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ACADEMIC CALENDAR

Fairbanks Campus Academic Calendar 2016-2017

For academic calendar information for UAF’s community campuses, contact the campuses directly or visit http://uaf.edu/uaf/about/campuses/.

View the 2015-2016 academic calendar (http://www.uaf.edu/catalog/catalog_15-16/acad_calendar.html).

FALL SEMESTER 2016

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<td>Begin registration and fee payment for nondegree students for fall 2016</td>
<td>Monday, April 11</td>
</tr>
<tr>
<td>semester</td>
<td></td>
</tr>
<tr>
<td>Deadline to apply for admission for fall semester (UA Scholars)</td>
<td>Sunday, May 1</td>
</tr>
<tr>
<td>Deadline to apply for admission for fall semester (graduate students)</td>
<td>Wednesday, June 1</td>
</tr>
<tr>
<td>Deadline to apply for admission for fall semester (undergraduate students)</td>
<td>Wednesday, June 15</td>
</tr>
<tr>
<td>Residence halls open, 8 a.m.</td>
<td>Thursday, Aug. 25</td>
</tr>
<tr>
<td>Orientation for new students</td>
<td>Thursday-Sunday, Aug. 25-28</td>
</tr>
<tr>
<td>First day of instruction; late registration begins</td>
<td>Monday, Aug. 29</td>
</tr>
<tr>
<td>Labor Day (offices closed — no classes, registration or fee payment)</td>
<td>Monday, Sept. 5</td>
</tr>
<tr>
<td>Deadline for adding classes and late registration; 5 p.m. in person, midnight at UAOnline</td>
<td>Friday, Sept. 9</td>
</tr>
<tr>
<td>Last day for student- and faculty-initiated drops (course does not appear on academic record)</td>
<td>Friday, Sept. 9</td>
</tr>
<tr>
<td>Deadline for tuition and fee payment; 5 p.m. in person, midnight at UAOnline</td>
<td>Monday, Sept. 12</td>
</tr>
<tr>
<td>Early progress reports due</td>
<td>Sunday, Oct. 2</td>
</tr>
<tr>
<td>Deadline to apply for fall 2016 graduation</td>
<td>Monday, Oct. 17</td>
</tr>
<tr>
<td>Spring 2017 course list available at UAOnline</td>
<td>Monday, Oct. 31</td>
</tr>
<tr>
<td>Last day for student- and faculty-initiated withdrawals (W grade appears on academic transcript)</td>
<td>Friday, Nov. 4</td>
</tr>
<tr>
<td>Begin registration and fee payment for spring 2017 semester</td>
<td>Monday, Nov. 14</td>
</tr>
<tr>
<td>Thanksgiving holiday (no classes, most offices closed)</td>
<td>Thursday-Sunday, Nov. 24-27</td>
</tr>
<tr>
<td>Last day of instruction</td>
<td>Saturday, Dec. 10</td>
</tr>
<tr>
<td>Final examinations</td>
<td>Saturday-Monday, Dec. 12-17</td>
</tr>
<tr>
<td>Residence halls close, noon</td>
<td>Sunday, Dec. 18</td>
</tr>
<tr>
<td>Deadline for faculty to post grades, noon</td>
<td>Wednesday, Dec. 21</td>
</tr>
<tr>
<td>Winter holiday (no classes, most offices closed; reopen Wednesday, Jan. 4, at 8 a.m.)</td>
<td>Saturday, Dec. 24-Tuesday, Jan. 3</td>
</tr>
</tbody>
</table>

WINTERMESTER AND SPRING SEMESTER 2017

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deadline to apply for admission for spring semester (international students)</td>
<td>Thursday, Sept. 1</td>
</tr>
<tr>
<td>Deadline to apply for admission for spring semester (graduate students)</td>
<td>Saturday, Oct. 15</td>
</tr>
<tr>
<td>Spring 2017 course list available at UAOnline</td>
<td>Monday, Oct. 31</td>
</tr>
<tr>
<td>Deadline to apply for admission for spring semester (undergraduate students)</td>
<td>Tuesday, Nov. 1</td>
</tr>
<tr>
<td>Begin registration and fee payment for spring 2017 semester and WINTERmester 2017</td>
<td>Monday, Nov. 14</td>
</tr>
<tr>
<td>Begin registration and fee payment for nondegree students for spring 2017 semester and WINTERmester 2017</td>
<td>Monday, Nov. 21</td>
</tr>
<tr>
<td>WINTERmester courses begin</td>
<td>Wednesday, Jan. 4</td>
</tr>
<tr>
<td>Deadline for adding WINTERmester classes; 5 p.m. in person, midnight at UAOnline</td>
<td>Wednesday, Jan. 4</td>
</tr>
<tr>
<td>Deadline for WINTERmester tuition and fee payment and refunds; 5 p.m. in person, midnight at UAOnline</td>
<td>Wednesday, Jan. 4</td>
</tr>
<tr>
<td>Deadline for WINTERmester student- and faculty-initiated withdrawals (W grade appears on academic transcript)</td>
<td>Monday, Jan. 9</td>
</tr>
<tr>
<td>Last day of WINTERmester instruction and finals</td>
<td>Friday, Jan. 13</td>
</tr>
<tr>
<td>Residence halls open, 8 a.m.</td>
<td>Sunday, Jan. 15</td>
</tr>
<tr>
<td>Orientation for new students</td>
<td>Sunday, Jan. 15</td>
</tr>
<tr>
<td>Alaska Civil Rights Day (no classes, most offices closed)</td>
<td>Monday, Jan. 16</td>
</tr>
<tr>
<td>First day of instruction; late registration begins</td>
<td>Tuesday, Jan. 17</td>
</tr>
<tr>
<td>Deadline for faculty to post WINTERmester grades, noon</td>
<td>Thursday, Jan. 19</td>
</tr>
<tr>
<td>Event</td>
<td>Date</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Deadline for adding classes and late registration; 5 p.m. in person, midnight at UAOnline</td>
<td>Friday, Jan. 27</td>
</tr>
<tr>
<td>Last day for student- and faculty-initiated drops (course does not appear on academic record)</td>
<td>Friday, Jan. 27</td>
</tr>
<tr>
<td>Last day for tuition and fee payment; 5 p.m. in person, midnight at UAOnline</td>
<td>Monday, Jan. 30</td>
</tr>
<tr>
<td>Deadline for UA Foundation and privately funded scholarship applications</td>
<td>Wednesday, Feb. 15</td>
</tr>
<tr>
<td>Deadline to apply for spring 2017 graduation</td>
<td>Wednesday, Feb. 15</td>
</tr>
<tr>
<td>Early progress reports due</td>
<td>Sunday, Feb. 19</td>
</tr>
<tr>
<td>Spring break (no classes)</td>
<td>Monday-Friday, March 13-17</td>
</tr>
<tr>
<td>University holiday (most offices closed for spring break)</td>
<td>Friday, March 17</td>
</tr>
<tr>
<td>Fall 2017 course list available at UAOnline</td>
<td>Monday, March 20</td>
</tr>
<tr>
<td>Last day for student- and faculty-initiated withdrawals (W grade appears on academic transcript)</td>
<td>Friday, March 31</td>
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<tr>
<td>Begin registration and fee payment for fall 2017 semester (degree students)</td>
<td>Monday, April 3</td>
</tr>
<tr>
<td>Begin registration and fee payment for fall 2017 semester (nondegree students)</td>
<td>Monday, April 10</td>
</tr>
<tr>
<td>SpringFest (no classes)</td>
<td>Friday, April 21</td>
</tr>
<tr>
<td>Last day of instruction</td>
<td>Monday, May 1</td>
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<tr>
<td>Final examinations</td>
<td>Tuesday-Friday, May 2-5</td>
</tr>
<tr>
<td>Commencement</td>
<td>Saturday, May 6</td>
</tr>
<tr>
<td>Residence halls close, noon</td>
<td>Monday, May 8</td>
</tr>
<tr>
<td>Deadline for faculty to post grades, noon</td>
<td>Wednesday, May 10</td>
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</tbody>
</table>

**SUMMER SEMESTER 2017**

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Summer 2017 course list available at UAOnline</td>
<td>Wednesday, Feb. 1</td>
</tr>
<tr>
<td>Registration and fee payment for summer courses begin</td>
<td>Monday, Feb. 27</td>
</tr>
<tr>
<td>Deadline to apply for admission for summer semester</td>
<td>Monday, May 1</td>
</tr>
<tr>
<td>MAYmester courses begin; attendance required. Deadline to register for MAYmester, or for refund of tuition and fees for MAYmester</td>
<td>Monday, May 8</td>
</tr>
<tr>
<td>Late payment fees begin for MAYmester</td>
<td>Tuesday, May 9</td>
</tr>
<tr>
<td>Deadline for student- and faculty-initiated withdrawals for MAYmester (W appears on academic transcript)</td>
<td>Monday, May 15</td>
</tr>
<tr>
<td>Last day of MAYmester instruction</td>
<td>Friday, May 19</td>
</tr>
<tr>
<td>First day of instruction for six-week session I and full session</td>
<td>Monday, May 22</td>
</tr>
<tr>
<td>Deadline to register for six-week session I; attendance required on this day</td>
<td>Wednesday, May 24</td>
</tr>
<tr>
<td>Deadline for refund of tuition and fees for six-week session I</td>
<td>Wednesday, May 24</td>
</tr>
<tr>
<td>Late payment fees begin for six-week session I</td>
<td>Thursday, May 25</td>
</tr>
<tr>
<td>Memorial Day (no classes, most offices closed)</td>
<td>Monday, May 29</td>
</tr>
<tr>
<td>Deadline to register for full session; attendance required</td>
<td>Tuesday, May 30</td>
</tr>
<tr>
<td>Deadline for refund of tuition and fees for full session</td>
<td>Tuesday, May 30</td>
</tr>
<tr>
<td>Late payment fees begin for full session</td>
<td>Wednesday, May 31</td>
</tr>
<tr>
<td>Last day for student- and faculty-initiated withdrawals (W appears on academic transcript) for six-week session I</td>
<td>Wednesday, June 14</td>
</tr>
<tr>
<td>Deadline to apply for summer 2017 graduation</td>
<td>Thursday, June 15</td>
</tr>
<tr>
<td>Last day of instruction for six-week session I</td>
<td>Friday, June 30</td>
</tr>
<tr>
<td>Independence Day holiday (no classes, most offices closed)</td>
<td>Monday-Tuesday, July 3-4</td>
</tr>
<tr>
<td>First day of instruction for six-week session II</td>
<td>Wednesday, July 5</td>
</tr>
<tr>
<td>Deadline to register for six-week session II; attendance required on this day</td>
<td>Monday, July 10</td>
</tr>
<tr>
<td>Last day for refund of tuition and fees for six-week session II</td>
<td>Monday, July 10</td>
</tr>
<tr>
<td>Last day for registration. Deadline for thesis and research credit payment (graduate students).</td>
<td>Monday, July 10</td>
</tr>
<tr>
<td>Late payment fees begin for six-week session II</td>
<td>Tuesday, July 11</td>
</tr>
<tr>
<td>Last day for student- and faculty-initiated withdrawals for full session (W appears on academic transcript)</td>
<td>Tuesday, July 11</td>
</tr>
<tr>
<td>Last day for student- and faculty-initiated withdrawals for six-week session II (W appears on academic transcript)</td>
<td>Wednesday, July 26</td>
</tr>
<tr>
<td>Last day of instruction for six-week session II and full session, including final exams</td>
<td>Friday, Aug. 11</td>
</tr>
<tr>
<td>Deadline for faculty to post grades, noon</td>
<td>Wednesday, Aug. 16</td>
</tr>
</tbody>
</table>
This catalog is a complete guide to studying at the University of Alaska Fairbanks. The catalog includes information on admission and graduation requirements, the academic calendar, and program and course listings for certificate, associate, bachelor’s, master’s and PhD degree students.

The catalog is updated each academic year to reflect changes in academic rules and degree requirements. If you are looking for a different academic year than the one listed above, view our archived catalogs (http://www.uaf.edu/catalog/archives.html).
OVERVIEW

The catalog is a complete guide to studying at the University of Alaska Fairbanks. The catalog includes information on admission and graduation requirements, the academic calendar, and program and course listings for certificate, associate, bachelor’s, master’s and PhD degree students.

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Programs approved after this catalog was published are available in the addendum (p. 14). Students enrolling for the first time should also refer to the registration guide at http://www.uaf.edu/register/. Search for courses available for registration at http://www.uaf.edu/coursefinder/.

For a schedule of classes at any of UAF’s community campuses, contact the campus directly. Addresses and phone numbers of campuses and UAF offices can be found at http://edir.alaska.edu.

UAF Facts and Figures

• Originally founded in 1917 when Alaska was still a territory, today UAF is America’s northernmost Land, Sea and Space Grant institution.

• UAF encompasses the central campus in Fairbanks; Bristol Bay Campus in Dillingham; Chukchi Campus in Kotzebue; Interior Alaska Campus, covering the Interior; Kuskokwim Campus in Bethel; Northwest Campus in Nome; and the Community and Technical College in Fairbanks.

• UAF’s geographically diverse student body represents 49 states and 48 foreign countries.

• UAF offers 149 degrees and 31 certificates in 115 disciplines.

• As America’s Arctic university, UAF offers a number of unique programs and degrees particularly focused on the biology, climate, natural resources and peoples of northern latitudes, the circumpolar North and the Pacific Rim.

The UAF mascot is the Nanook, a derivation of “nanuq,” the Inupiaq Eskimo word for polar bear. Up until the mid-70s, the men’s basketball team was known as the “Flying Nanooks” because of the regular, and long, airplane rides they took in order to compete with other college teams. Since 1963 all University of Alaska Fairbanks sports teams have been called Nanooks.

Degrees Conferred, Spring 2015

• 160 licensures and occupational endorsements
• 1,107 certificates and associate or baccalaureate degrees
• 249 master’s and doctoral degrees

Student Profile, Fall 2015

ENROLLMENT

Fairbanks Campus 6,215
Community and Technical College 2,885
Bristol Bay Campus 683
Chukchi Campus 272
Interior Alaska Campus 371
Kuskokwim Campus 529
Northwest Campus 509
eLearning & Distance Education 2,711
University of Alaska Fairbanks (total 1) 9,870

1 Some students attend more than one campus and are not counted twice in the total.

Female 58%
Male 42%
Alaska Native/American Indian 9%
Undergraduate 89%
Graduate 11%
Median Age 25

Estimated 2016-2017 UAF Annual Costs

FRESHMAN AND SOPHOMORES

<table>
<thead>
<tr>
<th></th>
<th>Alaska Resident</th>
<th>Non-Resident</th>
<th>WUE 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition and fees 3</td>
<td>$7,198</td>
<td>$22,455</td>
<td>$10,194</td>
</tr>
<tr>
<td>Room and board</td>
<td>$8,530</td>
<td>$8,530</td>
<td>$8,530</td>
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<tr>
<td>ANNUAL TOTAL</td>
<td>$15,728</td>
<td>$30,985</td>
<td>$18,724</td>
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JUNIORS AND SENIORS

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<thead>
<tr>
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<th>Alaska Resident</th>
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</thead>
<tbody>
<tr>
<td>Tuition and fees 3</td>
<td>$8,398</td>
<td>$26,655</td>
<td>$11,994</td>
</tr>
<tr>
<td>Room and board</td>
<td>$8,530</td>
<td>$8,530</td>
<td>$8,530</td>
</tr>
<tr>
<td>ANNUAL TOTAL</td>
<td>$16,928</td>
<td>$32,185</td>
<td>$20,524</td>
</tr>
</tbody>
</table>
# Accreditation

UAF is accredited by the Northwest Commission on Colleges and Universities (http://www nwccu.org). Additionally it has the following specialized accreditations, certifications and standards:

- AACSB International
- ABET — Engineering Accreditation Commission
- ABET — Computing Accreditation Commission
- Accrediting Council on Education in Journalism and Mass Communication
- Alaska Police Standards Council
- American Alliance of Museums
- American Bar Association
- American Chemical Society
- American Psychological Association
- Commission on Accreditation of Allied Health Education Programs: Medical Assistant and Paramedic Program
- Commission on Dental Accreditation
- Council on Social Work Education
- National Association for Developmental Education
- National Association of Schools of Music
- National Automotive Technicians Education Foundation
- National Council for the Accreditation of Teacher Education

## Campuses

All UAF campuses are tobacco-free as of Dec. 31, 2015.

### Fairbanks Campus

The 2,250-acre Fairbanks campus offers limitless opportunities for activity and recreation. The main campus has two lakes and 26 miles of trails as well as a major student recreation complex for indoor sports. Facilities are available for basketball, volleyball, badminton, tennis, calisthenics, dance, gymnastics, judo and karate. There are rifle and pistol ranges; courts for handball, racquetball and squash; a jogging track; a swimming pool; weight training and modern fitness equipment areas; an ice arena for recreational skating and hockey; a special aerobics area; a two-story indoor climbing wall; an outdoor climbing tower covered with ice in the winter; and a winter snowboard terrain park. UAF sponsors intercollegiate athletic teams in men’s and women’s basketball, men’s and women’s cross country running and skiing, coed rifle, men’s ice hockey and women’s volleyball and swimming.

The Wood Center is the focus of many extracurricular activities. With a pub, dining facilities, bowling lanes, conference rooms, lounge and games area, the Wood Center is a gathering place for the entire university community.

UAF has some of the best facilities in the state. Performances are scheduled almost every weekend during the academic year in Davis Concert Hall or Salisbury Theatre. The Rasmuson Library, Alaska’s largest library, offers extensive resource materials in print and online. An array of computer databases provides access to hundreds of academic journals, and Internet connections allow students at remote rural sites to use library resources. The UA Museum of the North is not only one of the top visitor attractions in the state but also a resource for students. Its vast collections are used for demonstration and comparative studies in classrooms and labs.

The Fairbanks campus is the statewide university system’s principal research center. Internationally respected institutes provide students with an opportunity to see science in action and participate in research activities.

## FAIRBANKS AREA

Fairbanks, Alaska’s second-largest city, sits on the banks of the Chena River in the heart of Alaska. The downtown district is easily accessible via the local bus system and a network of bike trails. The city is steeped in a history of riverboat captains and gold seekers. Its character has been shaped by a large military presence, construction of the trans-Alaska oil pipeline and the continuing oil economy, and a thriving university. It is a city where old quietly blends with new. Striking modern buildings sit side-by-side with log cabins built in the early part of the last century.

With an area population of some 100,000, Fairbanks offers the conveniences of a big city, yet millions of acres of rolling hills and spectacular Alaska panoramas are only minutes away. Whether the sport is canoeing, climbing, running, dog mushing, skiing or fishing, nowhere else compares with Alaska. Denali (Koyukon Athabascan for “The High One”), the tallest mountain in North America, is often visible from many UAF residence hall windows.

### TRANSPORTATION TO FAIRBANKS

Fairbanks is easily accessible by land or air. Anchorage is 365 miles away via the Parks Highway or the Alaska Railroad, and Seattle is 2,300 miles away via scheduled airline service.
away via the Alaska Highway. Major airlines offer several daily flights between Fairbanks and Anchorage, Seattle and many other destinations. The Alaska Railroad provides a special one-way fare between Anchorage and Fairbanks for all full-time UAF students in summer or regular sessions. Students must ask for the special rate when making reservations and present their student ID to the ticket agent at check-in. For reservations, contact the Alaska Railroad at 907-458-6025 or 800-544-0552.

**ELEARNING & DISTANCE EDUCATION**

Since 1963, UAF has been a leader in offering distance courses and programs for students throughout Alaska and the world. eLearning & Distance Education offers more than 350 courses in 60 disciplines. Additionally, eLearning offers degrees and certificates completely online. Internet-based lets students increase their educational opportunities, further their education and earn their degree without the constraint of classroom attendance. eLearning courses are academically rigorous, meet during regular semesters and count toward degree program requirements.

For more information contact eLearning & Distance Education in the Bunnell Building on the Fairbanks campus, by phone at 800-277-8060 or 907-479-3444, via email at uaf-elearning@alaska.edu or at http://elearning.uaf.edu.

**Community Campuses**

In addition to the Fairbanks campus, UAF has community and rural campuses in downtown Fairbanks, Bethel, Dillingham, Kotzebue and Nome, and maintains six community centers through its Interior Alaska Campus in Fairbanks. These branches, part of the College of Rural and Community Development, are central to fulfilling the UAF mission of providing educational opportunities throughout the state. Credits earned at any UAF campus or center are recognized at all UAF campuses, meaning that students may change campuses and transfer all UA credits.

For more information about the College of Rural and Community Development, visit http://www.uaf.edu/rural/.

**BRISTOL BAY CAMPUS IN DILLINGHAM**

The Bristol Bay Campus serves 32 rural communities in the Bristol Bay region within a 55,000-square-mile area. The campus includes 12 coastal communities served by the Aleutian-Pribilof outreach center in Unalaska/Dutch Harbor: the Aleutian archipelago, lower Alaska Peninsula, the Shumigan Islands, and the Pribilof Islands. The campus’ administrative center is in Dillingham (about 322 air miles from Anchorage and 570 air miles from Fairbanks), with centers in King Salmon, Togiak and New Stuyahok. Enrollment at Bristol Bay Campus ranges from 500 to 800 students each semester. The campus offers an Associate of Arts degree in general studies and Associate of Applied Science degrees in allied health, applied business, applied accounting, community health, early childhood education, human services, information technology, interdisciplinary studies and renewable resources. Bachelor’s degree programs include elementary education, interdisciplinary studies, rural development and social work. Master’s degrees are offered in rural development and education. Other programs include Adult Basic Education, providing adult basic education through high school-level instruction for Bristol Bay adults, and the Marine Advisory Program.

The Bristol Bay Campus also provides educational opportunities for communities in its service area, including vocational-technical, community interest and graduate courses. Classes are offered by distance delivery (audio conference, video conference, correspondence or Internet) and by instructors using traditional methods. For more information, visit http://www.uaf.edu/bbc/.

**CHUKCHI CAMPUS IN KOTZEBUE**

The Chukchi Campus is located 26 miles north of the Arctic Circle on the shores of the Chukchi Sea. The campus serves Kotzebue and 10 villages in a region of more than 36,000 square miles. Chukchi offers Associate of Arts as well as Associate of Applied Science degrees, and courses leading to baccalaureate degrees in education, rural development and social work. Courses are offered by local instructors and through the College of Rural and Community Development audio-conferencing and live Internet instructional systems. For more information, visit http://www.uaf.edu/chukchi/.

