)         MSL F111X—The Oceans       (4)         PHYS F103X—College Physics       (4)         PHYS F104X—College Physics       (4)         PHYS F115X—Physical Science I       (4)	ATM F101X—Weather and Climate of Alaska	.(4)	
BIOL F103X—Biology and Society	BIOL F100X—Human Biology	.(4)	
• BIOL F104X—Natural History       (4)         • BIOL F115X—Fundamentals of Biology I       (4)         • BIOL F116X—Fundamentals of Biology II       (4)         • BIOL F120X—Introduction to Human Nutrition       (4)         • BIOL F213X—Human Anatomy and Physiology I       (4)         • BIOL F214X—Human Anatomy and Physiology II       (4)         • CHEM F100X—Chemistry in Complex Systems       (4)         • CHEM F103X—Basic General Chemistry       (4)         • CHEM F104X—Beginnings in Biochemistry       (4)         • CHEM F105X—General Chemistry       (4)         • CHEM F106X—General Chemistry       (4)         • GEOS F111X—Earth and Environment: Elements of Physical Geography       (4)         • GEOS F100X—Introduction to Earth Science       (4)         • GEOS F101X—The Dynamic Earth       (4)         • GEOS F106X—Life and the Age of Dinosaurs       (4)         • GEOS F12X—History of Earth and Life       (4)         • GEOS F125X—Humans, Earth and Environment       (4)         • MSL F111X—The Oceans       (4)         • PHYS F102X—Energy and Society       (4)         • PHYS F103X—College Physics       (4)         • PHYS F104X—College Physics       (4)         • PHYS F115X—Physical Science I       (4)         • PHYS F211X—Gen	BIOL F101X—Biology of Sex	.(4)	
• BIOL F104X—Natural History       (4)         • BIOL F115X—Fundamentals of Biology I       (4)         • BIOL F116X—Fundamentals of Biology II       (4)         • BIOL F120X—Introduction to Human Nutrition       (4)         • BIOL F213X—Human Anatomy and Physiology I       (4)         • BIOL F214X—Human Anatomy and Physiology II       (4)         • CHEM F100X—Chemistry in Complex Systems       (4)         • CHEM F103X—Basic General Chemistry       (4)         • CHEM F104X—Beginnings in Biochemistry       (4)         • CHEM F105X—General Chemistry       (4)         • CHEM F106X—General Chemistry       (4)         • GEOS F111X—Earth and Environment: Elements of Physical Geography       (4)         • GEOS F100X—Introduction to Earth Science       (4)         • GEOS F101X—The Dynamic Earth       (4)         • GEOS F106X—Life and the Age of Dinosaurs       (4)         • GEOS F12X—History of Earth and Life       (4)         • GEOS F125X—Humans, Earth and Environment       (4)         • MSL F111X—The Oceans       (4)         • PHYS F102X—Energy and Society       (4)         • PHYS F103X—College Physics       (4)         • PHYS F104X—College Physics       (4)         • PHYS F115X—Physical Science I       (4)         • PHYS F211X—Gen	BIOL F103X—Biology and Society	.(4)	
BIOL F116X—Fundamentals of Biology II	BIOL F104X—Natural History	.(4)	
BIOL F116X—Fundamentals of Biology II	BIOL F115X—Fundamentals of Biology I	.(4)	
BIOL F120X—Introduction to Human Nutrition			
<ul> <li>BIOL F214X—Human Anatomy and Physiology II</li></ul>			
<ul> <li>CHEM F100X—Chemistry in Complex Systems</li></ul>	BIOL F213X—Human Anatomy and Physiology I	.(4)	
• CHEM F103X—Basic General Chemistry	BIOL F214X—Human Anatomy and Physiology II	.(4)	
• CHEM F104X—Beginnings in Biochemistry	CHEM F100X—Chemistry in Complex Systems	.(4)	
• CHEM F105X—General Chemistry			
• CHEM F105X—General Chemistry	CHEM F104X—Beginnings in Biochemistry	.(4)	
• GEOG F111X—Earth and Environment: Elements of Physical Geography(4)         • GEOS F100X—Introduction to Earth Science			
• GEOS F100X—Introduction to Earth Science       (4)         • GEOS F101X—The Dynamic Earth       (4)         • GEOS F106X—Life and the Age of Dinosaurs       (4)         • GEOS F112X—History of Earth and Life       (4)         • GEOS F120X—Glaciers, Earthquakes and Volcanoes       (4)         • GEOS F125X—Humans, Earth and Environment       (4)         • MSL F111X—The Oceans       (4)         • PHYS F102X—Energy and Society       (4)         • PHYS F103X—College Physics       (4)         • PHYS F104X—College Physics       (4)         • PHYS F115X—Physical Science I       (4)         • PHYS F175X—Astronomy       (4)         • PHYS F211X—General Physics       (4)         • PHYS F212X—General Physics       (4)	CHEM F106X—General Chemistry	.(4)	