**COMMUNITY AND TECHNICAL COLLEGE IN FAIRBANKS**

The Community and Technical College fulfills UAF’s community college mission in the greater Fairbanks area by offering high-quality certificate, degree and specialized training programs. Its core purpose is to provide community-driven education to meet needs for workforce development, academic preparation and lifelong learning. CTC helps prepare Alaskans for Alaska’s jobs.

CTC offers more than 40 certificate and degree programs such as allied health and nursing, process technology, applied business and accounting, paramedic and law enforcement academies, information technology, fire science, aviation, and early childhood education.

CTC benefits from strong partnerships with local employers in business, industry and organized labor. Many CTC faculty come from active workplace settings, ensuring that CTC students learn from people at the forefront of their professions.

Many CTC classes are held during evenings or weekends; the campus also offers a growing array of courses online. CTC specializes in meeting the needs of nontraditional students who have been away from college or whose work and family obligations make full-time student status challenging, as well as traditional students entering college for the first time.

CTC’s main campus is at 604 Barnette St., in downtown Fairbanks. At the Student Advising and Registration Center, students can receive academic advising, register and pay for classes, and take placement tests.

Additional CTC locations in Fairbanks and other communities include:

- Aviation Maintenance Program Hangar: 3504 University Ave. South
- Bunnell House Early Childhood Lab School: 703 Chatanika Dr.
- Fairbanks Pipeline Training Center: 3600 Cartwright Ct.
- Hutchison Institute of Technology: 3750 Geist Rd.
- University Park Building: 1000 University Ave.
- Offices on Fort Wainwright and Eielson Air Force Base
- Partnership office at Delta Career Advancement Center in Delta Junction

For more information contact CTC at 907-455-2800 or visit http://www.ctc.uaf.edu.

**INTERIOR ALASKA CAMPUS**

The Interior Alaska Campus in Fairbanks serves 49 communities and villages in the Doyon region and Interior Alaska, an area about the size of France. The Interior Alaska Campus is the most decentralized of the UAF
campuses. Although the director's office and some faculty are located in Fairbanks, there are Interior Alaska Campus staff in Fort Yukon, McGrath, Nenana and Tok. Courses are offered throughout the region online and by audio conference, on site by local or visiting instructors, and via intensive sessions in Fairbanks and Anchorage. The campus offers a range of degree programs, including occupational endorsements, certificates, and Associate of Arts and Associate of Applied Science degrees. Math and English tutors are available for all students taking courses through the campus. For more information, visit http://www.uaf.edu/iac/.

**KUSKOKWIM CAMPUS IN BETHEL**

The Kuskokwim Campus is located in Bethel and serves approximately 25,000 people in the Yukon-Kuskokwim Delta, which includes 47 remote Alaska Native Yup’ik and Cup’ik Eskimo and Athabaskan villages with 56 tribes in a 57,000-square-mile-area the size of Illinois. Bethel is a community of about 6,000 people 80 miles inland on the Kuskokwim River. KuC also operates one remote learning center based in Hooper Bay, a Yup’ik Eskimo community of 1,000 on the Bering Sea coast. KuC offers academic, vocational and community interest courses, as well as courses leading to associate, baccalaureate and master’s degrees, including a Bachelor of Arts degree in Yup’ik language and culture, the home language of many families in the region. The Emerging Scholars Program assists all full-time freshmen in the transition to college, both academically and socially, and in the completion of certificates and degrees. Students may attend classes on campus and through distance delivery. Housing on campus is available in Sackett Hall, which provides suites with space for four students in each. For more information, visit http://www.bethel.uaf.edu.

**NORTHWEST CAMPUS IN NOME**

Northwest Campus is located in Nome, a community of 3,500 that is the service hub for the 15 villages of the Bering Strait region. This 44,000-square-mile-region extends from Shishmaref on the northern edge of the Seward Peninsula to Stebbins on the southern rim of Norton Sound. It includes communities on St. Lawrence and Little Diomede islands. The area contains 570 miles of coastline, which includes all of Norton Sound and portions of the Bering and Chukchi seas.

The Northwest Campus serves a total population of nearly 10,000. Certificates and associate, bachelor’s and master’s degrees are offered to the region’s residents, with courses taught both traditionally and by distance delivery. Affiliated learning centers are located in the communities of Shishmaref and Unalakleet. The campus responds to vocational, business development, cultural preservation and academic needs of the Bering Strait region. Many courses, programs and degrees are offered in cooperation with regional health and tribal organizations, school districts and corporations. For more information, visit http://www.nwc.uaf.edu or http://www.facebook.com/uaf-nwc/.

**Troth Yeddha’**

In February 2013 the U.S. Board on Geographic Names officially recognized Troth Yeddha’ as the name for the ridge that is home to the University of Alaska Fairbanks campus. In Lower Tanana Athabaskan this name means “Indian potato ridge,” and refers to the plant with an edible root — *Hedysarum alpinum* — that is a traditional food for Native people throughout Alaska. The Athabaskan, or Dene, languages have ancient ties to the Tanana Valley. Athabaskan geographic names are functional and rule-driven and are shared across neighboring languages. Seeing these as interconnected facts, numerous Tanana Valley Athabaskan experts have shared the Troth Yeddha’ place name with pride.

In 1994 the late Chief Peter John of Minto said Athabaskan people long ago used to come to Troth Yeddha’ to talk and give advice to one another about what they were going to do. When they learned this place would be used for a university, he said, they decided that the school would be good and would carry on a traditional use of this hill — a place where good thinking and working together would happen.

In recent years numerous facts about the Chena Athabascans of Troth Yeddha’ have been assembled. Until the 1840s a small village was located at a pond at the base of the ridge, where the UAF Physical Plant is now. Place names for water features surrounding the ridge have also been reconstructed.

UAF celebrates and honors the historical place of Alaska’s first peoples. In 2008 the Board of Regents set aside seven acres as Troth Yeddha’ Park. The park will be a venue to celebrate the rich cultures of Alaska Natives and their presence on the Fairbanks campus.

For more information visit http://www.uaf.edu/trothyeddha/.

**Catalog Addendum**

The School of Fisheries and Ocean Sciences became the College of Fisheries and Ocean Sciences Sept. 16, 2016.

**Colleges and Schools**

UAF colleges and schools offer programs leading to occupational endorsements, certificates and associate, bachelor’s and master’s degrees in the arts, sciences and professions. Doctoral programs are available in areas of particular strength, such as sciences and mathematics.

**Education**

The School of Education prepares professional educators for Alaska's unique geographic, cultural and linguistic conditions. Course work and fieldwork in a broad range of undergraduate and graduate programs are available to students on the Fairbanks campus and by distance delivery to rural areas. Programs offered respond to recent standards developed by the Council for the Accreditation of Educator Preparation, formerly known as the National Council of Accreditation of Teacher Education, and the Alaska Teacher, Student and Cultural Standards.

Undergraduate degree programs and postbaccalaureate endorsement programs lead to state of Alaska teaching certificates in elementary and secondary education. A postbaccalaureate K-12 special education program leads to State of Alaska initial teacher certification or an additional endorsement in special education. Our school counseling program leads to a State of Alaska Type C Special Services certificate. Our community counseling program provides the course work required to be a licensed professional counselor in Alaska. Graduate degree programs leading to a Master of Education include school or community counseling, cross-cultural education, elementary education, secondary education, special education, curriculum and instruction, language and literacy, and online innovation and design.

School of Education staff and faculty work closely with colleagues at the CRCD campuses and school districts across the state to prepare well-qualified pre-service educators and to offer professional development opportunities to practitioners. Faculty research focuses on issues of formal and informal education related to Alaska Native people and
Fieldwork opportunities are available to undergraduate students through the School of Fisheries and Ocean Sciences (SFOS) Bachelor of Arts in fisheries, and a minor in marine sciences. For undergraduate degrees, SFOS offers a minor, Bachelor of Science in fisheries, and education, or research or management with state and federal agencies and private industry. As part of their degree programs, graduate students conduct research in collaboration with faculty, often in remote locations around Alaska and beyond.

Education, research and extension work on freshwater and marine systems are conducted by the departments that make up SFOS. The Institute of Marine Science (http://www.ims.uaf.edu), with major laboratory facilities in Fairbanks and Seward, focuses on oceanographic and marine biological research and graduate education. The Kasitsna Bay laboratory (http://www.sfos.uaf.edu/sites/kbay), near Homer, is the site for coastal research on intertidal and subtidal communities. The Juneau Center (http://www.uaf.edu/sfos/about-us/locations/juneau) focuses on fisheries research and education. The Kodiak Seafood and Marine Science Center (http://www.uaf.edu/sfos/about-us/locations/kodiak/about-kmsmc) is focused on research and extension work in seafood science and sustainable harvest technology. The Marine Advisory Program (http://www.uaf.edu/map) offers public education and outreach statewide from its offices in Anchorage and coastal communities. SFOS also operates the oceanographic vessel Sikuliaq, a global-class research vessel designed to work in the ice-laden waters of polar regions. The Sikuliaq is based in Seward.

For more information, visit http://www.sfos.uaf.edu or call 907-474-7824.

Graduate School
UAF offers professional licenses, graduate certificates, master's degrees and the Doctor of Philosophy degree in a number of areas. The Graduate School also manages UAF's unique interdisciplinary program where students can work on individualized degrees related to current issues. See the graduate degree requirements and specifics on programs offered.

The Office of the Graduate School provides information and assistance for prospective and current graduate students, including orientation, teaching assistant training and several scholarship and fellowship programs. Information can be found at http://www.uaf.edu/gradsch/ or by calling 907-474-7464.

Liberal Arts
As one of the largest colleges at Alaska's research university, the College of Liberal Arts supports scholarship that furthers understanding of Alaska and the circumpolar region in a changing global context in addition to offering a classic liberal arts course selection. Extensive research and creative work inform our teaching to provide students with opportunities to become knowledgeable in and across the arts and humanities, Alaska Native and global languages, and social and behavioral sciences; to develop expertise in specific areas of concentration; and to participate in exciting research both as a graduate student and as an undergraduate. The college provides interdisciplinary learning opportunities beyond the classroom that foster responsibility, understanding of vital issues and commitment to place. Core curriculum courses provide breadth to the general education of all UAF undergraduates, while liberal arts undergraduate and graduate
programs ground students in their disciplines. More information is available at http://www.uaf.edu/cla/ or by calling 907-474-7231.

Management

The School of Management is a global learning community where innovation in teaching, discovery and service prepares students for professional success that benefits our community, the state of Alaska and the nation. The school’s programs include undergraduate degrees in accounting, business administration, economics, and homeland security and emergency management, as well as 11 undergraduate minors. Graduate degrees include a Master of Business Administration, a Master of Security and Disaster Management, a Master of Science in resource and applied economics, and a doctorate in natural resources and sustainability. The School of Management is accredited by the Association to Advance Collegiate Schools of Business (AACSB) International and is one of only 182 schools worldwide with an additional specialized accreditation in accounting.

Going beyond the classroom, SOM embraces experiential learning by encouraging students to be active participants in their education through involvement in student organizations, paid internships and events.

For more information visit http://www.uaf.edu/som/ or call 907-474-7461.

Natural Resources and Extension

Scientists, natural resources managers and policymakers are becoming more aware of the complexity and interrelatedness of society and the environment. Implementing sustainable natural resources decisions in contemporary society requires an interdisciplinary approach. Graduates of the School of Natural Resources and Extension use their academic training to facilitate the wise management of renewable resources. The undergraduate program in natural resources management integrates knowledge in natural sciences, policy, forestry, economics and human values to examine the sustainable use of natural resources and decisions regarding their management.

Graduate students may earn one of two types of master’s degrees in natural resources management — one thesis-based and one project-based — and a doctorate in natural resources and sustainability.

Faculty and students conduct research through the Agricultural and Forestry Experiment Station, which includes research centers and experiment farms in Fairbanks and Palmer, the Forest Soils Laboratory in Fairbanks, and field sites around the state. SNRE developed its courses and programs in close cooperation with many university units, private industry, and local, state and federal agencies. These cooperative arrangements provide students with opportunities for fieldwork and internships in the degree options listed above, as well as in outdoor recreation, water resources management, park and wilderness management, geographic information systems, and research planning and administration. For more information visit http://www.uaf.edu/snre/ or call 907-474-7083.

Natural Science and Mathematics

The College of Natural Science and Mathematics offers undergraduate and graduate degrees in the physical and life sciences, statistics and mathematics. CNSM provides most UAF undergraduate courses in science and mathematics, including the baccalaureate core science curriculum and a variety of outreach programs. The college is known for its modern teaching technologies, access to professors and quality undergraduate student advising. CNSM also offers minors in each of its major disciplines.

Academic programs provide a foundation for professional careers or advanced study, and help students develop critical thinking and analytical skills. CNSM majors enjoy close working relationships with faculty and other students. The college provides opportunities for undergraduate and graduate students to work with faculty on research projects. Unique opportunities are available through UAF research centers and institutes, including the CNSM Division of Research, the Geophysical Institute, the Institute of Arctic Biology, the UA Museum of the North and the International Arctic Research Center. The fundamental knowledge gained through courses and by working on practical, discipline-related projects gives CNSM graduates the skills and experience they need to enter the job market or continue their education.

CNSM is home to the Alaska Native Science and Engineering Program and K–12 outreach programs, including the Science Potpourri, the Alaska Summer Research Academy, Girls on Ice and GeoFORCE. In these and other programs, high school and university students work with CNSM faculty on original research projects aimed at improving the quality of life in Alaska.

At the graduate level, CNSM offers Master of Science and doctoral degrees in the natural sciences and mathematics. These advanced programs provide students with research opportunities in laboratory and field settings throughout Alaska. CNSM’s doctoral programs provide opportunities for advanced study leading to academic and professional positions. In 2015, CNSM began a cooperative program in veterinary medicine with Colorado State University. For more information, visit http://www.uaf.edu/cnsm/ or call 907-474-7608.

Rural and Community Development

The College of Rural and Community Development focuses on the needs of nontraditional students, including students who seek skills and degrees suited to the economy and well-being of rural communities. CRCD promotes workforce preparation, economic development, lifelong learning and community development. CRCD campuses provide general and vocational-technical education at the certificate and associate degree levels, baccalaureate and graduate degrees in rural development, and, in cooperation with the College of Liberal Arts and the School of Education, baccalaureate and graduate degrees in cross-cultural studies, education and social work. In addition, CRCD offers workshops, continuing education and short-term courses, developmental studies, credit for prior learning and other nondegree-oriented services.

CRCD community campuses include Northwest (http://www.nwc.uaf.edu) (Nome), Kuskokwim (http://www.bethel.uaf.edu) (Bethel), Bristol Bay (http://www.uaf.edu/bbc) (Dillingham), Chukchi (http://www.uaf.edu/chukchi) (Kotzebue), Interior Alaska (http://www.uaf.edu/iac) (Fairbanks, which administers six centers throughout the Interior), and Community and Technical College (http://www.ctc.uaf.edu) (downtown Fairbanks).

CRCD serves nearly two-thirds of Alaska, encompassing 160 primarily Alaska Native Arctic, sub-Arctic and coastal communities. At least 16 indigenous languages are spoken in the region served by CRCD, and the economy spans subsistence hunting and fishing, small-scale village development and cooperatives, and large-scale international corporate development. The College of Rural and Community Development focuses on responding to students and partners to develop the economic and
social well-being of Alaska Native communities and beyond. For more information, visit http://www.uaf.edu/rural/ or call 907-474-7143.

Research Institutes, Centers and Consortia

UAF's location in Interior Alaska provides easy access to glaciers, permafrost, the Pacific and Arctic oceans, and other elements of a sub-Arctic climate. Accordingly, several research centers and academic departments focus their scholarly work on issues particular to the North. These include the environmental impact of human activities, development of renewable and nonrenewable resources and energy sources, and the understanding and preservation of indigenous northern cultures.

The vice chancellor for research oversees all university research activities and has primary responsibility for the university's research mission. The VCR office directs the development of university research policies and oversees sponsored programs, research integrity, and intellectual property and licensing.

Assistantships are available for graduate students working on research with faculty in many research institutes and centers. Each researcher has a joint appointment with an academic department. Any student interested in specific faculty research projects and the availability of assistantships should contact the appropriate academic department.

Agricultural and Forestry Experiment Station

The Agricultural and Forestry Experiment Station conducts research to enhance the quality of life in Alaska through development of natural, economic and human resources. Research emphasizes factors typical of high latitudes and is designed to provide the information and technology needed to manage renewable resources for the economic and social well-being of Alaskans. This work includes studies of natural and manipulated ecosystems, sustainable soil productivity, food production, food security, genetics for improved plant and animal productivity, and enhanced livestock production. Additional research involves economic and legal aspects of resource use, silviculture and forest management, resource use for tourism and recreation, and education and communications in resources management.

AFES, in cooperation with state and federal agencies, conducts research at sites in Fairbanks, Palmer, Delta Junction and Nome. AFES faculty have a leadership role in the Long-Term Ecological Research program funded by the National Science Foundation. This research, which is determining the structure and function of northern boreal forest ecosystems, forms the basis for sustainable forest management practices.

AFES faculty represent the disciplines of agronomy, animal science, economics, forestry, horticulture, land use planning, outdoor recreation, plant pathology, range science, resource policy and law, and soil science. For more information, visit http://www.uaf.edu/snre/research/afes/ or call 907-474-7083.

Alaska Cooperative Fish and Wildlife Research Unit

The Cooperative Fish and Wildlife Research Unit is jointly sponsored and financed by the U.S. Geological Survey, UAF, the Alaska Department of Fish and Game, the U.S. Fish and Wildlife Service, and the Wildlife Management Institute. The unit supports and guides graduate training in fisheries and wildlife biology and management.

Wildlife research is directed toward habitat relationships, avian ecology, wildlife population dynamics, and the impact of northern development on wild animals and their habitats. Fisheries research focuses on the ecology and fisheries of Alaska freshwater ecosystems, and evaluation and development of cold-water fisheries techniques.

For more information, visit http://www.akcfwu. uaf.edu or call 907-474-7661.

Alaska Native Language Center

The Alaska Native Language Center was established by state legislation in 1972 to document and preserve the 20 Indian, Aleut and Eskimo languages in Alaska. It is the major center in the United States for the study of Eskimo and northern Athabaskan languages. ANLC publishes its findings in dictionaries, grammars, story collections and research papers. The Alaska Native Language Archive houses a valuable collection of manuscript materials in and on Alaska Native languages, including word lists and documentation dating to the late 1700s. The archive is available to scholars and students and is housed at the Rasmuson Library.

As part of the College of Liberal Arts, ANLC's teaching program includes a B.A. in Yup'ik or Inupiaq Eskimo, an A.A.S. degree or certificate in Native language education, and special classes in language literacy. A B.A. in Yup'ik language and culture teaches major courses entirely in the Yup'ik language.

For more information, visit http://www.uaf.edu/ anlc/ or call 907-474-7874.

Alaska Quaternary Center

The Alaska Quaternary Center, established in 1982, is a focal point for interdisciplinary Quaternary studies and research at UAF. The Quaternary Period spans the past two million years, a time of glacial-interglacial climate oscillations, floral and fauna migrations, mammalian extinctions and human evolution. Quaternary studies thus encompass scientific investigations of geologic, climatic, biologic and human systems of the past and present. The AQC comprises researchers in the anthropology, biology and wildlife, and geology and geophysics departments, the School of Natural Resources and Extension, the Institute of Marine Science, the Institute of Arctic Biology and the Geophysical Institute.

The AQC is housed within the Department of Geology and Geophysics (http://www.uaf.edu/geology) and the College of Natural Science and Mathematics (http://www.uaf.edu/cnsm). The center sponsors seminars and workshops and hosts visiting speakers from countries throughout the world. Quaternary scholars from UAF regularly collaborate with Canadian, Russian and European colleagues conducting research in Alaska, Siberia and the Yukon, as well as Africa, Mongolia and western Europe. The AQC plays an important role in northern science during this time of increasing interest in studies of global change, biodiversity and other aspects of Arctic climates and ecosystems.
Alaska Sea Grant

Alaska Sea Grant is a partnership between the National Oceanic and Atmospheric Administration and the University of Alaska Fairbanks. Alaska Sea Grant is administered by the UAF School of Fisheries and Ocean Sciences (http://www.sfos.uaf.edu).

Alaska Sea Grant enhances the wise use and conservation of Alaska’s marine and freshwater resources through research, education, and outreach.

ASG supports researchers and university graduate students contributing new knowledge about healthy coastal ecosystems, sustainable fisheries and resilient coastal communities. Alaska Sea Grant also recruits students into career-building national and state scholarships and fellowships in marine policy, fisheries population dynamics and other marine fields.

Alaska Sea Grant Marine Advisory Program faculty are located in eight coastal communities and build partnerships that provide technical assistance to support economic development, marine literacy, workforce development and resource management. Thousands of adults and youth across the state attend workshops and presentations by ASG each year.

As part of its education mission, ASG supports marine literacy among K-12 teachers and students through curriculum and other learning resources and training. ASG produces publications and website resources available via an online bookstore that help the public understand Alaska’s diverse marine ecosystem. ASG also keeps scientists connected through community-based regional scientific conferences and through scientific symposia, including the international Lowell Wakefield Fisheries Symposium series.

ASG is funded by UAF and NOAA, with support from various public and private partners.

For more information visit http://www.alaskaseagrant.org or call 907-474-7086.

Center for Cross-Cultural Studies

Established in 1971, the Center for Cross-Cultural Studies is a teaching, research and development unit administered through the UAF College of Liberal Arts. It promotes programs that concentrate on the needs of Alaska’s indigenous societies, with particular regard to education and rural issues.

The center offers academic degree programs and course work in cross-cultural studies. It designs and conducts basic and applied research projects, develops and evaluates alternative educational strategies for Alaska schools, and disseminates findings on current research in education and rural community development.

The center gives technical support and information to school districts, social service agencies, Native corporations, tribal governments, community colleges, and state and federal agencies in rural Alaska. It provides direction for improving educational, professional and community development opportunities for rural Alaskans, and it is a forum for examining those issues. Curricula incorporating indigenous knowledge and Native ways of knowing are available through the Alaska Native Knowledge Network on the web at http://www.ankn.uaf.edu.

For more information, telephone 907-474-1902 or email fycxcs@ankn.uaf.edu.

Center for Global Change and Arctic System Research

The Center for Global Change and Arctic System Research facilitates collaborative research by faculty and students in environmental science and earth system studies. The center sponsors an annual student research grant competition that provides support to students for research related to global change with an Arctic or sub-Arctic focus presented in an interdisciplinary context. The center also participates in education and outreach activities on global change and Arctic system research.

For information on education opportunities in earth system and environmental sciences, see Interdisciplinary Studies (p. 287) in the Degrees and Programs section of this catalog, or call 907-474-5415.

For more information about the center and its activities, visit http://www.cgc.uaf.edu or call 907-474-5818.

Geophysical Institute

Founded in 1948, the Geophysical Institute is a world-renowned center for the study of geophysics from the sun to the center of the Earth.

Proximity to the Arctic provides excellent opportunities for high-latitude geosciences. Major research programs are underway in space physics, atmospheric science, seismology, volcanology, satellite remote sensing, tectonics and sedimentation. The institute operates a rocket range for space research and a satellite ground station with processing and archiving capabilities for earth science support. In addition, the Alaska Volcano Observatory (http://avo.alaska.edu), the Alaska Earthquake Center (http://earthquake.alaska.edu), Alaska Climate Research Center (http://climate.gi.alaska.edu) and the Alaska Center for Unmanned Aircraft Systems Integration (http://acuasi.alaska.edu) are located at the institute. More than 75,000 books, 350 journals and other specialized media are maintained at the Keith B. Mather Library (http://www.gi.alaska.edu/facilities/mather-library).

GI faculty and students benefit from the coupled activities of education and research. Undergraduate and graduate students find work in research programs while gaining academic credit toward their degrees. Most GI faculty have joint appointments, providing teaching opportunities at the College of Natural Science and Mathematics or the College of Engineering and Mines.

The institute focuses on the needs of Alaska, using geophysical data as the basis for decision-making tools. Examples include monitoring earthquakes and volcanic eruptions leading to hazard alerts to federal and state agencies. Remote sensing specialists use satellite and airborne observations to help fight forest fires and monitor the health of Alaska’s ecosystems. Institute scientists run computer simulations of tsunamis, aiding coastal communities in developing emergency evacuation plans. The institute has programs reaching out to K-12 schools with scientific curricula to educate and motivate potential science students.

More than 500 permanent field sites are operated throughout Alaska and are associated with the Poker Flat Research Range, the Alaska
Earthquake Center, the Alaska Volcano Observatory and the Permafrost Research Laboratory.

For more information, visit http://www.gi.alaska.edu or call 907-474-7282.

Institute of Arctic Biology

The Institute of Arctic Biology is Alaska’s principal research and educational unit for investigating high-latitude biological systems and providing policymakers knowledge to interpret, predict and manage biological systems through integration of research, student education and service to Alaska and the nation.

IAB research focuses on wildlife and conservation biology, including caribou, moose, polar bears and wildfowl; ecology, biogeochemistry, ecosystems and modeling of Arctic landscapes; climate change; physiology, including hibernation and thermogenesis; evolutionary biology; human, plant and animal genetics; plant-animal interactions; and human health disparities, nutrition and physical activity using a community-based, participatory approach.

IAB, established by the Alaska Legislature and the UA Board of Regents in 1962, is a world leader in Arctic research and is an academic gateway to study of the circumpolar Arctic. IAB administers several specialized research programs and facilities. Toolik Field Station (http://toolik.alaska.edu) is an internationally recognized Arctic research station that annually hosts hundreds of scientists from around the world. The Center for Alaska Native Health Research (http://www.uaf.edu/canhr) investigates weight, nutrition and health in Alaska Natives. The Bonanza Creek Long-Term Ecological Research program (http://www.iter.uaf.edu) focuses on the long-term consequences of climate change and disturbance in Alaska boreal forests. The Alaska IDeA Networks of Biomedical Research Excellence program seeks to enhance biomedical research infrastructure in Alaska and fund research and student training focused on the interface of health, disease and the environment in people and animals. The Alaska Cooperative Fish and Wildlife Research Unit (http://www.akcfwru.uaf.edu), part of the U.S. Geological Survey, promotes research and graduate student training in the ecology and management of fish and wildlife. The Alaska Geobotany Center (http://www.geobotany.uaf.edu) is dedicated to understanding northern ecosystems through GIS, remote sensing and field experiments. The Spatial Ecology Lab provides state-of-the-art spatial analysis of ecological data and development, testing, and application of spatially explicit ecological models. IAB’s research greenhouse provides a year-round environment for research and education. The Core DNA Lab keeps UAF at the cutting edge of molecular analysis.

For more information, call 907-474-7412, visit http://www.iab.uaf.edu or follow @ArcticBiology (http://www.twitter.com/ArcticBiology) on Twitter.

Institute of Marine Science

The Institute of Marine Science conducts marine science studies in the world’s oceans, with special emphasis on Arctic and Pacific sub-Arctic waters.

The faculty provide expertise in chemical, geological and physical oceanography and marine biology. Instruction is carried out through a minor in marine science and the graduate program in marine sciences and limnology in the School of Fisheries and Ocean Sciences, where degrees are offered at the master’s and doctoral levels.

Research efforts cover a wide range of disciplines, and some projects are components of large national and international cooperative programs that are worldwide in extent. Institute of Marine Science researchers also participate in the broad marine science community through service on a variety of national and international steering committees, boards, panels and advisory committees.

Research facilities include laboratories on the Fairbanks campus; the Seward Marine Center (http://www.sfos.uaf.edu/smc), a major coastal facility in Seward; the Kasitsna Bay Laboratory (http://www.sfos.uaf.edu/sites/kbay), a marine biology field station on Kachemak Bay; and the 261-foot global class, ice-strengthened Research Vessel Sikuliaq. The Seward Marine Center supports a high-quality seawater system and excellent biological and chemical laboratories, and is the Sikuliaq’s home port. The Alaska SeaLife Center, a private, state-of-the-art mammal and bird research and exhibition facility adjacent to the Seward Marine Center, also offers outstanding research facilities.

Institute of Marine Science research programs include the Virtual Tsunami Center; Alaska Natural Geography in Shore Areas; Census of Marine Life; Ocean Acidification Research Center; GAK1, Gulf of Alaska CTD Time Series; GOAIERP, Gulf of Alaska Integrated Ecosystem Research Program; RUSALCA, Russian-American Long-Term Census of the Arctic; and NEWNET/ORION, a radiation and climatological monitoring program through autonomous stations in Fairbanks, Seward, Nome, Kotzebue, Point Hope and Barrow. Laboratories and specialists cover areas including acoustics; algae, biological, chemical, fisheries, geological and physical oceanography; marine biology; mammals; pathology and ecosystems; remote sensing; seagrass studies; and underwater instrumentation.

The main offices, laboratories and computer facilities of IMS are located in the William A. O’Neill, Laurence Irving II and Arctic Health Research buildings on the west ridge of the Fairbanks campus. For more information, visit http://www.ims.uaf.edu or call 907-474-7229.

Institute of Northern Engineering

The Institute of Northern Engineering is the research enterprise for the College of Engineering and Mines. INE faculty and students are engineering solutions for the world’s cold regions and beyond. The institute is home to many of the world’s leading researchers in cold weather and cold climate science and engineering. INE research and support span the engineering disciplines, offering studies and expertise in energy production, modeling and testing of mechanical systems, and environmental engineering and hydrology, as well as Arctic infrastructure, and mining and petroleum development. INE also participates in many cross-institute endeavors.

The institute includes the Alaska Center for Energy and Power (http://acep.uaf.edu), Alaska University Transportation Center (http://ine.uaf.edu/autc), Mineral Industry Research Laboratory (http://ine.uaf.edu/miril), Petroleum Development Laboratory (http://ine.uaf.edu/pdl), and Water and Environmental Research Center (http://ine.uaf.edu/werc). ACEP houses the Alaska Hydrokinetic Energy Research Center, and WERC serves as the home of the Alaska Stable Isotope Facility. External grant and research support for INE programs has been more than $20 million annually since 2011. Most of INE’s researchers are full-time faculty in the College of Engineering and Mines, allowing research results to reach the classroom quickly.

INE offers diverse interdisciplinary research opportunities, challenging students to tackle wide-ranging engineering topics. Students gain
knowledge and experience through hands-on engagement, setting them apart in the engineering job market.

To get started with your northern engineering research or studies, visit http://www.uaf.edu/ine/ or call 907-474-5457.

International Arctic Research Center

The International Arctic Research Center was established in 1999 as a cooperative research institute supported by both the U.S. and Japanese governments. Funding comes from the National Science Foundation, the Department of Energy, and the National Oceanic and Atmospheric Administration in the U.S., and from the Japan Agency for Marine-Earth Science and Technology, and Japan Aerospace Exploration Agency.

IARC serves as a focal point of excellence for international collaboration and provides the Arctic research community with an unprecedented opportunity to share knowledge about science in the Arctic, with an emphasis on global climate change research. IARC’s mission is to foster Arctic research in an international setting to help the nation and the international community to understand, prepare for, and adapt to the pan-Arctic impacts of climate change. In order to fulfill that mission, IARC provides an integrated science and service program for the benefit of the Arctic community.

Key elements of that program include analysis, synthesis and provision of Arctic climate information, including Arctic Ocean hydrographic information for scientists, students, decision-makers and the public; support and coordination of Arctic system modeling; and serving as a gateway or Arctic climate science coordination center for Alaska and the Arctic research community, with special attention to collaboration with international scientists and institutions.

IARC conducts an internationally popular summer school for young researchers and holds workshops on the integration and synthesis of research. IARC also supports several K–12 outreach projects.

IARC is located in the Akasofu Building. For more information, call 907-474-6016 or visit http://www.iarc.uaf.edu.

Juneau Center, School of Fisheries and Ocean Sciences

The Juneau Center is home to nine UAF fisheries faculty members and about 60 graduate students enrolled in the M.S. and Ph.D. fisheries and marine biology programs. Four UAS biology and marine biology faculty hold joint appointments in the SFOS fisheries division and supervise UAF graduate students based at the Juneau Center.

Faculty supervise students’ research on a broad array of biological problems in laboratories that specialize in quantitative stock assessment, biology and ecology of marine and freshwater species, molecular genetics, behavioral ecology, marine policy, and other fields of study. Laboratories at the Juneau Center include specialized facilities for seawater culture of marine animals and plants, quantitative (computer) analysis and fisheries stock assessment, geographic information systems, molecular genetics, salmon culture, and marine ecology. Juneau Center students also work in laboratories and facilities of other agencies in Juneau such as NOAA Fisheries’ Auke Bay Laboratory and Ted Stevens Marine Research Institute, the U.S. Geological Survey’s Glacier Bay Field Station, and the Alaska Department of Fish and Game’s Mark, Tag and Age Lab.

The center is adjacent to the National Marine Fisheries Service Ted Stevens Marine Research Institute in Auke Bay. For more information, visit http://www.sfos.uaf.edu/fishdiv/ or call 907-796-6441.

Kodiak Seafood and Marine Science Center

The Kodiak Seafood and Marine Science Center contributes scientific and technical expertise through teaching, research and service in fisheries, seafood science and technology, and marine biology. Faculty at KSMSC teach undergraduate and graduate classes in fisheries, seafood and marine biology, and provide informal education and training for industry, K–12 students and the public. KSMSC is the hub of applied seafood research for the state and also home to research related to marine mammal ecosystems, harmful algal blooms, and food science and marketing. Public service is provided through seafood and fishing industry consultations and partnerships with local organizations for economic development and increasing understanding of the local environment.

KSMSC faculty have expertise in fisheries, nutrition, food chemistry, food microbiology, marine mammal biology, seafood processing, seafood economics and seafood engineering. The Kodiak Center provides ready access to coastal and offshore marine systems in the Gulf of Alaska as well as freshwater streams and lakes.

The center is near the NOAA Kodiak Fisheries Research Center and the Alaska Department of Fish and Game. For more information, call 907-486-1500 or visit http://www.sfos.uaf.edu/ksmsc/.

UArctic

UAF is a founding member of UArctic (originally the University of the Arctic), a cooperative network of universities, colleges and other organizations committed to higher education and research in the North. The consortium’s goal is to create a strong, sustainable circumpolar region by empowering northerners and northern communities through education and shared knowledge. As part of this network, UAF participates in research and teaching partnerships and is a member of the student exchange program north2north, which provides opportunities for students from UArctic member institutions to experience different northern regions firsthand, and to share experiences face-to-face by allowing students to study at other UArctic institutions. For more information visit http://www.uaf.edu/arctic/.

University of Alaska Museum of the North

Voted the “Best Museum in Alaska,” the University of Alaska Museum of the North is a vital component of UAF’s research and education facilities as well as a thriving visitor attraction.

The museum’s research collections hold more than 1.4 million artifacts and specimens representing millions of years of biodiversity and more than 11,000 years of cultural traditions in the North. These collections form the foundation for the museum’s exhibits and education programs and serve as a critical source of data for issues unique to the circumpolar North. Using the collections, university students work with the museum’s faculty curators on original research aimed at interpreting the region’s dynamic environment and cultures.
The museum’s Rose Berry Alaska Art Gallery features 2,000 years of Alaska art — from ancient ivory carvings to contemporary sculptures. In the gallery of Alaska, exhibit highlights include the state’s largest gold display, extensive displays of Alaska Native art and artifacts, and Blue Babe, a 36,000-year-old mummified steppe bison.

In 2014, the museum began a five-year project to renovate the Gallery of Alaska. The current exhibit was installed in 1980 with minimal improvements in the intervening years. Since then, Alaska, the world and our understanding of it has changed. There are many new stories to tell. The new gallery will be immersive, allowing children and adults to engage with hands-on elements. By redesigning the casework and mounting techniques, the museum will also add to the sustained life of the collections. The new exhibits will be installed one section at a time, allowing the Gallery of Alaska to remain open to the museum’s nearly 90,000 annual visitors. The museum is raising funds from local and private sources to complete the project by 2018.

The museum also hosts several special exhibits each year. In addition, the museum presents artists’ residencies, lectures and family programs on a variety of Alaska topics, and runs the museum store, featuring Alaska jewelry, books and Alaska Native artwork.

For more information, visit http://www.uaf.edu/museum/ or call 907-474-7505.

**The UAF Experience**

**UAF — Then and Now**

UAF’s Fairbanks campus is four miles west of downtown Fairbanks, on a low ridge overlooking the Chena and Tanana river floodplains. Artifacts found on the bluff tell us tribal groups used the hill beginning perhaps 3,500 years ago. It offered a wide view of the flats below and probably served as a base camp for hunting and gathering.

**THE EARLY YEARS**

Gold discoveries in the early 1900s brought sudden changes to the Tanana Valley. In 1906 the hill where UAF now stands became part of a federal Agricultural Experiment Station, and in 1915 the U.S. Congress approved money and transferred a piece of land from this station to establish a school of higher education. The institution began as the Alaska Agricultural College and School of Mines, focusing on research and teaching in support of agriculture and mining. Two years later the Alaska Territorial Legislature added funding, and in 1922, when the first building was completed, the college opened its doors to students. In the first semester, a faculty of six offered 16 classes to a student body of 12. Commencement in 1923 consisted of a single graduate.

The institution quickly began to grow. In 1931 the federal government transferred the entire Agricultural Experiment Station to the college. In 1935 the Alaska Territorial Legislature changed the institution’s name to the University of Alaska to reflect the school’s expanding role in research, teaching and public service for all Alaska. By then, faculty and course offerings had grown to include liberal arts, science and engineering.

World War II brought a rapid influx of population and development to the territory. Wartime national awareness of the need for scientific polar research in the interests of defense and communications led to the establishment in 1946 of the Geophysical Institute. Since its inception, the GI has earned an international reputation for studies of the Earth and the physical environment at high latitudes. The university awarded its first Ph.D. degree to a geophysics student in 1955.

**STATEHOOD AND BEYOND**

The University of Alaska had a significant role in the statehood movement of the 1950s, when the Constitutional Convention was held on campus. The Alaska Constitution was drafted in what is now Constitution Hall and signed in stately Signers’ Hall, now the home of UAF student service and administrative offices. Alaska became the nation’s 49th state in 1959.

Research expanded broadly in the decade of the 1960s with the establishment of institutes in several disciplines. The Alaska Legislature created the Institute of Marine Science in 1960 and the Institute of Arctic Biology two years later. Since 1969 the Geophysical Institute has operated Poker Flat Research Range, providing launch facilities for NASA and the Department of Defense. Poker Flat is the only university-owned rocket range in the world.

In 1970 the university was designated a federal Sea Grant institution for marine research. Alaska Sea Grant develops and supports research, education, and outreach programs and partnerships to help sustain economic development, traditional cultural uses, and conservation of Alaska’s marine, estuarine and coastal watershed resources. Stations in Kodiak and Juneau are also actively involved in marine and fisheries research.

In 1972 the Alaska Legislature established the Alaska Native Language Center and provided operating funds. Since then the university has supported research, documentation and teaching of the state’s 20 Native languages.

To meet the need for expanding services for all Alaskans, the University of Alaska statewide system was created in 1975. Campuses in Anchorage and Juneau were assigned their own chancellors and central staffs, with the statewide administration and overall university president remaining in Fairbanks.

Meanwhile, the campus in Fairbanks continued to expand. The University of Alaska Museum of the North, one of the state’s most popular visitor attractions, moved into the Otto Geist Building in 1980. An expansion completed in 2006 nearly doubled the museum’s size and added a research center, learning center and Alaska art gallery. The museum’s unique collection offers the public a view of the rich and varied cultures of the North.

In 1981, UAF enrollment topped 5,000 students for the first time. The university also began to emphasize its shared scholarship and global education efforts in a series of agreements with schools in Japan, Denmark, Canada, India, People’s Republic of China, Russia and other countries. The institution branched out to include campuses in Bethel, Dillingham, Kotzebue, Nome and the Interior. Learning centers in other communities such as Fort Yukon, Galena, McGrath, Nenana, Tok and Unalaska provide additional education services to rural Alaskans.

UAF’s public service role is filled in part by the statewide Cooperative Extension Service with its 13 district offices. Public broadcasting stations KUAC FM and TV, the first public stations in the state, are headquartered at UAF.

In 1991 NASA named UAF a Space Grant institution for aerospace research, making it a Land, Sea and Space Grant institution, one of only a handful of triple-crown universities in the country.
TODAY

UAF’s colleges and schools offer degrees and certificates in 115 disciplines with a variety of vocational and technical programs. Graduate degrees are available in a wide range of academic study. UAF is internationally known for its Pacific Rim and circumpolar North research. It is consistently among the top 100 universities in the nation for funding from the National Science Foundation. UAF is the primary doctoral degree-granting institution in Alaska, offering Ph.D. degrees in anthropology, indigenous studies, several of the physical and natural sciences, psychology, mathematics and engineering. Master’s degrees are offered in almost 40 fields in the humanities, social sciences, northern studies, physical and natural sciences, and in professional fields such as engineering, justice, education and business administration. Interdisciplinary programs are possible for students who have a research focus in areas where UAF has faculty expertise and research facilities.

In 2017, UAF will celebrate 100 years of making important contributions to Alaska, helping find solutions to the state’s unique challenges in areas like Arctic engineering, wildlife biology, health care and education. UAF helps power Alaska’s economy by turning students into professionals for Alaska’s workforce.

Students

Individualism and diversity are Alaska traditions. At UAF, students find not only a broad mix of cultures and ages, but also a climate of respect for individual rights and preferences. A student from a rural Alaska village can share knowledge and insights with others from places as distant as Tallahassee or Tokyo. UAF’s enrollment in fall 2015 was 9,870 students. Of those, 58 percent are female and 42 percent male; 89 percent are undergraduate and 11 percent are graduate students. UAF students hail from 49 states and 48 foreign countries.

Many UAF students are nontraditional. They study at night or after work, and balance schoolwork with family responsibilities. The university offers a wide variety of evening and weekend classes. UAF students can attend classes through distance delivery from remote areas of Alaska or from anywhere in the world. Using computers, telephones and the Internet, students can take courses or work toward their degrees without leaving home.

Many students take advantage of UAF’s exchange programs to study at colleges and universities around the world, or through the National Student Exchange program, which offers studies at universities throughout the United States. There are more than 130 different student organizations on campus, with that number going up all the time. Students produce the weekly Sun Star newspaper, run KSUA, the campus radio station, and participate in scores of special interest groups.

Faculty

At UAF you find faculty members who are among the best in the country, and because of the low 12:1 student-faculty ratio, you receive more personal attention here than you would at almost any other public university in the nation. Once you have chosen a major, you will be assigned a faculty advisor from your academic department. Your advisor will help you choose classes each semester and will explain programs and requirements. You will get to know the faculty not just as professors, but as friends, advisors and mentors. Education is an individual process, different for each person. At UAF, you are an individual, not just a face in the crowd.

UAF’s Mission

The University of Alaska Fairbanks is a Land, Sea, and Space Grant university and an international center for research, education, and the arts, emphasizing the circumpolar North and its diverse peoples. UAF integrates teaching, research, and public service as it educates students for active citizenship and prepares them for lifelong learning and careers.

CORE THEMES

- **Educate**: Undergraduate and graduate students and lifelong learners
- **Research**: Create and disseminate new knowledge, insight, technology, artistic and scholarly works
- **Prepare**: Alaska’s career, technical and professional workforce
- **Connect**: Alaska Native, rural and urban communities by sharing knowledge and ways of knowing
- **Engage**: Alaskans through outreach for continuing education and community and economic development

Commitment to Quality

UAF has been accredited since 1934 by the Northwest Commission on Colleges and Universities. UAF acts continually to assess and improve the educational experience for its students. Students evaluate their teachers at the end of each semester; those student opinion reports are available at http://www.asuafstudentgov.org/teacher-and-course-evaluations1/. Faculty and administrators evaluate courses in the core curriculum every year. Each degree program and certificate is assessed at least every five years. Results are used to change and improve the education provided by UAF. The learning outcomes expected for each degree program can be viewed at http://www.uaf.edu/provost/assessment-review/assessment/.
GETTING STARTED

Applying for Admission: Occupational Endorsement Programs

When to Apply
Applications for admission to occupational endorsement programs are due no later than June 15 for fall semester, Nov. 1 for spring semester and May 1 for summer semester.