• GEOS F101X—The Dynamic Earth	• GEOG F111X—Earth and Environment: Elements of Physical Geography	.(4)	
• GEOS F106X—Life and the Age of Dinosaurs       (4)         • GEOS F112X—History of Earth and Life       (4)         • GEOS F120X—Glaciers, Earthquakes and Volcanoes       (4)         • GEOS F125X—Humans, Earth and Environment       (4)         • MSL F111X—The Oceans       (4)         • PHYS F102X—Energy and Society       (4)         • PHYS F103X—College Physics       (4)         • PHYS F104X—College Physics       (4)         • PHYS F115X—Physical Science I       (4)         • PHYS F175X—Astronomy       (4)         • PHYS F211X—General Physics       (4)         • PHYS F212X—General Physics       (4)			
• GEOS F112X—History of Earth and Life       (4)         • GEOS F120X—Glaciers, Earthquakes and Volcanoes       (4)         • GEOS F125X—Humans, Earth and Environment       (4)         • MSL F111X—The Oceans       (4)         • PHYS F102X—Energy and Society       (4)         • PHYS F103X—College Physics       (4)         • PHYS F104X—College Physics       (4)         • PHYS F115X—Physical Science I       (4)         • PHYS F175X—Astronomy       (4)         • PHYS F211X—General Physics       (4)         • PHYS F212X—General Physics       (4)	GEOS F101X—The Dynamic Earth	.(4)	
• GEOS F120X—Glaciers, Earthquakes and Volcanoes       (4)         • GEOS F125X—Humans, Earth and Environment       (4)         • MSL F111X—The Oceans       (4)         • PHYS F102X—Energy and Society       (4)         • PHYS F103X—College Physics       (4)         • PHYS F104X—College Physics       (4)         • PHYS F115X—Physical Science I       (4)         • PHYS F175X—Astronomy       (4)         • PHYS F211X—General Physics       (4)         • PHYS F212X—General Physics       (4)	GEOS F106X—Life and the Age of Dinosaurs	.(4)	
• GEOS F125X—Humans, Earth and Environment       (4)         • MSL F111X—The Oceans       (4)         • PHYS F102X—Energy and Society       (4)         • PHYS F103X—College Physics       (4)         • PHYS F104X—College Physics       (4)         • PHYS F115X—Physical Science I       (4)         • PHYS F175X—Astronomy       (4)         • PHYS F211X—General Physics       (4)         • PHYS F212X—General Physics       (4)	GEOS F112X—History of Earth and Life	.(4)	
<ul> <li>MSL F111X—The Oceans</li></ul>			
<ul> <li>PHYS F102X—Energy and Society</li></ul>	GEOS F125X—Humans, Earth and Environment	.(4)	
<ul> <li>PHYS F103X—College Physics</li> <li>PHYS F104X—College Physics</li> <li>PHYS F115X—Physical Science I</li> <li>PHYS F175X—Astronomy</li> <li>PHYS F211X—General Physics</li> <li>PHYS F212X—General Physics</li> <li>(4)</li> </ul>	MSL F111X—The Oceans	.(4)	
• PHYS F104X—College Physics       (4)         • PHYS F115X—Physical Science I       (4)         • PHYS F175X—Astronomy       (4)         • PHYS F211X—General Physics       (4)         • PHYS F212X—General Physics       (4)			
• PHYS F115X—Physical Science I	PHYS F103X—College Physics	.(4)	
• PHYS F115X—Physical Science I	PHYS F104X—College Physics	.(4)	
• PHYS F211X—General Physics(4) • PHYS F212X—General Physics(4)			
PHYS F212X—General Physics(4)	PHYS F175X—Astronomy	.(4)	
•	PHYS F211X—General Physics	.(4)	
• PHYS F213X—Elementary Modern Physics(4)	PHYS F212X—General Physics	.(4)	
	PHYS F213X—Elementary Modern Physics	.(4)	

# Library and Information Research .....0 – 1 Credit

 Successful completion of library skills competency test or LS F100X or LS F101X prior to junior standing

0 – 1

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## **Upper-Division Writing and Oral Communication**

Complete the following at the upper-division level:

 Two writing intensive courses designated (W) and one oral communication intensive course designated (O), or two oral communication intensive courses designated (O/2) (see degree and/or major requirements)

Total credits required 38 - 39

All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements. Students must earn a C- grade or better in each course used toward the baccalaureate core.