High school seniors are encouraged to apply for admission as early as the first semester of their senior year and should provide a high school transcript including a list of courses in progress.

How to Apply
To be admitted to UAF, a student must:

1. Submit an application for admission
   Apply online at http://www.uaf.edu/admissions/. Applications must be received before the published deadlines. There is no fee to apply for an occupational endorsement program.

2. Submit transcripts
   Most applicants to occupational endorsement programs are not required to submit high school or college transcripts, but all are strongly encouraged to do so. Transfer students who want to receive credit for prior work must submit official transcripts.

Admission Requirements
For admission to occupational endorsement programs, official documentation must be provided showing that the applicant meets program age requirements by the first day of the semester (see individual program descriptions for minimum age requirements).

Program Completion
Occupational endorsement programs require between 9 and 29 credit hours that will be posted to the student’s transcript upon completion and approval by the academic department. The credit hours may be applied to other undergraduate degree programs when applicable. Students should check with an advisor for the specific requirements for their program.

Where to Get More Information
Office of Admissions and the Registrar
University of Alaska Fairbanks
First floor, Signers’ Hall
P.O. Box 757480
Fairbanks, AK 99775-7480
Email: admissions@uaf.edu
Online: http://www.uaf.edu/admissions/
Telephone: 907-474-7500
Toll free: 800-478-1823
Fax: 907-474-7097

Applying for Admission: Certificate or Associate Degree Programs

When to Apply
Applications for admission to certificate or associate degree programs are due no later than June 15 for fall semester, Nov. 1 for spring semester and May 1 for summer semester.

High school seniors are encouraged to apply for admission as early as the first semester of their senior year and should provide a high school transcript including a list of courses in progress. Transfer students should apply at least three to four months before the beginning of the semester in which they plan to enroll.

How to Apply
To be admitted to UAF, a student must:

1. Submit an application for admission
   Apply online at http://www.uaf.edu/admissions/. Applications must be received before the published deadlines, along with a $40 nonrefundable application fee. The fee should be paid by check, credit card or money order to the University of Alaska Fairbanks. Please do not send cash.

2. Submit transcripts
   Most applicants to certificate and associate degree programs are not required to submit high school or college transcripts, but all are strongly encouraged to do so. Transfer students who want to receive credit for prior work must submit official transcripts.

3. Submit official test results
   Certificate and associate degree applicants with fewer than 30 semester credit hours must submit the results of the ACT Plus Writing, SAT or ACCUPLACER test taken within the last two years for English and composition placement. Students will also need to submit ALEKS test scores taken within the last year for placement into math, DEV4 or any course that requires a math prerequisite. Contact Testing Services at 907-474-5277 or your high school guidance office for information concerning the ACT Plus Writing, SAT or ACCUPLACER tests. Visit http://www.uaf.edu/admitted/aleks/ to take the ALEKS test.

INTERNATIONAL STUDENTS
See Applying for Admission: International Students (p. 28) page for additional information.

Admission Requirements
For admission to associate/certificate programs, official documentation must be provided showing that the applicant:

A. is at least 18 years old, or
B. has a high school diploma, or
C. has a General Educational Development (GED) diploma.

Students under the age of 18 who will not have a high school diploma or GED before the start of their first semester are not admissible but may take courses as a nondegree student. Please note that in order to qualify for federal financial aid, students must have either a high school diploma or a GED.
TRANSFER STUDENTS

Transfer students are eligible for admission if they left their previous accredited institution(s) in good standing. Admission status will be determined on an individual basis if a student attended an unaccredited/ nonregionally accredited postsecondary institution. Students transferring with fewer than 30 semester hours of credit must submit placement scores from the ACT Plus Writing, SAT or ACCUPLACER test for placement in English or composition courses, and the ALEKS test for placement into math courses. Test results must be less than two years old for English placement and less than one year old for math placement. See Transferring Credits (p. 30) page for more information.

HIGH SCHOOL STUDENTS

High school students may take classes at UAF. There are two enrollment options for students interested in certificate or associate degree programs: Secondary Student Enrollment and TECH PREP. Both have specific registration requirements but do not require admission to UAF.

HOME-SCHOOLED STUDENTS

Home-schooled students may be admitted to an associate or certificate program if the student is at least 18 years old, holds a GED, graduated from a state-sponsored correspondence program with a high school diploma, or with the approval of the director of admissions.

After Acceptance

Qualified applicants will receive a letter of acceptance once all items are received and evaluated. Qualified applicants who are in their last year of high school or are attending another college will receive conditional acceptance. Acceptance becomes final when the Office of Admissions and the Registrar receives official transcripts showing the student has satisfactorily completed all work in progress and that high school seniors have graduated. Acceptance to UAF is final only when the Office of Admissions and the Registrar has approved all necessary credentials.

For additional program-specific application requirements, please see program descriptions.

REQUEST TO POSTPONE

An offer of admission to UAF is valid for the semester for which the applicant applied. Requests to postpone admission until a later semester may be made to the Office of Admissions and the Registrar. Admission may be postponed for up to one calendar year.

READMISSION OF FORMER DEGREE STUDENTS

Undergraduate degree students who choose not to enroll for a semester or more may be eligible to re-enroll in their original degree program without reapplying for admission. Students remain eligible to register for classes if:

- they have not been academically disqualified,
- they have not attended a non-UA institution since they were last enrolled at UAF,
- their lapse in enrollment is less than two years, and
- they are continuing with the same degree program.

Students who meet all of the above requirements should consult with their academic advisor and register for classes. Students who do not meet all of these requirements should submit a new application for admission along with the $40 application fee and transcripts of any non-UA course work taken. Students who are unsure about their status should contact the Office of Admissions and the Registrar.

Fresh Start for Returning Students

Fresh Start can offer a new beginning for students who performed poorly at UAF and have taken at least a two-year break from classes. Students who withdrew from school or were dismissed for academic reasons may apply for readmission through the Fresh Start program and request that their entire prior academic record be disregarded. Students who qualify for Fresh Start will begin their college study anew, with no credits attempted or earned and no quality points reflected in future GPA calculations. Fresh Start can be used only once.

All prior course work will remain part of the student's overall academic record and appear on transcripts, but none of the previously earned credits can be used in a new program. These credits will be included only in GPA computations for graduation with honors (see Graduation with Honors (p. 88)). A student admitted under Fresh Start may be allowed advanced standing or a waiver of requirements just as any other student, but will not be allowed credit by exam for courses lost in Fresh Start. Students interested in Fresh Start should contact the Office of Admissions and the Registrar.

Readmission of Service Members

The Higher Education Opportunity Act of 2008 requires that students who left school to serve in the uniformed services be readmitted into the same program with the same standing they had when they left. UAF allows for special readmission of these students. More information is available at http://www.uaf.edu/veterans/.

Where to Get More Information

Office of Admissions and the Registrar
University of Alaska Fairbanks
First floor, Signers’ Hall
P.O. Box 757480
Fairbanks, AK 99775-7480
Email: admissions@uaf.edu
Online: http://www.uaf.edu/admissions/
Telephone: 907-474-7500
Toll free: 800-478-1823
Fax: 907-474-7097

Applying for Admission: Bachelor’s Degree Programs

When to Apply

Freshman and transfer applications for admission to a bachelor’s degree program are due no later than June 15 for fall semester, Nov. 1 for spring semester and May 1 for summer semester.

Applications are processed in the order they are received. Applications received after the published deadlines may not be processed by the beginning of the semester.

High school seniors are encouraged to apply for admission as early as the first semester of their senior year and should provide a high school transcript including a list of courses in progress. Transfer students should apply at least three to four months before the beginning of the semester in which they plan to enroll.
How to Apply

To be admitted to UAF, a student must:

1. **Submit an application for admission**
   
   Apply online at http://www.uaf.edu/admissions/. Applications must be received before the published deadlines, along with a $50 nonrefundable application fee. The fee should be paid by check, credit card or money order to the University of Alaska Fairbanks. Please do not send cash.
   
   Applications are processed in the order they are received. Applications received after the published deadlines may not be processed by the beginning of the semester.

2. **Submit transcripts**
   
   To be considered official, transcripts must arrive in sealed envelopes from each institution attended.
   
   **High school transcripts** — Applicants with no college course work or fewer than 30 semester credit hours of college credit must submit official high school transcripts. Students currently enrolled in high school may submit unofficial, in-progress transcripts for admissions review. Acceptance becomes final when official transcripts with degree earned are received.
   
   **College transcripts** — Applicants who have college-level course work must send official college or university transcripts to UAF.
   
   **International** — See Applying for Admission: International Students (p. 28) page for additional information.

3. **Submit official test results**
   
   Freshman and transfer applicants with fewer than 30 semester credit hours must submit the results of either the ACT or the SAT examination. Please note that the ACCUPLACER, ASSET, COMPASS, ALEKS or other placement tests do not satisfy this requirement.

INTERNATIONAL STUDENTS

See Applying for Admission: International Students (p. 28) page for additional information.

**Admission Requirements**

For admission to baccalaureate-level programs, applicants must fulfill either:

**Option 1:**

a. have a high school diploma, and

b. pass the 16-credit high school core curriculum (see High School Entrance Requirements (p. 25)) with a GPA of at least 2.5, and

c. have a cumulative GPA of 3.0. No minimum ACT or SAT score is required, OR

**Option 2:**

a. have a high school diploma, and

b. pass the 16-credit high school core curriculum (see High School Entrance Requirements (p. 25)) with a GPA of at least 2.5, and

c. have a cumulative GPA of 2.5, and

d. submit results of the ACT with a score of 18 or SAT with a score of 955. UAF will continue to accept test scores of 1290 from the previous version of the SAT.

Admission to a specific bachelor’s degree program is based on a combination of your high school GPA and completion of specific high school courses. See High School Entrance Requirements (p. 25) to specific colleges and schools within the university.

Test results from the ACT or SAT must be received before a student can be fully admitted.

**HIGH SCHOOL ENTRANCE REQUIREMENTS FOR ALL BACHELOR’S DEGREE PROGRAMS**

**High School Core Curriculum**

Required for all freshmen; 2.50 GPA in core; 16 credits total, which must include:

<table>
<thead>
<tr>
<th>English</th>
<th>Math</th>
<th>Social Sciences</th>
<th>Natural/Physical Sciences</th>
<th>Foreign Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 cr</td>
<td>3-4 cr in college preparatory mathematics (selected from Algebra I, II, geometry, trigonometry, elementary functions, precalculus or calculus)</td>
<td>3-4 cr</td>
<td>3-4 cr (includes 1-cr lab science course in biology, chemistry or physics)</td>
<td>2 cr</td>
</tr>
</tbody>
</table>

**College of Engineering and Mines • College of Natural Science and Mathematics • School of Fisheries and Ocean Sciences • School of Natural Resources and Extension**

| 4 cr | Algebra-2 cr; Geometry-1 cr; Trigonometry-1/2 cr; At least an additional 1/2 cr of advanced math is recommended for computer science, mathematics, physics, statistics and engineering. | 3-4 cr | Physics or Chemistry-1 cr; Natural Sciences-1 cr; Elective-1 cr. Both physics and chemistry are strongly recommended for engineering. | Same as high school core |

**College of Liberal Arts • School of Management • College of Rural and Community Development • General Studies (undecided or exploratory)**
4 cr  
Same as high school core; 3-4 cr  
School of Management students should be well-prepared in mathematics with at least Algebra II, but precalculus or higher is preferred.

1 Recommended but not required.

**PRE-MAJOR**

Students who have not met the minimum requirements for admission to a baccalaureate degree program will be admitted to pre-major status within the department of their choice.

Students will be changed to major status when they are in good standing and have completed 14 credits at the 100 level or above with a C (2.0) average or higher; 9 of the 14 credits must satisfy baccalaureate core requirements.

**GENERAL STUDIES**

Students accepted to bachelor’s programs that do not select a major will be admitted as general studies students. Students receiving GI assistance or veterans’ benefits may be required to change to a declared major to keep their benefits award. Students must have declared a major to participate in the Western Undergraduate Exchange program.

**TRANSFER STUDENTS**

A transfer student is defined as someone coming into the university who has been a degree student at any other institution prior to the semester applied for. Students with more than 30 university credits must only submit prior college transcript(s). Students with less than 30 credits must submit high school transcripts and test scores in addition to their college transcripts, and will be evaluated based on all three. Transfer students are eligible for admission to a bachelor’s program if they have a 2.0 GPA in their previous course work and left their previous institution(s) in good standing. If applying to a technical or scientific program, students may need to present a higher grade average and proof that they have completed appropriate background courses before they will be admitted. Admission status for students who have attended an unaccredited postsecondary institution will be determined on an individual basis. See Transferring Credits (p. 30) for more information.

**PROBATIONAL ACCEPTANCE**

Applicants with previous college course work may be admitted with probationary status or an academic warning if their cumulative or most recent term grade point average is less than C (2.0).

**HIGH SCHOOL STUDENTS**

High school students may take classes at UAF. The Alaska Higher Education Admission Decision program requires formal admittance to UAF. The other two enrollment options, Secondary Student Enrollment and TECH PREP, have specific registration requirements but do not require admission to UAF.

**AHEAD PROGRAM**

The Alaska Higher Education Admission Decision program allows qualified high school students to be formally admitted to UAF as general studies students. AHEAD students are assigned an academic advisor and follow the registration timeline for degree students. To qualify, students must have completed three-fourths of their high school core curriculum and have a cumulative 3.0 GPA or higher. Students who wish to apply to the AHEAD program may get a program application from the Office of Admissions and the Registrar.

**HOME-SCHOOLED STUDENTS**

Home-schooled students who have gone through a state-recognized program and have a valid high school diploma may be admitted to a bachelor’s program according to UAF admission standards. See How to Apply section (p. 25) for more information.

For home-schooled students who have not gone through a state-recognized program, admission to a bachelor’s degree is through an individual review by the director of admissions (or a designee). Applicants are required to submit scores from either the SAT or ACT and the ALEKS exam to determine math placement prior to an admission review. Additional supporting documentation, such as letters of recommendation, may be requested for review by the director of admissions. In some cases, files will be shared with deans, department chairs or faculty for further review.

Students who have not met the minimum requirements for admission to a bachelor’s degree program may be admitted to pre-major status within the department of their choice. Students will be changed to major status when their admissions file is complete, they are in good standing, and they have completed 14 credits at the 100 level or above with a C (2.0) average or higher, 9 credits of which must satisfy baccalaureate core requirements.

**After Acceptance**

**CONDITIONAL AND FINAL ACCEPTANCE**

Qualified applicants will receive a letter of acceptance once all required items are received and evaluated. Qualified applicants who are in their last year of high school or are attending another college will receive conditional acceptance. Acceptance becomes final when the Office of Admissions and the Registrar receives official transcripts showing the student has satisfactorily completed all work in progress and that high school seniors have graduated. Acceptance to UAF is final only when the Office of Admissions and the Registrar has reviewed all necessary credentials.

**REQUEST TO POSTPONE**

An offer of admission to UAF is valid for the semester for which the applicant applied. Requests to postpone admission until a later semester must be made in writing to the Office of Admissions and the Registrar. Admission may be postponed for up to one calendar year. Students are required to notify the Office of Admissions and the Registrar if they are attending another school outside the University of Alaska statewide system.
APPLYING FOR A SECOND BACHELOR’S DEGREE
Upon official acceptance to a UAF undergraduate degree program, a student who earned a bachelor’s degree from a regionally accredited institution will be considered to have completed the equivalent of the UAF baccalaureate core.

READMISION OF FORMER DEGREE-SEEKING STUDENTS
Undergraduate degree students who choose not to enroll for a semester or more may be eligible to re-enroll in their original degree program without reapplying for admission. Students remain eligible to register for classes if:

- they have not been academically disqualified,
- they have not attended a non-UA institution since they were last enrolled at UAF,
- their lapse in enrollment is less than two years, and
- they are continuing with the same degree program.

Students should be aware that poor academic performance at other campuses in the UA system may affect academic standing upon their return to UAF. Students who meet all of the above requirements should consult with their academic advisor and register for classes. Students who do not meet all of these requirements should submit an undergraduate application for admission along with the $50 application fee and transcripts of any non-UA course work taken. Students who are unsure about their status should contact the Office of Admissions and the Registrar.

Fresh Start for Returning Students
Fresh Start can offer a new beginning for students who performed poorly at UAF when they last attended, and who have taken at least a two year break from classes. Those who withdrew from school or were dismissed for academic reasons may apply for readmission and request that their entire prior academic record be disregarded. Students who qualify for Fresh Start begin their college study anew with no credits attempted or earned, and no quality points reflected in future GPA calculations. Fresh Start can be used only once. All prior course work will remain part of the student’s overall academic record and appear on transcripts, but none of the previously earned credits can be used in a new program. These credits will be included only in GPA computations for graduation with honors (see Graduation with Honors [p. 136]). A student admitted under Fresh Start may be allowed advanced standing or a waiver of requirements just as any other student, but will not be allowed credit by exam for courses lost in Fresh Start.

Readmission of Service Members
The Higher Education Opportunity Act of 2008 requires that students who left school to serve in the uniformed services be readmitted into the same program with the same standing they had when they left. UAF allows for special readmission of these students. More information is available at http://www.uaf.edu/admissions/other/military/.

Where to Get More Information
Office of Admissions and the Registrar
University of Alaska Fairbanks
First floor, Signers’ Hall
P.O. Box 757480
Fairbanks, AK 99775-7480
Email: admissions@uaf.edu
Online: http://www.uaf.edu/admissions/

Applying for Admission: Graduate Degree Programs
When to Apply
Applicants should apply to a graduate degree program at least six to nine months before the beginning of the semester in which they plan to enroll. Most departments require earlier submission of credentials for acceptance to their program. Contact the department for specific deadlines. The number of students accepted for graduate study is limited.

At the latest, applications for graduate admission with all supporting documentation must be received by June 1 for the fall semester and Oct. 15 for the spring semester. Earlier deadlines apply for international applicants.

Graduate students are strongly encouraged to apply early. Applications received near deadline will be processed as time permits or may be considered for the following semester.

How to Apply
To be admitted to UAF, a student must:

1. Submit an application for admission
   Apply online at http://www.uaf.edu/admissions/. Applications must be received before the published deadlines, along with a $60 nonrefundable application fee. The fee should be paid by check, credit card or money order to the University of Alaska Fairbanks. Please do not send cash.

2. Submit official transcripts
   The Office of Admissions and the Registrar requires official transcripts of all college-level course work. To be considered official, transcripts must arrive in sealed envelopes from each institution attended.

Transcripts for International Applicants
See Applying for Admission: International Students (p. 28) page for additional information.

3. Submit official test results
   Not all departments require Graduate Record Exam scores if the student has earned a GPA of 3.0 or higher. Refer to the admission requirements of your prospective degree program to determine which tests are required.

4. Submit resume/curriculum vitae
   Include work and research experience, publications, patents, honors, professional and civic memberships, and foreign travel.

5. Submit statement of academic goals
   Write a statement indicating why study is desired in a particular program. Include qualifications and educational experience. For applicants to education programs, a four-to-five-page self-evaluation essay is required.

6. Submit three letters of recommendation
   Send at least three letters of recommendation from people able to vouch for the applicant’s academic work, character and ability to undertake graduate study and research.
ADDITIONAL APPLICATION INFORMATION

- **Master of Fine Arts Applicants**
  Master of fine arts applicants must submit writing samples when applying for admission to the creative writing program. An art portfolio (usually slides) must be submitted when applying to the program in art.

- **Interdisciplinary Applicants**
  Submit a Proposed Graduate Study Plan (available at http://www.uaf.edu/inds/) and a comprehensive research proposal. Applicants must also obtain commitment from UAF faculty members to serve as an advisory committee. Contact the Graduate School for specific interdisciplinary procedures.

- **International Students**
  See Applying for Admission: International Students (p. 28) page for additional information.

- **Students in Western Regional Graduate Programs**
  Students from Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington and Wyoming may be eligible for resident tuition through the Western Regional Graduate Program/Western Interstate Commission for Higher Education. This program is for students pursuing a graduate degree in clinical-community psychology, justice, northern studies or rural development. For more information about this program, contact the Graduate School at 907-474-7464, uaf-grad-school@alaska.edu, or online at http://www.uaf.edu/gradsch/. Students with questions may also contact the WICHE Student Exchange Program at P.O. Box 9752, Boulder, CO 80301-9752, 303-541-0210, or http://wiche.edu/wrgp/.

Admission Requirements

In general, applicants may be admitted to a graduate program if they have a bachelor’s degree from an accredited institution with at least a 3.0 (B) cumulative undergraduate GPA and a 3.0 (B) GPA in their major. The undergraduate major should provide suitable preparation for continuation of studies in the field of choice. Some programs require the Graduate Record Exam or Graduate Management Admission Test and other special criteria for admission.

For the purposes of admission to graduate study, all grades, including those generated from retaking a course, are included in calculating GPA.

If an applicant meets the minimum requirements for the university, the Office of Admissions and the Registrar sends the complete application to the academic department. Program heads and/or committees in fields of interest will determine the adequacy of the student’s preparation and whether or not departmental facilities are sufficient for their aims.

Information on specific degree programs is available from academic departments or by contacting the Graduate School at 907-474-7464, uaf-grad-school@alaska.edu, or http://www.uaf.edu/gradsch/.

After Acceptance

Qualified applicants can be accepted for admission while enrolled in their last semester at another college. Acceptance is conditional, pending receipt of the final transcript indicating satisfactory completion of work in progress and the completion of graduation requirements prior to enrollment at UAF.

Final acceptance to UAF is complete only when the Office of Admissions and the Registrar receives and accepts all credentials.

REQUEST TO POSTPONE

An offer of admission to UAF is valid for the semester for which the applicant applied. Requests to postpone admission until a later semester should be sent to admissions@uaf.edu. Admission may be postponed for up to one calendar year with the approval of the academic department and the dean of the graduate school. All graduate student requests to postpone are subject to approval by the department to which the student is applying.

Where to Get More Information

Office of Admissions and the Registrar
University of Alaska Fairbanks
First floor, Signers’ Hall
P.O. Box 757480
Fairbanks, AK 99775-7480
Email: admissions@uaf.edu
Online: http://www.uaf.edu/admissions/
Telephone: 907-474-7500
Toll free: 800-478-1823
Fax: 907-474-7097

Graduate School
University of Alaska Fairbanks
202 Eielson Building
PO Box 757560
Fairbanks, AK 99775-7560
Email: uaf-grad-school@alaska.edu
Online: http://www.uaf.edu/gradsch/
Telephone: 907-474-7464

Applying for Admission: International Students

When to Apply

International students may apply for admission to associate, bachelor and graduate-level degrees. Applications for admission from international students are due no later than Jan. 15 for the fall semester and Sept. 1 for the spring semester. For graduate applicants, it is important to note that certain departments maintain earlier deadlines.

International students must complete all UAF application requirements as well as meet requirements for U.S. immigration agencies. I-20s Certification of Eligibility for F-1 Status cannot be issued for programs that are offered only through distance delivery. I-20s are not issued for the A.A.S. degree in professional piloting.

Admission Requirements

More information regarding the process for application to associate, bachelor or graduate programs can be found in the Getting Started (p. 23) section.

UNDERGRADUATE APPLICANTS

To be admitted to UAF, a student must:

1. Apply online at http://www.uaf.edu/admissions/. The $50 application fee should be paid by check, credit card or money order in U.S. funds to the University of Alaska Fairbanks. Please do not send cash.
2. Send official secondary school and/or university transcripts to an approved credential evaluation agency and request a comprehensive course-by-course credential report. Visit http://www.uaf.edu/
admissions/apply/international/ for a list of approved service providers. Transcripts from Canadian institutions (excluding Quebec) are exempt from this requirement; they may be sent directly from the issuing institution.

3. Submit certified official secondary school and/or university transcripts and English translations. It is required that official transcripts of all high school and/or college-level course work be signed and sealed by a registration official of the institution(s) attended.

4. Submit test scores from the SAT or ACT exam.
5. Submit official TOEFL or IELTS test scores.
6. Submit a copy of the student’s passport identification page.
7. Complete UAF’s financial statement form and provide supporting documentation showing adequate funding to cover all expenses at UAF, including round-trip transportation to Alaska.

GRADUATE APPLICANTS
To be admitted to UAF, a student must:

1. Apply online at http://www.uaf.edu/admissions/. The $60 application fee should be paid by check, credit card or money order in U.S. funds to the University of Alaska Fairbanks. Please do not send cash.
2. Review your department’s department-specific requirements and application deadlines.
3. Submit certified official university transcripts and English translations. To be considered official, transcripts must arrive in sealed envelopes from each institution attended. If the transcript does not show that a bachelor’s degree has been or will be awarded, a diploma must also be sent.
4. Submit official GRE or GMAT test scores. Not all departments require GRE scores if the student has earned a GPA of 3.0 or higher. Refer to the admission requirements of your prospective degree program to determine which tests are required.
5. Submit a resume/curriculum vitae. Include work and research experience, publications, patents, honors, professional and civic memberships, and foreign travel.
6. Submit a statement of academic goals. Write a statement indicating why study is desired in a particular program. Include qualifications and educational experience. (For applicants to education programs, a four-to-five page self-evaluation essay is required.)
7. Submit three letters of recommendation. Send at least three letters of recommendation from people able to vouch for the applicant’s academic work, character and ability to undertake graduate study and research.
8. Submit official TOEFL or IELTS test results.
9. Submit a copy of the student’s passport identification page.
10. Complete UAF’s financial statement form and provide supporting documentation showing adequate funding to cover all expenses at UAF.

Required Funding Amounts
The minimum estimated cost for one school year at UAF for an international student is $34,935 for undergraduate students and $34,255 for graduate students. (Students taking College of Engineering and Mines and School of Management courses: $36,040 undergraduate and $35,860 graduate.) This covers university fees, room and board on campus, and a reasonable amount of personal expenses. It does not include transportation to and from Alaska, summer living or winter clothing costs. Add approximately $4,500 for summer living expenses.

Residents of countries which hold approved sister city/sister province agreements qualify for resident tuition. A complete list of sister cities and provinces is listed below. Students on an F-1 visa who are not from a UA sister city or province are not eligible for resident tuition. For international students who are residents of a sister city, the estimated cost for one school year at UAF is $22,325 for an undergraduate and $25,300 for a graduate student. (Students taking College of Engineering and Mines and School of Management courses: $23,430 undergraduate and $26,905 graduate.)

UA SISTER CITIES AND PROVINCES

<table>
<thead>
<tr>
<th>Country</th>
<th>City or Province</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Darwin</td>
</tr>
<tr>
<td>Canada</td>
<td>Inuvik, Northwest Territory and</td>
</tr>
<tr>
<td></td>
<td>Whitehorse, Yukon Territory</td>
</tr>
<tr>
<td>China</td>
<td>Harbin, Heilongjiang Province</td>
</tr>
<tr>
<td>Great Britain</td>
<td>Whiby, England</td>
</tr>
<tr>
<td>India</td>
<td>Pune</td>
</tr>
<tr>
<td>Japan</td>
<td>Chitose, Hokkaido Prefecture, Kanayama, Nemuro, Noshiro, Obihiro, Saroma, Teshio</td>
</tr>
<tr>
<td>Korea</td>
<td>Incheon</td>
</tr>
<tr>
<td>Mongolia</td>
<td>Erdenet City</td>
</tr>
<tr>
<td>Norway</td>
<td>Hammerfest, Mo, Tromsø</td>
</tr>
<tr>
<td>Philippines</td>
<td>Camiling</td>
</tr>
<tr>
<td>Russia</td>
<td>Khabarovsk Region, Magadan, Mirnyy, Noglicki, Okha, Providenya, Vladivostok, Yakutsk, Yelisovo</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Chiayi Township</td>
</tr>
</tbody>
</table>

Immigration Requirements
Once a student has been accepted to UAF, the Office of International Programs and Initiatives will issue a Form I-20, which must be presented at a U.S. embassy or consulate in the country of citizenship in order to obtain an F-1 (student) visa. The I-20 form requires the university to certify to U.S. immigration agencies that a student has been accepted for full-time enrollment and has sufficient funds to meet estimated expenses for an academic program.

If a student is already in the United States on an F-1 visa, the SEVIS record may be transferred as long as the record is in SEVIS active status.

English Proficiency Requirements
Students on an F-1 visa are required to submit scores from the TOEFL (Test of English as a Foreign Language) or the IELTS (International English Language Testing System) exam. English proficiency may be demonstrated by:

1. A minimum TOEFL score of 79.
2. A minimum IELTS score of 6.5.
3. Completion of secondary education in Great Britain, New Zealand, Australia or Canada (excluding Quebec).
Requests for exception to this policy may be submitted via email to the Office of Admissions and the Registrar. Acceptable grounds for waiving this requirement may include:

1. Successful completion (C or higher) of a college-level, non-ESL English composition course.
2. A comparable score on another approved exam such as the ACT, SAT or ACCUPLACER exam.

Request to Postpone

If applicants are unable to attend, they must notify the Office of Admissions and the Registrar and the Office of International Programs and Initiatives. Students may request to postpone their admission for up to one calendar year. For graduate applicants, acceptance is not guaranteed for a future semester. An updated financial statement and current supporting financial documents will be required from all students.

Where to Get More Information

Office of Admissions and the Registrar
University of Alaska Fairbanks

Transferring Credits

Credit accepted at UAF that has been earned from other regionally accredited institutions, through military educational experiences, or credit accepted by special approval is considered transfer credit. Where possible, transfer credit is equated with UAF courses. See the Table of GER Substitutions (p. 32): UA System (p. 32) for a list of substitutions within the University of Alaska system and the Table of GER Substitutions: Non-UA Institutions (p. 31) for substitutions from non-UA institutions.

UAF is a member of the Servicemembers Opportunity Colleges network. For additional information about the SOC program, see http://www.uaf.edu/veterans/soc/ or contact the Office of Admissions and the Registrar.

UAF’s transfer credit resource website at http://uaonline.alaska.edu shows most courses previously evaluated by UAF and is an unofficial reference for undergraduate students who are considering transferring to UAF. An official evaluation of transfer credits will be provided after formal application and admission to a degree program at UAF.

The following regulations apply to transfer of credit:

1. Students are eligible for transfer of credit if they have been admitted to an undergraduate degree or certificate program.
2. The applicability of transfer credit to a student’s major and/or minor requirements is subject to approval by the major and/or minor department. Transfer students must fulfill the UAF graduation and residency requirements, including those specific to their programs.
3. Undergraduate credits earned at the 100 level or above with a C- grade or higher at institutions accredited by one of the six regional accrediting agencies will be considered for transfer. Transfer credit is not granted for courses with doctrinal religious content or for graduate courses (for undergraduate programs).

Note: For information about transferring graduate credits to meet graduate program requirements, see Transfer Credit (p. 242) under How to Earn a Graduate Degree or contact the Graduate School at uaf-grad-school@alaska.edu or 907-474-7464.

4. Transfer credit is awarded for courses in which the student received grades of C- or better. Instructor permission may be required for purposes of registration if the transfer credit courses have not satisfied the prerequisite requirements.
5. Any student who has completed a bachelor’s degree from a regionally accredited institution will be considered to have completed the equivalent of the baccalaureate general education requirements, the Associate of Arts general education requirements and the Associate of Science general education requirements when officially accepted to a bachelor’s, Associate of Arts or Associate of Science program at UAF. These students will also be considered to have completed the communication, computation and human relations requirements for the Associate of Applied Science and the certificate.
6. Any student who has completed an Associate of Arts or an Associate of Science degree from a regionally accredited institution will be considered to have satisfied the 100- and 200-level UAF general education requirements.
7. Any transfer student who has completed the baccalaureate general education requirements at any regionally accredited four-year institution will be considered to have completed the baccalaureate general education requirements (excluding oral intensive and writing intensive) at UAF. The student is responsible for providing an official statement and documentation certifying general education requirements completion at the previous institution.
8. Transfer credit is not included in computation of the UAF GPA except to determine eligibility for graduation with honors.
9. Class standing (e.g., freshman, sophomore) is based on the number of college credits accepted in transfer by UAF, combined with any courses completed in residence at UAF.
10. Credits may be awarded for formal service schooling and military occupational specialties (MOS) based on recommendations published by the American Council on Education. ACE military credit recommendations can be found at http://www2.acenet.edu/credit/?fuseaction=search.main. The award of credit is subject to review and approval of appropriate UAF faculty.

11. A student will be awarded credit for currently valid government and professional certifications that have been reviewed and approved for designated course equivalencies at UAF. A list of these programs is available in the Office of Admissions and the Registrar.

12. Credit may also be awarded for satisfactory completion of training programs, based on recommendations of the American Council on Education. ACE college credit recommendations can be found at http://www2.acenet.edu/credit/?fuseaction=search.main. The award of credit is subject to review and approval of appropriate UAF faculty.

Table of GER Substitutions: Non-UA Institutions

This table describes courses accepted by transfer to UAF from institutions outside the University of Alaska system that may substitute for UAF’s general education requirements. Students transferring from either UAA or UAS should consult Table of GER Substitutions: UA System (p. 32), or visit http://www.uaf.edu/admissions/apply/transfer/.

<table>
<thead>
<tr>
<th>UAF General Education Courses</th>
<th>Transfer Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL F111X</td>
<td>the required first-semester composition course at the 100 level (must be basic freshman composition and not developmental)</td>
</tr>
<tr>
<td>ENGL F211X or ENGL F213X</td>
<td>the second half of the introductory composition series at the 100 level or above</td>
</tr>
<tr>
<td>COMM F121X, COMM F131X or COMM F141X</td>
<td>a 100-level or above performance course in fundamentals of speech communication, public speaking or small group communication</td>
</tr>
<tr>
<td>Library and Information Research (0-1 credit)</td>
<td>a 100-level library skills course</td>
</tr>
<tr>
<td>Arts (3 credits)</td>
<td>an introductory course in the arts which does not stress skills acquisition</td>
</tr>
<tr>
<td>Humanities (3-5 credits)</td>
<td>an introductory course in the humanities</td>
</tr>
<tr>
<td>Social Sciences (6 credits)</td>
<td>introductory courses in different social sciences disciplines</td>
</tr>
<tr>
<td>Additional Arts/Humanities/Social Sciences (3-5 credits)</td>
<td>see Arts, Humanities, Social Sciences above</td>
</tr>
<tr>
<td>Ethics (Values and Choices): BA F323X, COMM F300X, JUST F300X, NRM F303X, PHIL F322X or PS F300X</td>
<td>an upper-division course in ethics, or, with approval of the Philosophy Department, a lower-division course in ethics</td>
</tr>
<tr>
<td>MATH F113X, MATH F122X, MATH F151X, MATH F152X or MATH F156X</td>
<td>a 100-level or above mathematics course having a prerequisite of at least two years of high school algebra</td>
</tr>
<tr>
<td>MATH F230X, MATH F251X, MATH F252X, MATH F253X or STAT F200X</td>
<td>a calculus or statistics course at the 100 level or above</td>
</tr>
<tr>
<td>Natural Sciences (8 credits)</td>
<td>courses in basic natural sciences (biology, chemistry, earth sciences, physics) with labs, at the 100 level or above. Non-lab courses are transferable only as a second natural science course. To fulfill general education requirements, a transfer student must complete two lab courses or two labs. Transfer of credit for courses in a natural science other than those listed requires approval of the dean of the College of Natural Science and Mathematics.</td>
</tr>
</tbody>
</table>

Transferring Credits within the UA System

In general, undergraduate credits earned at the 100 level or above at a University of Alaska institution will transfer to UAF. In addition, in order to serve students who transfer among the three institutions that make up the University of Alaska system, UAF, UAA and UAS have identified fully transferable general education requirements for baccalaureate degrees.

Credit for course work successfully completed at one UA institution which applies to general education requirements will fulfill the same categories at all other UA institutions. This applies even if there is no directly matching course work at the institution to which the student transfers.

Transfer students from UAA or UAS who have completed all general education requirements in the baccalaureate program before transferring to UAF will have completed all requirements for the UAF baccalaureate general education requirements. Courses taken to complete the general education requirements at UAA or UAS will meet UAF baccalaureate general education requirements according to the current Table of GER Substitutions: UA System (p. 32). Students should notify the UAF Office of Admissions and the Registrar if they completed the general education requirements at UAA or UAS prior to enrollment in a major program of study at UAF.

In accordance with UA Board of Regents policy, completion of the 38-44 credits of the UAF baccalaureate general education requirements (excluding the writing and oral intensive upper-division requirements) meets the general education requirements at UAA and UAS.

For more information about transfer credit visit http://www.uaf.edu/admissions/apply/transfer/.
Table of GER Substitutions: UA System

Use this course substitution table to determine how individual courses that meet UAA or UAS general education requirements may substitute for individual UAF baccalaureate core courses. This table applies only to courses taken within the University of Alaska system. Students transferring courses from outside the UA system should consult Table of Substitutions: Non-UA Institutions (p. 31) or visit http://www.uaf.edu/admissions/apply/transfer/.

<table>
<thead>
<tr>
<th>To meet these UAF General Education course requirements</th>
<th>Use any of these UAA general education courses</th>
<th>Use any of these UAS general education courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>WRITTEN COMMUNICATION (3 cr)</td>
<td>ENGL F111X</td>
<td>ENGL A111</td>
</tr>
<tr>
<td>WRITTEN COMMUNICATION (3 cr)</td>
<td>ENGL F211X or ENGL F213X</td>
<td>ENGL A211, ENGL A212, ENGL A213, ENGL A214,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ENGL S211, ENGL S212</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ENGL A311, ENGL A312, ENGL A414</td>
</tr>
<tr>
<td>ORAL COMMUNICATION (3 cr)</td>
<td>COMM F121X, COMM F131X or COMM F141X</td>
<td>COMM A111, COMM A235, COMM A237, COMM A241</td>
</tr>
<tr>
<td></td>
<td></td>
<td>COMM S111, COMM S235, COMM S237, COMM S241</td>
</tr>
<tr>
<td>ARTS (3 cr)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete one of the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANS F161X; ANS F202X, ANS F223X; ART F200X, ART F261X,</td>
<td>AKNS A215, AKNS A216; ART A160; DNCE A170;</td>
<td></td>
</tr>
<tr>
<td>F217X; JRN F105X, JRN F217X; MUS F103X, MUS F125X, MUS</td>
<td>A221, MUS A222; THR A111</td>
<td></td>
</tr>
<tr>
<td>F200X, MUS F223X, NORS F223X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOCIAL SCIENCES (6 cr)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete two courses in two different disciplines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete two courses in two different disciplines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANCT F261X; ANS F242X; ANTH F100X, ANTH F101X, ANTH</td>
<td>ANTH A101, ANTH A200, ANTH A202, ANTH A250;</td>
<td></td>
</tr>
<tr>
<td>F111X, ANTH F211X, BA F151X, COMM F180X, ECE F104X;</td>
<td>BA A151; CEL A292; ECON A100, ECON A123; ECO</td>
<td>ANTH S101, ANTH S202, ANTH S211; ECON S100,</td>
</tr>
<tr>
<td>ECON F100X, ECON F201X, ECON F202X, ECON F235X, GEOG</td>
<td>N A201, ECON A202, ECON A210; EDEC A105; ECO</td>
<td>S101, ECON S201, ECON S202; GEOG S101; HIST</td>
</tr>
<tr>
<td>F101X; HIST F100X, HIST F102X, HIST F122X, HIST F132X;</td>
<td>N A105; ENVI A212; GEOG A101; HIST A101, HIST</td>
<td>S105, HIST S106, HIST S131, HIST S132; PS</td>
</tr>
<tr>
<td>JUST F110X, PS F100X, PS F201X, PSY F101X, RD F200X,</td>
<td>A102, HIST A121, HIST A122, HIST A131, HIST</td>
<td>S101, PS S102, PS S202, PS S251, PSY S101,</td>
</tr>
<tr>
<td>SWK F103X; SOC F100X, SOC F201X; WGS F201X</td>
<td>A132, HIST A341; HNRS A292; HS A220; INTL</td>
<td>PS S250; SOC S101, SOC S201</td>
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<tr>
<td></td>
<td>A101; JPC A204; JUST A110, JUST A251, JUST</td>
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<tr>
<td></td>
<td>A330, JUST A375; LEGL A101; LSSS A111; PS</td>
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</tr>
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<td></td>
<td>A101, PS A102, PS A311, PS A351; PSY A111,</td>
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<tr>
<td></td>
<td>PSY A150, PSY A200; SOC A101, SOC A110, SOC</td>
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<tr>
<td></td>
<td>A201, SOC A202, SOC A251, SOC A342; SOC A351;</td>
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</tr>
<tr>
<td></td>
<td>SWK A106, SWK A243; URS A121, WS A200</td>
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</table>

HUMANITIES (3-5 cr)

Complete one of the following:

<table>
<thead>
<tr>
<th>Complete one of the following:</th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>ANS A101, ANTH A200, ANTH A202, ANTH A250; BA A151;</td>
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<td></td>
</tr>
<tr>
<td>CEL A292; ECON A100, ECON A123; ECON A201, ECON A202,</td>
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</tr>
<tr>
<td>ECON A210; EDEC A105; ENVI A212; GEOG A101; HIST A101,</td>
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</tr>
<tr>
<td>HIST A102, HIST A121, HIST A122, HIST A131, HIST A132,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIST A341; HNRS A292; HS A220; INTL A101; JPC A204;</td>
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<td></td>
</tr>
<tr>
<td>JUST A110, JUST A251, JUST A330, JUST A375; LEGL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A101; LSSS A111; PS A101, PS A102, PS A311, PS A351;</td>
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<td></td>
</tr>
<tr>
<td>PSY A111, PSY A150, PSY A200; SOC A101, SOC A110, SOC</td>
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<td></td>
</tr>
<tr>
<td>A201, SOC A202, SOC A251, SOC A342; SOC A351; SWK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A106, SWK A243; URS A121, WS A200</td>
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<td></td>
</tr>
<tr>
<td>Additional ARTS/HUMANITIES/SOCIAL SCIENCES (3-5 cr)</td>
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<td></td>
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<tr>
<td>-----------------------------------------------------</td>
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</tr>
<tr>
<td>Complete one additional course from the Arts, Humanities or Social Sciences courses listed above.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ETHICS (3 cr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete one of the following:</td>
</tr>
<tr>
<td>BA F323X; COMM F300X; JUST F300X; NRM F303X; PHIL F322X; PS F300X</td>
</tr>
<tr>
<td>PHIL A301, PHIL A305</td>
</tr>
<tr>
<td>PHIL S301</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MATHEMATICS (3-4 cr)</th>
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</thead>
<tbody>
<tr>
<td>Complete one of the following:</td>
</tr>
<tr>
<td>MATH F113X, MATH F122X, MATH F151X, MATH F152X, MATH F156X, MATH F230X; MATH F251X, MATH F252X, MATH F253X; STAT F200X</td>
</tr>
<tr>
<td>MATH A115, MATH A121, MATH A151, MATH A152, MATH A155, MATH A221, MATH A251, MATH A252, MATH A253; STAT A252, STAT A307, STAT A308</td>
</tr>
<tr>
<td>MATH S113, MATH S151, MATH S152, MATH S251, MATH S252; STAT S107, STAT S273</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NATURAL SCIENCES (8 cr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete two of the following:</td>
</tr>
<tr>
<td>ATM F101X, BIOL F100X, BIOL F101X, BIOL F103X, BIOL F104X, BIOL F115X, BIOL F116X, BIOL F120X, BIOL F213X, BIOL F214X, CHEM F100X, CHEM F103X, CHEM F104X, CHEM F105X, CHEM F106X, CHEM F111X, GEOG F111X, GEOS F100X, GEOS F101X, GEOS F106X, GEOS F112X, GEOS F120X, MSL F111X, PHYS F102X, PHYS F103X, PHYS F104X, PHYS F115X, PHYS F175X, PHYS F211X, PHYS F212X, PHYS F213X</td>
</tr>
<tr>
<td>Non-lab Courses: ANTH S205; ASTR S225; CHEM S100; GEOL S105; OCN S101; PHIL S206</td>
</tr>
</tbody>
</table>
Or any math course having one of these as a prerequisite.

Alternate Ways to Earn Credit

TESTING SERVICES

As a national test center, UAF Testing Services administers paper-and-pencil and computer-based exams. The office advises UAF students, prospective students and the community on national testing matters for college admissions and placement and for career and professional certification. Testing Services also coordinates credit by examination for local tests and for the College-Level Examination Program (CLEP). The office also does private proctoring. For more information and registration materials, contact Testing Services, 211 Gruening Building, 907-474-5277, uaf-testing-dept@alaska.edu or http://www.uaf.edu/testing/.

CREDIT FOR NATIONAL EXAMS

There are several ways to earn college credit by receiving a passing score on a national exam. For any of the following exam options, grades are not computed in the UAF GPA. Credit received for exams is not considered UAF residence credit and is not considered to be part of the semester course load for classification as a full-time student. Credit is awarded to current or previously enrolled degree students at UAF. Rules that apply to transfer courses (including the tables of substitutions) also apply to course credit received through a national exam. The credit for national exam options are briefly outlined here.

- **College-Level Examination Program**
  
  CLEP is a national testing program that awards college credit for some introductory courses. The exams cost $120 each (cost subject to change) and are administered by appointment only.

  See a list of College-Level Examination Program (CLEP) general and subject exams approved for credit at UAF (p. 35) in the table below. To register for a CLEP exam or for more information, contact UAF Testing Services at 907-474-5277 or uaf-testing-dept@alaska.edu. The following criteria apply to CLEP exams:

  1. Students can earn up to 6 semester credits upon successful completion of a General CLEP exam in the discipline of college mathematics, humanities, natural sciences or social sciences/history. Students who have earned less than 6 credits in the discipline (or 3 credits for mathematics), from any source, will be awarded the difference in credits upon successful completion of the exam. Students who already have 6 or more credits in the discipline (or 3 credits for mathematics) will not receive credit for the exam. General CLEP exams are listed in bold font in the College-Level Examination Program (CLEP) Exams Currently Accepted (p. 35) table.

  2. Students may not duplicate a course for which credit has already been earned or in which the student is currently enrolled.

  3. Students must wait at least one year after the end of an audited course before taking the CLEP Subject exam for that course.

  4. The minimum passing score for approved CLEP exams is 50, with the exception of the following foreign languages scores: **French** semester I and II minimum 50, semesters III and IV minimum 59; **German** semester I minimum 39, semester II minimum 50, semester III minimum 55, semester IV minimum 60; **Spanish** semester I minimum 39, semester II minimum 50, semester III minimum 57, semester IV minimum 63.

- **College Board Advanced Placement Exams**

  UAF grants advanced credit for exam results of 3 or higher, or a score of 4 or 5 (effective fall 2016) for Calculus AB or BC, on the College Board (CEEB) Advanced Placement Tests (see the College Board Advanced Placement (AP) Exams Currently Accepted (p. 36) table). These exams are usually taken during the junior or senior year in high school.

  To receive CEEB advanced placement credit, ask that an official report of the exam results be sent to the Office of Admissions and the Registrar from the College Board. Credits may be earned for more than one advanced placement exam.

- **Credit for Language Testing**

  UAF accepts successful test results from Brigham Young University or other national testing programs (subject to approval from the Department of Foreign Languages and Literatures) in languages for which no CLEP test is available, for a maximum of 12 credits. The first 10 credits may be applied to the general education Humanities and/or Additional Arts/Humanities, Social Sciences requirement, and any additional credits will be awarded general humanities elective credit. Results must be submitted directly to the Office of Admissions and the Registrar by the testing agency. For more information on foreign language testing opportunities, contact UAF Testing Services at 907-474-5277 or uaf-testing-dept@alaska.edu.

  Students who are speakers of non-English languages transferring from foreign partner universities to UAF are exempted from taking a foreign language test to demonstrate fluency in that language. Complete the language exemption/core credit waiver form and file it with the Office of Admissions and the Registrar. Upon approval, 3 credits of general education Humanities and/or 3 credits of Additional Arts/Humanities/ Social Sciences general education requirements will be waived. This applies only to students participating in formalized articulation agreements established between UAF and partner institutions.

- **DANTES-DSST (Standardized Subject Tests)**

  DSST is a national testing program that offers exams in traditional academic, vocational/technical and business subject areas. Credit is awarded for successfully completing DSST tests as recommended by the American Council on Education. Acceptance of the DSST exam for a specific catalog course or as a major/minor requirement is subject to department approval. DSST exams cost $120 each (cost subject to change). Contact UAF Testing Services at 907-474-5277 or uaf-testing-dept@alaska.edu about the availability of DSST testing.

- **International Baccalaureate**

  The International Baccalaureate Diploma Program is a two-year curriculum for students ages 16 to 19 and is similar to the final year of secondary school in Europe. UAF grants advanced credit, with a waiver of fees, for IB higher-level and some standard-level exams on which students have
earned a score of 4 or higher, or a score of 5 or higher for mathematics (see the International Baccalaureate Exams Currently Accepted (p. 37) table). To receive IB credit, students should submit an official copy of their IB exam results to the Office of Admissions and the Registrar.

## College-Level Examination Program (CLEP) Exams Currently Accepted

<table>
<thead>
<tr>
<th>Examination Name</th>
<th>UAF Course Equivalent</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algebra (College)</td>
<td>MATH F122X or MATH F151X</td>
<td>3 or 4</td>
</tr>
<tr>
<td>American Government</td>
<td>PS F101&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>Calculus</td>
<td>MATH F251X</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry, General</td>
<td>CHEM F105X/CHEM F106X</td>
<td>8</td>
</tr>
<tr>
<td>College Composition</td>
<td>ENGL F111X</td>
<td>3</td>
</tr>
<tr>
<td><strong>College Mathematics</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Mathematics elective credits</td>
<td>3</td>
</tr>
<tr>
<td>Financial Accounting</td>
<td>ACCT F261X</td>
<td>3</td>
</tr>
<tr>
<td>French (College level)</td>
<td>FREN F101X/FREN F102X</td>
<td>5/5</td>
</tr>
<tr>
<td></td>
<td>FREN F201/FREN F202</td>
<td>3/3</td>
</tr>
<tr>
<td>German (College level)</td>
<td>GER F101X/GER F102X</td>
<td>5/5</td>
</tr>
<tr>
<td></td>
<td>GER F201/GER F202</td>
<td>3/3</td>
</tr>
<tr>
<td>History of the U.S. I</td>
<td>HIST F131&lt;sup&gt;2&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>History of the U.S. II</td>
<td>HIST F132X</td>
<td>3</td>
</tr>
<tr>
<td>Human Growth and Development</td>
<td>PSY F240&lt;sup&gt;2&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td><strong>Humanities</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Humanities elective credits&lt;sup&gt;3&lt;/sup&gt;</td>
<td>6</td>
</tr>
<tr>
<td><strong>Natural Sciences</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Natural sciences elective credits</td>
<td>6</td>
</tr>
<tr>
<td>Precalculus</td>
<td>MATH F151X/MATH F152X</td>
<td>4/3</td>
</tr>
<tr>
<td>Principles of Macroeconomics</td>
<td>ECON F202X</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Microeconomics</td>
<td>ECON F201X</td>
<td>3</td>
</tr>
<tr>
<td>Psychology (Introductory)</td>
<td>PSY F101X</td>
<td>3</td>
</tr>
<tr>
<td><strong>Social Sciences/History</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Social sciences elective credits&lt;sup&gt;2&lt;/sup&gt;</td>
<td>6</td>
</tr>
<tr>
<td>Sociology (Introductory)</td>
<td>SOC F100X</td>
<td>3</td>
</tr>
<tr>
<td>Spanish (College level)</td>
<td>SPAN F101X/SPAN F102X</td>
<td>5/5</td>
</tr>
<tr>
<td></td>
<td>SPAN F201/SPAN F202</td>
<td>3/3</td>
</tr>
<tr>
<td>Western Civilization I</td>
<td>HIST F101&lt;sup&gt;2&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>Western Civilization II</td>
<td>HIST F102X</td>
<td>3</td>
</tr>
</tbody>
</table>

<sup>1</sup> General CLEP Exam. Students who have earned less than 6 credits in the discipline (or 3 credits for mathematics), from any source, will be awarded the difference in credits upon successful completion of the exam. Students who already have 6 or more credits in the discipline (or 3 credits for mathematics) will not receive credit for the exam.

<sup>2</sup> Can be used to meet the Social Sciences general education requirement.

<sup>3</sup> Can be used to meet the Humanities general education requirement.

X = Course meets baccalaureate general education requirement.

The Table of GER Substitutions: Non-UA Institutions (p. 31) guidelines determine which courses may meet baccalaureate general education requirements.

Must have minimum score of 50 in order to receive UAF credit, with the exception of foreign language exams (p. 34) where score determines number of credits awarded.
### College Board Advanced Placement (AP) Exams Currently Accepted

<table>
<thead>
<tr>
<th>Examination Name</th>
<th>UAF Course Equivalent</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art: History</td>
<td>ART F261X/ART F262X</td>
<td>6</td>
</tr>
<tr>
<td>Art: 2-D, 3-D or Drawing</td>
<td>Art electives&lt;sup&gt;1&lt;/sup&gt;</td>
<td>6</td>
</tr>
<tr>
<td>Biology</td>
<td>BIOL F115X/BIOL F116X</td>
<td>8</td>
</tr>
<tr>
<td>Calculus AB</td>
<td>MATH F251X</td>
<td>4</td>
</tr>
<tr>
<td>Calculus BC</td>
<td>MATH F251X/MATH F252X</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry</td>
<td>CHEM F105X/ CHEM F106X</td>
<td>8</td>
</tr>
<tr>
<td>Chinese Language and Culture</td>
<td>CHNS F101/CHNS F102</td>
<td>10</td>
</tr>
<tr>
<td>Computer Science A</td>
<td>CS F201</td>
<td>3</td>
</tr>
<tr>
<td>English Language &amp; Composition</td>
<td>ENGL F111X</td>
<td>3</td>
</tr>
<tr>
<td>English Literature &amp; Composition</td>
<td>ENGL F111X</td>
<td>3</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>Natural sciences elective (meets general education requirement)</td>
<td>4</td>
</tr>
<tr>
<td>European History</td>
<td>HIST F101/HIST F102X</td>
<td>6</td>
</tr>
<tr>
<td>French Language and Culture</td>
<td>FREN F101X/FREN F102X</td>
<td>10</td>
</tr>
<tr>
<td>German Language and Culture</td>
<td>GER F101X/GER F102X</td>
<td>10</td>
</tr>
<tr>
<td>Government and Politics: Comparative</td>
<td>PS F201X</td>
<td>3</td>
</tr>
<tr>
<td>Government and Politics: U.S.</td>
<td>PS F101&lt;sup&gt;2&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>Human Geography</td>
<td>GEOG F101X</td>
<td>3</td>
</tr>
<tr>
<td>Italian Language and Culture</td>
<td>Foreign Language electives&lt;sup&gt;3&lt;/sup&gt;</td>
<td>8</td>
</tr>
<tr>
<td>Japanese Language and Culture</td>
<td>JPN F101X/JPN F102X</td>
<td>10</td>
</tr>
<tr>
<td>Latin</td>
<td>Foreign Language electives&lt;sup&gt;3&lt;/sup&gt;</td>
<td>8</td>
</tr>
<tr>
<td>Macroeconomics</td>
<td>ECON F202X</td>
<td>3</td>
</tr>
<tr>
<td>Microeconomics</td>
<td>ECON F201X</td>
<td>3</td>
</tr>
<tr>
<td>Music Theory (score of 3)</td>
<td>MUS F103X</td>
<td>3</td>
</tr>
<tr>
<td>Music Theory (score of 4 or 5)</td>
<td>MUS F131/MUS F133</td>
<td>5</td>
</tr>
<tr>
<td>Physics 1</td>
<td>PHYS F103X</td>
<td>4</td>
</tr>
<tr>
<td>Physics 2</td>
<td>PHYS F104X</td>
<td>4</td>
</tr>
<tr>
<td>Physics C: Mechanics</td>
<td>PHYS F211X</td>
<td>4</td>
</tr>
<tr>
<td>Physics C: Electricity and Magnetism</td>
<td>PHYS F212X</td>
<td>4</td>
</tr>
<tr>
<td>Psychology</td>
<td>PSY F101X</td>
<td>3</td>
</tr>
<tr>
<td>Spanish Language</td>
<td>SPAN F101X/SPAN F102X</td>
<td>10</td>
</tr>
<tr>
<td>Spanish Literature and Culture</td>
<td>Spanish electives (200 level)&lt;sup&gt;3&lt;/sup&gt;</td>
<td>2</td>
</tr>
<tr>
<td>Statistics</td>
<td>STAT F200X</td>
<td>3</td>
</tr>
<tr>
<td>U.S. History</td>
<td>HIST F131/HIST F132X</td>
<td>6</td>
</tr>
<tr>
<td>World History</td>
<td>HIST F100X</td>
<td>3</td>
</tr>
</tbody>
</table>

<sup>1</sup> Portfolios may be submitted to the Art Department for further evaluation.

<sup>2</sup> Can be used to meet the Social Sciences general education requirement.

<sup>3</sup> Can be used to meet the Humanities general education requirement.

**X** = Course meets baccalaureate general education requirement.

The Table of GER Substitutions: Non-UA Institutions (p. 31) guidelines determine which courses may meet baccalaureate general education requirements.

Must have minimum score of 3 in order to receive UAF credit. Effective fall 2016, a score of 4 or 5 will be required for Calculus AB and BC.
**International Baccalaureate Exams Currently Accepted**

<table>
<thead>
<tr>
<th>Examination Name</th>
<th>Level</th>
<th>UAF Course Equivalent</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>HL</td>
<td>BIOL F115X/BIOL F116X</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry</td>
<td>SL</td>
<td>CHEM F103X/CHEM F104X</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry</td>
<td>HL</td>
<td>CHEM F105X/CHEM F106X</td>
<td>8</td>
</tr>
<tr>
<td>Classical Greek</td>
<td>HL</td>
<td>Humanities electives¹</td>
<td>6</td>
</tr>
<tr>
<td>French</td>
<td>SL</td>
<td>FREN F101X/FREN F102X</td>
<td>10</td>
</tr>
<tr>
<td>French</td>
<td>HL</td>
<td>FREN F101X/FREN F102X</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FREN F201/FREN F202</td>
<td>6</td>
</tr>
<tr>
<td>German</td>
<td>SL</td>
<td>GER F101X/GER F102X</td>
<td>10</td>
</tr>
<tr>
<td>German</td>
<td>HL</td>
<td>GER F101X/GER F102X</td>
<td>10</td>
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<tr>
<td></td>
<td></td>
<td>GER F201/GER F202</td>
<td>6</td>
</tr>
<tr>
<td>Japanese</td>
<td>SL</td>
<td>JPN F101X/JPN F102X</td>
<td>8</td>
</tr>
<tr>
<td>Japanese</td>
<td>HL</td>
<td>JPN F101X/JPN F102X</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>JPN F201/JPN F202</td>
<td>10</td>
</tr>
<tr>
<td>History of Europe &amp; the Islamic World</td>
<td>HL</td>
<td>HIST F100X substitute</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HIST elective</td>
<td>3</td>
</tr>
<tr>
<td>Latin</td>
<td>HL</td>
<td>LAT F101X/LAT F102X</td>
<td>6</td>
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<tr>
<td>Language A1 (English)</td>
<td>HL</td>
<td>ENGL F111X and ENGL elective</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>HL</td>
<td>MATH F251X</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics w/Series &amp; ODE option</td>
<td>HL</td>
<td>MATH F251X</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MATH F252X</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics and Further Math</td>
<td>HL</td>
<td>MATH F251X, MATH F252X</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>SL</td>
<td>MATH elective</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy</td>
<td>HL</td>
<td>PHIL F102X</td>
<td>3</td>
</tr>
<tr>
<td>Physics</td>
<td>SL</td>
<td>PHYS F103X</td>
<td>4</td>
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<td>Physics</td>
<td>HL</td>
<td>PHYS F103X/PHYS F104X</td>
<td>8</td>
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<tr>
<td>Russian</td>
<td>SL</td>
<td>RUSS F101X/ RUSS F102X</td>
<td>10</td>
</tr>
<tr>
<td>Russian</td>
<td>HL</td>
<td>RUSS F101X/RUSS F102X</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RUSS F201/ RUSS F202</td>
<td>8</td>
</tr>
<tr>
<td>Social &amp; Cultural Anthropology</td>
<td>SL</td>
<td>ANTH F100X substitute</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>HL</td>
<td>ANTH F242</td>
<td>3</td>
</tr>
<tr>
<td>Spanish</td>
<td>SL</td>
<td>SPAN F101X/SPAN F102X</td>
<td>10</td>
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<tr>
<td>Spanish</td>
<td>HL</td>
<td>SPAN F101X/SPAN F102X</td>
<td>10</td>
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<td></td>
<td></td>
<td>SPAN F201/SPAN F202</td>
<td>6</td>
</tr>
<tr>
<td>Theatre</td>
<td>SL</td>
<td>THR F200X</td>
<td>3</td>
</tr>
<tr>
<td>Theatre</td>
<td>HL</td>
<td>THR F200X</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>THR elective</td>
<td>1</td>
</tr>
<tr>
<td>20th-C World History: History of Africa</td>
<td>HL</td>
<td>HIST F100X substitute</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HIST elective</td>
<td>3</td>
</tr>
<tr>
<td>20th-C World History: History of the Americas</td>
<td>HL</td>
<td>HIST F100X substitute</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HIST elective</td>
<td>3</td>
</tr>
<tr>
<td>20th-C World History: History of Asia &amp; Oceania</td>
<td>HL</td>
<td>HIST F100X substitute</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HIST elective</td>
<td>3</td>
</tr>
<tr>
<td>20th-C World History: History of Europe &amp; the Middle East</td>
<td>HL</td>
<td>HIST F100X substitute</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HIST elective</td>
<td>3</td>
</tr>
<tr>
<td>Visual Arts</td>
<td>HL</td>
<td>ART F105/ART F161</td>
<td>6</td>
</tr>
</tbody>
</table>

¹ Can be used to meet the Humanities general education requirement.

X = Course meets baccalaureate general education requirement.
The Table of GER Substitutions: Non-UA Institutions (p. 31) guidelines determine which courses may meet baccalaureate general education requirements.

If an international baccalaureate exam is not in this table, contact the Office of Admissions and the Registrar at registrar@uaf.edu for more information.

Must have minimum score of 4 (or score of 5 in mathematics) to receive UAF credit.

**UAF CREDIT BY EXAM**

Credit by exam can be earned at UAF by students who are currently enrolled. Most courses are available for credit by exam, except those with numbers ending -90 through -99 (193, 292, 497, etc.). A course challenged for credit cannot duplicate a course for which credit has already been granted or in which the student is currently enrolled. It is up to the discretion of the department and instructor to decide which courses can be challenged, the testing method and grading procedures. Credit by exam may not be requested for audited courses until one year has passed since the end of the semester in which the course was audited.

Credit by examination forms may be obtained online at http://www.uaf.edu/testing/, under UAF-Specific Tests, or at the Office of Testing Services in 211 Gruening. For more information on challenging a course call Testing Services at 907-474-5277.

**UAF ADVANCED PLACEMENT CREDIT**

- **English**
  Students with ACT or SAT scores that place them in ENGL F211X or ENGL F213X (see English, Developmental English and Developmental Studies Course Placement Scores (p. 39) table) may receive local advanced placement credit for ENGL F111X upon completion of ENGL F211X or ENGL F213X with a grade of C or better.
  Students who have received transfer credit that substitutes for ENGL F211X or ENGL F213X with a grade of C or better and who meet the ACT or SAT test score requirement may also receive credit for ENGL F111X.
  To receive this credit, students must submit the Application for ENGL F111X Credit form to the Office of Admissions and the Registrar. The form is available at the Office of Admissions and the Registrar or the English Department.

- **Alaska Native Language**
  After completing a course in which the student was placed (above 101) and earning a B grade or higher, the student may ask to receive credit for the two immediately preceding prerequisite courses, if any. However, credit cannot be awarded for such courses if university credit has already been granted. Credit will not be awarded for special topics courses, individual study courses, literature or culture courses, conversation courses, or any course taught in English.

**CREDIT FOR PRIOR LEARNING**

The Academic Advising Center administers the credit for prior learning program, wherein students may earn undergraduate credit based on university-level learning they have obtained outside the classroom. Students can document the university-level learning they have gained through employment, volunteer service or other life experiences with a portfolio or copies of licenses and certificates earned. Certificate, associate or bachelor’s degree students may earn up to 25 percent of total program requirements through the credit for prior learning program.

Credentials for admitted degree students who are currently enrolled are reviewed by faculty from participating departments who determine if this process is appropriate and make recommendations for awarding prior learning credit. Review is based on equivalency to courses listed in this catalog. Credit received for prior learning does not affect your GPA and is not considered residence credit. The university will award transfer credit for specified national and state authorizations, certificates, credentials and/or examinations (see Transferring Credits catalog). Credit received for prior learning review. For further information or assistance, contact the Academic Advising Center, 510 Gruening Building, 907-474-6396 or uaf.advising@alaska.edu. The credit for prior learning student handbook is available at http://www.uaf.edu/advising/cpl/CPL-Handbook-.pdf.

**COMPETENCY TESTING**

Students with appropriate background experience may complete certain components of the UAF general education requirements via competency testing. Credit by exam is not available.

- **Library Competency Exam**
  The Library Competency Exam, administered by UAF Testing Services, is offered to fulfill the general education requirement for LS F101X. The LCE, offered daily in Testing Services for $30, is designed to test or verify a student’s knowledge of standard library functions, services and organization. While no credit is awarded for passing this exam, a score of at least 70 percent will fulfill the general education requirements for LS F101X. Please contact Testing Services at 907-474-5277, uaf-testing-dept@alaska.edu or 211 Gruening Building for more information.

- **Computer Skills Placement Exam**
  The Computer Skills Placement Exam, administered by UAF Testing Services, is offered to fulfill the degree requirement for AIS F101, required by students seeking a B.B.A. degree at UAF. The CSP, offered daily in Testing Services for $30, is designed to test or verify a student’s knowledge of information technology and file management procedures; word processing (Word), spreadsheets (Excel), databases (Access) and presentation (PowerPoint) software; and information and communication skills. While no credit is awarded for passing this exam, a score of at least 70 percent will fulfill the degree requirement for AIS F101. Please contact Testing Services at 907-474-5277, uaf-testing-dept@alaska.edu or 211 Gruening Building for more information.
• Oral Communication Competency Exam
Requests for competency testing for COMM F141X will be considered only if, in the opinion of a member of the Communication Department faculty, a student presents evidence of substantive prior experience in formal public speaking situations (competency testing is not available for COMM F131X). Neither prior oral intensive course work nor COMM F432 are considered evidence of substantive prior experience. If the prior experience is sufficient, the individual will be asked either: a) to provide a video (not audio) recording of a formal public speaking presentation at least 10 minutes in length, or b) to present a 10-minute persuasive speech before a live audience, with at least one member of the Communication Department faculty present. This process may be attempted only once. The date for live speeches will be established each semester, at a single time during the fourth to sixth week of classes. While no credit is awarded for passing this exam, a grade of at least a B (3.0) for either type of presentation will fulfill the general education requirements for COMM F141X. For more information and an application for competency testing, contact Testing Services at 907-474-5277, 211 Gruening Building, or the Department of Communication at 907-474-6591 or 503 Gruening.

Registration
You must register and pay tuition and fees to attend classes and earn credit. Registration is held each semester on dates published in the regular academic calendar. It is important for potential graduate students to understand that credits earned as a nondegree student might not be accepted for use toward a graduate degree program. Please see the transfer credit section of How to Earn a Graduate Degree (p. 242). Any nondegree student who wants to be considered a degree candidate must submit an application for admission, meet regular admission requirements and submit transcripts. Nondegree students are subject to placement examination requirements for courses, and they must maintain a 2.0 GPA to remain in good standing. Nondegree students are not eligible for financial aid or priority registration.

Academic Advising is Required
Academic advising is an important part of planning for your education. Degree students must obtain an academic advisor's signature every semester to begin the registration process. All degree and certificate students are required to have an academic advisor. You will work in tandem with your academic advisor to develop a viable educational plan that reflects your academic interests and goals. Your academic advisor will assist you in determining the best options, alternatives and sequences of classes to take. Nondegree students may also see an academic advisor, and it is recommended for those taking 9 or more credits in a semester or for those who have accumulated 30 or more UAF credits. Nondegree students who have been academically disqualified should meet with an academic advisor each semester to develop a realistic and timely educational plan. Academic advising is available at several campuses. See Services and Resources (p. 68) for more information.

Nondegree Students
Anyone who wants to attend classes at UAF as a nondegree student may register as long as they have the appropriate permissions. Students under the age of 18 may take courses as a nondegree student. Current high school students should refer to the High School and Secondary School Students section below.

High school and secondary students may take classes at UAF. One program, Alaska Higher Education Admission Decision, requires formal admittance to UAF (see Admissions Requirements (p. 24)). Secondary student enrollment and TECH PREP, however, do not entail formal admission.

• Secondary Student Enrollment
The secondary student enrollment process allows secondary school students to register for UAF classes. A student meeting course prerequisites may enroll in university classes. Students must consult their appropriate school district officials and school counselors for approval prior to registration if they wish to use university courses to meet high school graduation requirements. Registering for courses at UAF establishes a permanent academic record that reflects student academic performance in all courses attempted. Note: Enrollment in UAF courses as a secondary student does not constitute formal admission to the university for the purposes of earning a certificate or degree. Please note that in order to qualify for federal financial aid, you must have either a high school diploma or a GED.

• TECH PREP Opportunities
The TECH PREP program allows students to earn credits toward a UAF certificate or associate degree by completing career and technical education classes in high school that have been approved for college credit by UAF. The classes available for credit vary from school to school, but in general they are taken from the following areas: applied business; automotive; airframe and powerplant; human services; computer...
Course Placement

PLACEMENT REQUIREMENTS

Many UAF courses require placement. All students planning to take courses with specific placement requirements must meet those requirements before registering for those courses. Specific writing, reading and math placement requirements are listed in the sections below.

Students need mathematics placement at DEVM F105 or above and ENGL F111X placement to register for core science courses.

PLACEMENT TESTS

Test results are required for first-time degree or certificate students, transfer students with fewer than 30 transfer credits, or students planning to take 100-level English, reading, mathematics, natural sciences and many general education courses. UAF mathematics placement test results must be on file with the Office of Admissions and the Registrar or the local regional campus registration office before you can register for DEVM, math, statistics or general education science classes. Results from American College Testing Program (ACT) or the Scholastic Aptitude Test (SAT) or, for associate degree or certificate students, the ASSET, ACCUPLACER or COMPASS test must be on file with the Office of Admissions and the Registrar before you can register for classes. Your ability to register may be blocked if you have not submitted required test scores.

Students who enroll in any course without meeting placement or prerequisite requirements may be dropped or withdrawn from the course through the faculty-initiated withdrawal process.

Writing placement exams must be taken within two calendar years before the start of a course; mathematics placement exams must be taken within one calendar year prior. Students enrolling in developmental or lower-division core courses must have completed any prerequisite courses within two calendar years of their enrollment.

COURSE PREREQUISITES

Course prerequisites indicate what previous preparation is needed to enroll in a course. An instructor has the right to drop any student from the course if he or she does not meet the prerequisite or has not received a grade of C- or better in all prerequisite courses. An instructor also has the right to waive a course prerequisite if the instructor documents that the student possesses the background required to succeed in the class. Students who take a course at a higher level than a corresponding prerequisite course required for a degree program are not exempt from taking that required course.

WRITING

Placement into writing courses requires either prerequisite course credit or a standardized placement test that measures academic skills such as critical thinking and reading. The score from any of the tests (see English, Developmental English and Developmental Studies Course Placement Scores (p. 41) table) places the student in the appropriate writing class. A writing sample, given on the first day of class, may modify this placement. Degree or certificate students placed in developmental writing or reading courses should register for them during their first semester. These courses help students gain competencies necessary to succeed in college-level courses. If the student’s standardized test scores are below the minimums in English, Developmental English and Developmental Studies Course Placement Scores (p. 41) table and if the student’s high school cumulative GPA is 3.0 or higher, the student may be given permission to enroll in ENGL F111X by the director of university writing or rural campus English/Arts and Letters faculty.

On the basis of test scores, students may be required to take developmental English and/or developmental studies courses. These courses help students gain competencies necessary for success in college-level courses.
English, Developmental English and Developmental Studies Course Placement Scores

<table>
<thead>
<tr>
<th>Courses</th>
<th>ACT English + Reading Total Combined Score</th>
<th>SAT Writing + Critical Reading Total Combined Score (400-1600)</th>
<th>SAT Redesigned(^1) Evidence Based Reading + Writing Total Combined Score (200-800)</th>
<th>ACCUPLACER Sentence Skills + Reading Comprehension Total Combined Score</th>
<th>ASSET Form B2 Writing Skills + Form B2 Reading Skills Total Combined Score</th>
<th>UAF Writing Sample For Use with ASSET Form B2</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL F211X or ENGL F213X(^2)</td>
<td>60-72</td>
<td>1340-1600</td>
<td>710-800</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>ENGL F111X</td>
<td>36-59</td>
<td>860-1330</td>
<td>480-700</td>
<td>170-240</td>
<td>82-107</td>
<td>19-25</td>
</tr>
<tr>
<td>DEVE F109</td>
<td>30-35</td>
<td>760-850</td>
<td>430-470</td>
<td>140-169</td>
<td>76-81</td>
<td>16-18</td>
</tr>
<tr>
<td>DEVE F104/ DEVS F105(^3), DEVE F194</td>
<td>26-29</td>
<td>680-750</td>
<td>390-420</td>
<td>110-139</td>
<td>70-75</td>
<td>12-15</td>
</tr>
<tr>
<td>DEVE F060/ DEVS F052(^4), DEVE F094</td>
<td>18-25</td>
<td>540-670</td>
<td>330-380</td>
<td>80-109</td>
<td>66-69</td>
<td>9-11</td>
</tr>
<tr>
<td>Adult Basic Education(^5)</td>
<td>2-17</td>
<td>400-530</td>
<td>200-320</td>
<td>0-79</td>
<td>46-65</td>
<td>0-8</td>
</tr>
</tbody>
</table>

1 The SAT Redesigned administered starting March 2016.
2 Students with ACT or SAT scores that place them in ENGL F211X or ENGL F213X may receive local advanced placement credit for ENGL F111X upon completion of ENGL F211X or ENGL F213X with a grade of C or better. To receive this credit, students must submit the Application for ENGL F111X Credit form to the Office of Admissions and the Registrar.
3 DEVS F105 should be taken concurrently with DEVE F104 and should be used to supplement DEVE F104, not replace it. Trial course DEVE F194 — Writing and Reading Strategies (4 credits) may be taken in place of DEVE F104 and DEVS F105.
4 DEVS F052 should be taken concurrently with DEVE F060 and should be used to supplement DEVE F060, not replace it. Trial course DEVE F094 — Basic Writing and Reading (4 credits) may be taken in place of DEVE F060 and DEVS F052.
5 For an Adult Basic Education program listing, go to www.jobs.alaska.gov/abe/ (http://www.jobs.alaska.gov/abe)

Note: ENGL F111X-plus pairs a section of ENGL F111X with DEVE F068. Qualifying students are those who have a combined ACCUPLACER 135-169 score and are referred by their academic advisor to the director of University Writing to interview for the program. DEVE F068 is a writing support group tutorial class, recommended based on the student’s needs for writing assistance along with any DEVE or ENGL writing course listed in the table. Students may take up to 3 credits of DEVE F068 per semester for as many semesters as needed.

MATHEMATICS

Mathematics course placement varies according to the type of degree the student is planning to pursue and the corresponding math course(s) needed. (See the degree program requirements (p. 134) for more detail.) The UAF mathematics placement test is used to determine math placement. Minimum test scores for placement in math and developmental math courses are listed in Math, Statistics and Developmental Math Placement Scores (p. 41) table.

Students who have limited access to or limited experience with the Internet should contact the Department of Mathematics and Statistics or the Department of Developmental Education for assistance.

FOREIGN LANGUAGE

Students may not register for foreign language classes higher than F101 unless they have received credit through CLEP, AP, transfer or another UAF-approved test for the prior levels. With approval of the Department of Foreign Languages and Literatures, students may enroll in the level of a language at which they are competent, based on prior experience.

Math, Statistics and Developmental Math Placement Scores

<table>
<thead>
<tr>
<th>Courses</th>
<th>ALEKS PPL</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F251X</td>
<td>78-100</td>
</tr>
<tr>
<td>MATH F211, MATH F230X</td>
<td>70-100</td>
</tr>
<tr>
<td>MATH F152X, MATH F156X</td>
<td>65-77</td>
</tr>
<tr>
<td>STAT F200X</td>
<td>55-100</td>
</tr>
<tr>
<td>MATH F122X, MATH F151X</td>
<td>55-77</td>
</tr>
<tr>
<td>DEVM F105, DEVM F105N, MATH F113X (DEVM F071, DEVM F105G, DEVM F105H, DEVM F105J)</td>
<td>30-54</td>
</tr>
</tbody>
</table>
Note: DEVM F051 is appropriate for students preparing for the High School Qualifying Exam in Alaska or those needing a review of basic math skills. DEVM F065 assists students in reviewing and reinforcing course concepts covered by DEVM F054–DEVM F105.

Note: Students, in consultation with their academic advisor or course instructor, may opt to take a course lower than their placement.

**Adding, Dropping and Withdrawing from Classes**

Information about the add/drop process can also be found at http://uaonline.alaska.edu and in the registration guide at http://www.uaf.edu/register/. Adds, drops and withdrawals are not final until the student has completed the appropriate procedure, paid any relevant fees or tuition and submitted all necessary paperwork to the Office of Admissions and the Registrar. If you drop a class within specified time frames, the course will not be part of your academic transcript. Important deadlines are listed in Important Registration Change Deadlines (p. 42) table.

### Important Registration Change Deadlines

<table>
<thead>
<tr>
<th>Action</th>
<th>Begins</th>
<th>Ends</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adding a class</td>
<td>First day of registration</td>
<td>Second Friday after the first day of</td>
<td>Advisor's signature not required</td>
</tr>
<tr>
<td></td>
<td>for the semester</td>
<td>instruction for the semester</td>
<td></td>
</tr>
<tr>
<td>Dropping a class (class does not appear on</td>
<td>First day of registration</td>
<td>Last day of the second week of instruction</td>
<td>Advisor's signature required for student in degree program after</td>
</tr>
<tr>
<td>transcript)</td>
<td>for the semester</td>
<td>for the semester</td>
<td>the second Friday after the first day of instruction</td>
</tr>
<tr>
<td>Faculty-initiated drop (class does not</td>
<td>First day of instruction</td>
<td>Last day of the second week of instruction</td>
<td>Faculty member will notify the Office of Admissions and the Registrar</td>
</tr>
<tr>
<td>appear on transcript)</td>
<td>for the semester</td>
<td>for the semester</td>
<td></td>
</tr>
<tr>
<td>Withdrawing from a class (class appears on</td>
<td>After the third Friday after</td>
<td>Last day of the tenth week of instruction</td>
<td>Advisor's signature required for student in degree program</td>
</tr>
<tr>
<td>transcript with W grade)</td>
<td>the first day of instruction</td>
<td>for the semester</td>
<td></td>
</tr>
<tr>
<td>Dropping or withdrawing from all classes</td>
<td>First day of registration</td>
<td>Last day of the tenth week of instruction</td>
<td>Advisor's signature required for student in degree program. Total</td>
</tr>
<tr>
<td></td>
<td>for the semester</td>
<td>for the semester</td>
<td>withdrawal form must be completed.</td>
</tr>
<tr>
<td>Credit/No-credit option</td>
<td>First day of registration</td>
<td>Last day of the second week of instruction</td>
<td>Undergraduates only Only electives not specified in a student’s core, major, minor and degree programs are eligible for this option.</td>
</tr>
<tr>
<td></td>
<td>for the semester</td>
<td>for the semester</td>
<td></td>
</tr>
<tr>
<td>Faculty-initiated withdrawal (class appears</td>
<td>After the third Friday after</td>
<td>Last day of the tenth week of instruction</td>
<td>Faculty member will notify the Office of Admissions and the Registrar</td>
</tr>
<tr>
<td>on transcript with W grade)</td>
<td>the first day of instruction</td>
<td>for the semester</td>
<td></td>
</tr>
<tr>
<td>Late withdrawal from a class 3</td>
<td>After the last day for student-initiated withdrawals</td>
<td>Last day of instruction for the semester</td>
<td>Advisor's signature required for student in degree program. Total withdrawal form must be completed.</td>
</tr>
<tr>
<td>Appeal for late withdrawal</td>
<td>After the last day for student-initiated withdrawals</td>
<td>30 class days after the beginning of the next regular semester</td>
<td>Reviewed by a campus appeals committee</td>
</tr>
</tbody>
</table>

**Note:** Add/drop, total withdrawal and credit/no-credit requests must be completed by the appropriate deadlines.

1. Add, drop, withdrawal and credit/no-credit option deadlines will be adjusted proportionally for courses that are less than a semester in length.
2. The first day of instruction for all semester-length courses is the date indicated in the official semester academic calendar. It might not be the first day that a class meets.
3. Late withdrawals are allowed for exceptional cases only, and approval is not automatic.

**NONATTENDANCE DROP POLICY**

Students are expected to begin attending classes on the first day of instruction. Some departments, in trying to find space for students on waitlists, require that you attend the first class session or notify the department in advance that you cannot attend the first class. If you miss the first class without notifying the department, you may be dropped from the course, and the space may be assigned to a student on the waitlist.

Because of the high demand for composition and basic speech courses listed below, students who fail to attend either of the first two meetings of a basic course will be dropped even if they registered in advance and paid their fees. If space becomes available in a class from which you have been dropped by the department, you need to follow the add procedure to re-enroll.

**Composition**
ENGL F111X  Introduction to Academic Writing  
ENGL F211X  Academic Writing about Literature  
ENGL F213X  Academic Writing about the Social and Natural Sciences  
ENGL F313  Writing Nonfiction Prose  
ENGL F414  Research Writing  

COMM F131X  Fundamentals of Oral Communication: Group Context  
COMM F141X  Fundamentals of Oral Communication: Public Context  

WITHDRAWING

- Withdrawing from a Class  
  If you withdraw from a class later than the second Friday after the first day of instruction (last day to drop classes), a grade of W appears on your academic record. The W grade does not affect your GPA. However, it may impact your financial aid. Be sure to check with the Financial Aid Office before withdrawing from classes. The last day you can withdraw from a class is the 10th Friday after the first day of instruction. For specific dates, see the academic calendar (p. 8). Fees and tuition are not automatically refunded for W grades.

- Withdrawing from a Class Shorter than the Full Semester  
  Withdrawal must be done by the 60 percent point of instruction.

- Total Withdrawal from All Classes  
  If you want to withdraw from all your classes later than the second Friday after the first day of instruction (last day to drop classes), use a Total Withdrawal form available at http://www.uaf.edu/reg/forms/ or from the Office of Admissions and the Registrar. You’ll receive a W grade for all classes, which does not impact your GPA. A student-initiated total withdrawal is subject to the same deadlines as withdrawal from a class. For specific dates, see the academic calendar (p. 8). Fees and tuition are not automatically refunded for W grades.

WITHDRAWALS AFTER THE DEADLINE  

Appeals for a late withdrawal after the student-initiated withdrawal deadline — the ninth Friday after the first day of instruction — are exceptions to policy and are allowed only in exceptional cases. Approval is not automatic, and you need to provide documented evidence to support your request. Acceptable serious and compelling reasons may include:

1. death in immediate family;  
2. serious illness or injury of student or immediate family; and  
3. factors outside of student’s control (for example, fire or flood).

Failing a course, avoiding an unsatisfactory grade or ignorance of policies are not serious and compelling reason for seeking a late withdrawal and will not be approved.

Appeals for late withdrawals must be submitted within 30 class days after the beginning of the next regular semester. Forms for an appeal for late withdrawals are available at http://www.uaf.edu/reg/forms/, through the Office of Admissions and the Registrar in Signers’ Hall on the Fairbanks campus, or through local campus student services offices. Once received, the appeal will be evaluated by a campuswide committee, which will return a decision to the student. The decision of the university is final, and a student who files a written appeal under these procedures shall be expected to abide by the final disposition of the review, as provided, and may not seek further appeal of the matter under any other procedure within the university.

FACULTY-INITIATED DROP OR WITHDRAWAL  

Class instructors have the right to drop students who do not meet course prerequisites, did not obtain a grade of C- or better in all prerequisite courses, or who have not participated substantially in a course. Faculty-initiated drops submitted through the second Friday after the first day of instruction will be treated as a dropped class and will not appear on any student transcript. The faculty-initiated withdrawal may occur after the second Friday but before the 10th Friday after the first day of instruction. A grade of W will appear on a student’s academic record for faculty-initiated withdrawals.

Directed and Individual Study  

Directed study courses allow a student to contract with an instructor to enroll individually in a course that is listed in the catalog but in a semester in which the course is not offered in the regular schedule.

For example, a directed study proposal may be approved if the course is not being offered that semester and the student needs to complete the course for graduation. The title for the directed study course will include DS.

Individual study courses provide students with opportunities to improve their knowledge in areas of study not listed in the current catalog. A student who requests or is advised to undertake such an individual study should present a brief proposal and syllabus to the appropriate faculty member. The syllabus must be attached to an individual study form. This requirement does not apply to directed study courses. An individual study course number will end in 97.
Registration for directed and individual study courses is not available via the web. To register for a directed or individual study course, download the request form from http://www.uaf.edu/reg/forms/ or pick up a copy at the Office of Admissions and the Registrar. Submit the completed form to the Office of Admissions and the Registrar.

Where to Get More Information
Office of Admissions and the Registrar
University of Alaska Fairbanks
102 Signers' Hall
P.O. Box 757480
Fairbanks, AK 99775-7480
Email: registrar@uaf.edu
Online: http://www.uaf.edu/reg/
Telephone: 907-474-7500
ACADEMICS AND REGULATIONS

To encourage a positive learning environment and high academic standards, universities establish specific scholastic requirements and community rules. At UAF, academic regulations address issues such as grading, academic standing, and student rights and responsibilities. Since policies change from time to time, it’s important for students to stay informed about current requirements. By enrolling at UAF, a student agrees to abide by university rules, regulations and academic standards.

Communication via Email

UAF uses email to communicate with students about many important matters. Email is often the only way some information is distributed, so it’s important that you regularly check your university email address or forward email from your UAF address to an address you check frequently.

The university automatically assigns each student an official UAF email account when the student enrolls (except students whose primary registration is through Bristol Bay, Chukchi, Interior Alaska, Kuskokwim or Northwest campuses). If you have multiple UAF email accounts, you should forward them to the one you check most often. You’re responsible for knowing — and when appropriate, acting on — the contents of all university communications sent to your official UAF email account.

All notifications regarding waitlisted courses will be sent to your student-preferred email address. To receive these important notifications be sure your email is current and you have selected your preferred student email at UAOnline.

If you want to receive university communications at a different email address, you need to forward email from your assigned UAF account to an email address of your choice. You can easily do this online at http://www.alaska.edu/google/.

Class Standing

Undergraduate Students

Class standing is determined by the total credits you have earned.

<table>
<thead>
<tr>
<th>First-year</th>
<th>0-29 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sophomore</td>
<td>30-59 credits</td>
</tr>
<tr>
<td>Junior</td>
<td>60-89 credits</td>
</tr>
<tr>
<td>Senior</td>
<td>90 or more credits</td>
</tr>
</tbody>
</table>

Transfer students are given class standing based on the number of transfer credits accepted by UAF. Nondegree students are registered without class standing.

Graduate Students

Students are given the class standing of “graduate” only after being officially admitted to a graduate degree or certificate program.

Full- or Part-Time Status/Study Load

Undergraduate Students

Undergraduate students registered for 12 or more semester credits are classified as full-time students, and those enrolled in 6 credits are considered part-time students. To complete an undergraduate program in four years, you must earn 16 or 17 credits each semester. You may enroll in up to 18 credits per semester without special permission. To enroll in more than 18 credits you need a 3.0 cumulative GPA and an overload approval from your advisor.

Credits carried at any UA unit (or any combination of UAF/UAA/UAS) are used to determine study load hours and full-time or part-time classification. Audited courses, courses taken for credit by examination and yearlong correspondence study courses are not included in the study load computation.

Graduate Students

A graduate student registered for 9 or more semester credits, with 3 or more at the 600 level, is classified as a full-time student. A graduate student enrolled in 5 credits is classified as part-time. Except in unusual circumstances, enrollment in the fall/spring semesters is limited to 1 credit per week. You may enroll in up to 14 credits per semester without special permission. To enroll in 15-19 credits you must be in good standing and obtain an overload approval from your advisor and department chair. Enrollment in more than 19 graduate credits will be allowed only in extraordinary circumstances, and requires good standing and overload approval from your advisor, department chair, dean and the dean of the graduate school.

Enrollment in the three-week summer session is limited to 3-4 credits per session, and enrollment in the six-week summer session is limited to 6-8 credits per session.

Credits carried at any UAF department are considered in determining study load hours and full-time or part-time classification. Courses that are audited are not included in the study load computation.

Grading Options

Credit/No-Credit Option

Undergraduates only — The credit/no-credit option encourages students to explore areas of interest not necessarily related to their major. This option may be used for one undesignated elective (an elective that is not specifically required for your major) each semester. The deadline for choosing the credit/no-credit option is the third Friday after the first day of instruction for a semester. The instructor does not know your status in the course, and you complete the course the same way as other students in the class. Credit for the course is awarded if your performance is at the C- grade level or higher; if your performance falls below that level, the course will not appear on your academic record. In either case, the course will not be included in any GPA calculations. If credit is granted, a CR grade will be entered for the course.

Under the credit/no-credit option, students may take undesignated elective courses or courses to meet the minimum credit requirements for a degree. Major or minor requirements and those specified as foundation courses are not allowed.

Auditing

Students who want to enroll in one or more courses for informational purposes may only register as an auditor if space is available and auditing is permitted in the class. You pay the standard credit fees for the course, but the credits are not included in the computation of study load for full-time/part-time determination or for overload status.
The requirement, acceptance and review of work, and lab privileges are at the discretion of the instructor. A grade of AU (audit) is granted to students who complete an audited course, but no credit is awarded. Audited courses do not apply toward degree requirements, and they will not transfer to other institutions.

When you register you should indicate on the registration form your desire to audit a course. Students who want to change from audit to credit must request the change before the deadline to add a course. Requests made after the third Friday after the first day of instruction must be approved by the instructor of the course. All changes must be made before the deadline for student-initiated withdrawals.

Instructors set the requirements under which an AU grade is to be recorded, and they must submit AU for students who satisfy requirements. Auditors not receiving an AU grade receive a W grade. If you have audited a class, you cannot request local credit by exam for that class for a period of at least one year.

**Changing from Credit to Audit**

The add/drop process may be used to change from credit status to audit status for a class. The change must be made by the end of the second full week of instruction by following the add/drop process. Changes after this date require approval by the instructor of the course. For degree students an advisor's signature is also required. You may not change from credit to audit after the last day for student-initiated withdrawals.

**Grading System and Grade Point Average Computation**

All course grades are letter grades unless otherwise specified in the class schedule. The method of grading (letter or pass/fail) is an integral part of the course structure and is included in the course description. Instructors are expected to state their grading policies in writing at the beginning of each course. Grades appearing on academic records are:

<table>
<thead>
<tr>
<th>Letter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>&quot;A&quot; (including A+ and A-) indicates a thorough mastery of course content and outstanding performance in completion of course requirements.</td>
</tr>
<tr>
<td>B</td>
<td>&quot;B&quot; (including B+ and B-) indicates a high level of acquired knowledge and performance in completion of course requirements.</td>
</tr>
<tr>
<td>C</td>
<td>&quot;C&quot; (including C+ and C-) indicates a satisfactory level of acquired knowledge and performance in completion of course requirements.</td>
</tr>
<tr>
<td>D</td>
<td>&quot;D&quot; (including D+ and D-) indicates a minimal level of acquired knowledge and minimal performance in completion of course requirements. This grade does not satisfy requirements for courses in the major, minor, core or graduate programs.</td>
</tr>
<tr>
<td>F</td>
<td>&quot;F&quot; indicates failure to meet a minimal level of understanding of course content and/or performance in completion of course requirements. All F grades, including those earned in pass/fail courses, are included in the GPA calculations.</td>
</tr>
<tr>
<td>CR</td>
<td>Indicates credit was given under the credit/no-credit option.</td>
</tr>
<tr>
<td>DF</td>
<td>Deferred — This designation is for courses such as theses and special projects that require more than one semester to complete. It indicates that course requirements cannot be completed or that institutional equipment breakdown resulted in noncompletion by the end of the semester. Credit may be withheld without penalty until the course requirements are met within an approved time. For undergraduate courses, the grade will automatically change to a W (withdrawn) after two years unless an extension is requested and granted by the registrar.</td>
</tr>
<tr>
<td>AU</td>
<td>Audit — A registration status indicating that you have enrolled for informational instruction only. No academic credit is granted. You may be given a W if you fail to attend a course you are auditing.</td>
</tr>
<tr>
<td>W</td>
<td>Withdrawn — Indicates withdrawal from a course after the first two weeks of a semester.</td>
</tr>
<tr>
<td>I</td>
<td>Incomplete — An incomplete is a temporary grade used to indicate that the student has satisfactorily completed (C (2.0) or better) the majority of work in a course but for personal reasons beyond the student's control, such as sickness, has not been able to complete the course during the regular semester. Normally, an incomplete is assigned in a case when the student is current in the class until at least the last three weeks of the semester or summer session. Negligence or indifference are not acceptable reasons for an I grade. Instructors include a statement of work required of the student to complete the course at the time the I grade is assigned, and a copy of the notice of the incomplete grade will be sent to the dean of the school or college in which the course is given. An incomplete must be made up within one year or it will automatically be changed to an F grade. One year is the longest amount of time allowable for completion of the I. The I grade is not computed in the student’s GPA until it has been changed to a regular letter grade by the instructor or until one year has elapsed, at which time it will be computed as an F. A senior cannot graduate with an I grade in either a university or major course requirement. To determine a senior’s GPA for honors at graduation, the I grade will be computed as a failing grade.</td>
</tr>
<tr>
<td>NB</td>
<td>No Basis — Instructors may award a No Basis grade if there is insufficient student progress and/or attendance for evaluation to occur. No credit is given, nor is NB calculated in the GPA. This is a permanent grade and may not be used to substitute for the Incomplete. It cannot be removed by later completing outstanding work.</td>
</tr>
<tr>
<td>NS</td>
<td>Not Submitted — Grade not submitted by instructor.</td>
</tr>
</tbody>
</table>
NG Non-Graded — Used for sections that are not graded, usually continuing education units (CEUs) or lab sections. Has no impact on GPA calculation.

The letter grades A, B, C and D may include a “+” or “-” to indicate that a student’s level of performance is slightly higher or lower than that of the letter grade alone.

- Computing your GPA
  Your grade point average is a weighted numerical average of the grades you earn in your courses at UAF. To compute your GPA, divide the total number of credits you have attempted into the total number of grade points you have earned. Grade points are calculated by multiplying the number of credits attempted by the number of credits earned for the course. The following grades are figured in your GPA: A+, A, A-, B+, B, B-, C+, C, C-, D+, D, D- and F. Grades of I, DF, W, P, NB, AU and CR do not carry grade points and do not affect your GPA.

  Noncredit courses, transfer credits and credit by examination do not affect the GPA calculations. Your “graduating GPA” is your cumulative grade point average at the time of graduation. If, after earning a bachelor’s degree, you take more classes from UAF as a nondegree student, grades for those courses won’t be factored into your official graduating GPA. The exception is students who are officially admitted to a second degree program.

- Repeating Courses
  All grades (original and retakes) for a course completed at UAF are included on your academic record, but only the last grade earned for a course is computed in your GPA unless the course is one that can be repeated for credit. For purposes of calculating honors for graduation, all courses (even those repeated) are included in the GPA.

### Grade

<table>
<thead>
<tr>
<th>Grade</th>
<th>Grade Points per Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>4.0</td>
</tr>
<tr>
<td>A</td>
<td>4.0</td>
</tr>
<tr>
<td>A-</td>
<td>3.7</td>
</tr>
<tr>
<td>B+</td>
<td>3.3</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
</tr>
<tr>
<td>B-</td>
<td>2.7</td>
</tr>
<tr>
<td>C+</td>
<td>2.3</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
</tr>
<tr>
<td>C-1</td>
<td>1.7</td>
</tr>
<tr>
<td>D+</td>
<td>1.3</td>
</tr>
<tr>
<td>D</td>
<td>1.0</td>
</tr>
<tr>
<td>D-2</td>
<td>0.7</td>
</tr>
<tr>
<td>F</td>
<td>0.0</td>
</tr>
</tbody>
</table>

1 Minimum grade possible for a course to count toward baccalaureate core, major, minor or degree requirements, or as a prerequisite for another course

2 Minimum grade possible to earn credit for a course

Note: Some degree programs require C or higher for their major or minor requirements. Check program listings for your degree requirements.

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### Example of Grade Point Average Computation

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Grade</th>
<th>Credits x Grade Points per Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL F213X</td>
<td>4</td>
<td>A</td>
<td>16</td>
</tr>
<tr>
<td>COMM F131X</td>
<td>3</td>
<td>D+</td>
<td>3.9</td>
</tr>
<tr>
<td>ENGL F111X</td>
<td>3</td>
<td>C</td>
<td>5.1</td>
</tr>
<tr>
<td>MATH F122X</td>
<td>3</td>
<td>B+</td>
<td>8.1</td>
</tr>
<tr>
<td>HIST F131</td>
<td>3</td>
<td>F</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>16</td>
<td></td>
<td><strong>33.1 grade points</strong></td>
</tr>
</tbody>
</table>

33.1 grade points ÷ 16 credits = 2.07 GPA

### Attendance

UAF is committed to student success and academic integrity. UAF faculty expect that students are committed to academic achievement. You are expected to adhere to the class attendance policies set by your instructors.

**General Absences:** If you miss class, you are responsible for conferring with your instructor as soon as possible concerning your absence, and to discuss the possibilities for arranging alternative learning opportunities. Note that some departments drop students who miss the first day of class and who fail to obtain their instructor’s prior approval for the absence.

**UAF-Sanctioned Absences:** If you are scheduled to miss class for an academic requirement or to represent UAF in an official capacity (e.g., NCAA athletic competition, music performance), you must notify your instructor in writing by the first Wednesday of the semester in which the absences will occur. The notification should list all scheduled absences and bear the signature of a UAF school official.

Instructors are encouraged to make reasonable accommodations for students who miss class to participate in these official, UAF-recognized activities. However, it is your responsibility to follow up the notification of absence by discussing alternative learning opportunities with your instructors before the end of the drop/add period (typically the second Friday of the semester). Doing so will allow you to drop the class and to add another if, after a good faith effort, you and your instructor cannot arrange for comparable learning opportunities that would enable you to be successful in the class.

### Academic Progress

Early progress reports help students gauge their class performance and, if necessary, seek assistance early in the term. Instructors are responsible for ensuring that students are aware of the grading policy for a course and that homework, exams and other assignments are returned to students in a timely manner. Instructors are asked to submit early progress reports within the first six weeks of the semester.

### Academic Standards

UAF’s scholastic standards are designed to help students take action before their academic record deteriorates to the point that readmission to UAF or another institution is difficult. In all cases involving poor
scholarship, students are encouraged to consult with their advisor, instructors or dean.

Undergraduate and certificate students are subject to scholastic action if they fail to earn a GPA of 2.0 at the end of the semester. Scholastic action may result in warning, probation or disqualification from the university.

**Good Standing**

**Undergraduate students** — You are in good standing if your cumulative GPA and most recent semester GPA are 2.0 or better.

**Graduate students** — To maintain good academic standing in UAF graduate programs, students must:

a. Maintain a cumulative GPA of 3.0 in courses taken since admission to graduate school. Before advancing to candidacy, however, a cumulative GPA of 3.0 is required. You must earn at least a B grade in 400-level courses.

b. Be registered at UAF with a minimum of 6 graduate or 400-level credits per year unless on approved leave of absence.

c. Abide by all parts of the Student Code of Conduct.

d. Have a current graduate study plan or an advancement to candidacy submitted and approved unless you are within the first year of graduate study.

e. Have on file with the Graduate School by May 15 of each year an annual report from the graduate advisory committee certifying satisfactory progress. This is the responsibility of the student. Students starting in January need not submit an annual report until May of the next academic year. If a satisfactory annual report is not filed as specified, the student may be placed on probation.

f. Pass any required qualifying exams or comprehensive exams. Departments may set the number of times a student may retake an exam.

**Academic Honors**

**Undergraduate and certificate students** — To be eligible for academic honors at the end of a semester, you must be a full-time student in a UAF undergraduate degree or certificate program who has completed at least 12 UA institutional credits graded with the letter grades A+, A, A-, B+, B, B-, C+, C, C-, D+, D, D- or F. If you have received an incomplete or deferred grade, your academic honors cannot be determined until those grades have been changed to permanent grades. Academic honors are recorded on your permanent record. You will make the chancellor’s list with a semester GPA of 3.9 or better, or the dean’s list with a GPA of 3.5-3.89. UAF announces the students who have earned honors each semester. Students with incompleted or deferred grades that are changed after publication of honors will not be announced separately. If you’ve requested that information not be released about you (under FERPA), your name will not be released to the media.

**Warning**

Students whose semester GPA falls below 2.0 but whose cumulative GPA is 2.0 or higher will be placed on academic warning. Students on academic warning will be contacted and instructed to meet with an advisor to discuss academic support resources.

**Probation**

**Undergraduate students** — Students whose semester and cumulative GPA falls below 2.0 after any semester, including the summer session, will be put on academic probation. Students on probation may not enroll in more than 13 credits a semester unless an exception is granted by the appropriate dean. Probation may include additional conditions as determined by the dean of the college or school in which the student’s major is located. Students on probation will be referred for developmental advising/education and/or to an advising or support counseling center. The student should work with an academic advisor to prepare an academic plan for achieving a higher GPA. Removal from probation requires the student’s cumulative and semester GPAs to be at least 2.0.

**Academic Disqualification**

**Undergraduate students** — Undergraduate students on probation whose semester and cumulative GPA fall below a 2.0 for two consecutive semesters will be placed on academic disqualification. Academically disqualified students may continue their enrollment at UAF only as nondegree students, are limited to 10 credits per semester and are ineligible for most types of financial aid.

To be eligible for readmission to an academic degree program, the student must:

1. Achieve a 2.0 cumulative grade point average by repeating courses previously failed at UAF and reapply for admission, or

2. Complete 9 credits for a baccalaureate or associate program, or 6 credits for a certificate program, with a GPA of 2.0 or higher. The courses may be completed at UAF and/or another regionally accredited institution and must be letter-graded. Grades of P or CR will not be considered. In considering students for readmission, deans will look for course work taken that relates to the student’s intended program.

Students seeking readmission into an occupational endorsement program must have a 2.0 GPA.

Readmission to a degree program is not automatic or guaranteed. The student must reapply and the application must be approved by the dean. The student may apply to the same program from which they were disqualified, or to a different program or level (e.g. baccalaureate, associate or certificate). Readmission may be granted with a status of probation or with other conditions as specified by the dean. It is vitally important for academically disqualified students to work closely with their academic advisor in developing a realistic and timely educational plan.

**Academic Dismissal**

**Graduate students** — If recommended by the department chair, graduate advisory committee and dean of the college or school, and approved by the dean of the Graduate School, a student will be dismissed because of unsatisfactory performance. Unsatisfactory performance is deemed as one or more of the following:

a. Exceeding maximum time limit for degree.

b. Not being registered at UAF for a minimum of 6 credits per year unless on approved leave of absence.
c. Having less than a 3.0 cumulative GPA for courses taken since admission to graduate school.
d. Being on probationary status for more than two consecutive semesters.
e. Violating the Student Code of Conduct.
f. Lacking progress as judged by the advisory committee and documented on the student’s annual report.
g. Having substantive inaccuracies in the original application for admission.

If the student does not have a graduate advisory committee, dismissal can occur upon the recommendation of the department chair and the dean of the college or school, with approval from the dean of the Graduate School.

Appeal of Academic Decisions

The University of Alaska appeals policies can be found in the Regents’ Policy and University Regulation Part IX — Student Affairs, Chapter 09.03, Student Dispute Resolution, available online at http://www.alaska.edu/bor/policy-regulations/.

Grade Error Policy

A grade other than an incomplete or deferred submitted by the instructor after a course is completed is the final grade and becomes part of the student’s permanent academic record. A grade will not be changed unless the instructor made a legitimate error in calculating the grade. If an error has occurred, contact the instructor immediately. Grade error corrections must be received within 30 class days after the beginning of the next regular semester, and must be approved by the instructor’s department head and dean. This is not an appeal of an academic decision.

Grade Appeals Policy

A student who wishes to appeal a faculty decision on a final grade must submit a grade appeal form, available at the Office of Admissions and the Registrar. There are only two valid reasons for appeal of a grade:

1. an error in calculation of the grade, or
2. arbitrary and capricious grading.

Evidence of either must be documented for an appeal to be successful. Merely wanting a higher grade is not sufficient grounds to justify an appeal.

The full text of the grade appeals policy can be found at http://www.uaf.edu/uafgov/faculty-senate/policies-procedures/grade-appeals/. The grade appeal form is on the Registrar’s website at http://www.uaf.edu/reg/forms/grade_appeal.pdf. Grade appeal forms are also available at the Office of Admissions and the Registrar and at the Dean of Students’ office.

Academic Decisions Other Than Grades

Students who want to appeal an academic decision such as denial of admission, faculty-initiated withdrawal, dismissal from program or pass/fail decisions of a faculty committee on non-course examinations (such as qualifying, comprehensive or thesis examinations) must submit an appeal within 30 class days after the beginning of the next regular semester.

To appeal academic decisions, the student should first address the person who made the decision. Often problems can be resolved and misunderstandings cleared up through this step. If the student does not find the informal review decision acceptable, the student may initiate a formal appeal procedure. Formal appeals must be made in writing and must be received by the provost no later than 10 days after the student has learned the outcome of the informal review. The offices of the provost, university registrar, vice chancellor of students or dean of the graduate school (for graduate student issues) can give you advice and answers to questions about the process.

By submitting a request for a review, the student acknowledges that no additional mechanisms exist within the university for the review of the decision, and that the university’s administration can not influence or affect the outcome of the review. For the detailed “Appeals Policy For Academic Decisions” go to http://www.uaf.edu/uafgov/faculty-senate/policies-procedures/appeals-policy-for-academ/.

Academic Appeals Advisor

The academic appeals advisor helps undergraduate students with the policies and procedures associated with grade appeals, appeals policy for academic decisions other than assignment of grades, academic petitions and financial aid satisfactory progress appeals.

The academic appeals advisor is a professional academic advisor in the Academic Advising Center. The academic appeals advisor helps students determine whether the appeal or petition is appropriate, reviews documentation relevant to the appeal or petition, and navigates the process for the appeal or petition submission. In the preceding sentence, “appropriate” does not refer to whether an appeal is likely to be successful, but rather whether the appeal falls within the purview of the grade or academic decisions appeal process. The academic appeals advisor does not guarantee the appeal or petition will be successful and will not comment on the likelihood of acceptance. Students are responsible for writing the appeal or petition, for gathering and recording relevant documentation, and for submitting the appeal or petition with the proper signatures.

Contact the Academic Advising Center at 907-474-6396 or uaf-advising@alaska.edu.

Students’ Rights and Responsibilities

The university subscribes to principles of due process and fair hearings as specified in the “Joint Statement on Rights and Freedoms of Students.” This document can be found at http://www.uaf.edu/deanofstudents/. You are encouraged to read it carefully.

Most students adjust easily to the privileges and responsibilities of university citizenship. The university attempts to provide counsel for those who find the adjustment more difficult. UAF may terminate enrollment or take other necessary and appropriate action in cases where a student is unable or unwilling to assume the social responsibilities of citizenship in the university community.

Student Code of Conduct

UAF students are subject to the Student Code of Conduct. In accordance with board of regents policy 09.02.01, UAF will maintain an academic environment in which freedom to teach, conduct research, learn and administer the university is protected. Students will benefit from this environment by accepting responsibility for their role in the academic community. The principles of the student code are designed to encourage
communication, foster academic integrity and defend freedoms of inquiry, discussion and expression across the university community.

UAF requires students to conduct themselves honestly and responsibly, and to respect the rights of others. Conduct that unreasonably interferes with the learning environment or violates the rights of others is prohibited. Students and student organizations are responsible for ensuring that they and their guests comply with the code while on property owned or controlled by the university or at activities authorized by the university.

The university may initiate disciplinary action and impose disciplinary sanctions against any student or student organization found responsible for committing, attempting to commit or intentionally assisting in the commission of any of the following prohibited forms of conduct:

a. cheating, plagiarism or other forms of academic dishonesty
b. forgery, falsification, alteration or misuse of documents, funds or property
c. damage or destruction of property
d. theft of property or services
e. harassment
f. endangerment, assault or infliction of physical harm
g. disruptive or obstructive actions
h. misuse of firearms, explosives, weapons, dangerous devices or dangerous chemicals
i. failure to comply with university directives
j. misuse of alcohol or other intoxicants or drugs
k. violation of published university policies, regulations, rules or procedures
l. any other actions that result in unreasonable interference with the learning environment or the rights of others.

This list is not intended to define prohibited conduct in exhaustive terms, but rather offers examples as guidelines for acceptable and unacceptable behavior.

Honesty is a primary responsibility of yours and every other UAF student. The following are common guidelines regarding academic integrity:

1. Students will not collaborate on any quizzes, in-class exams or take-home exams that contribute to their grade in a course unless the course instructor grants permission. Only those materials permitted by the instructor may be used to assist in quizzes and examinations.
2. Students will not represent the work of others as their own. Students will attribute the source of information not original with themselves (direct quotes or paraphrases) in compositions, theses and other reports.
3. No work submitted for one course may be submitted for credit in another course without the explicit approval of both instructors.

Alleged violations of the Code of Conduct will be reviewed in accordance with procedures specified in regents policy, university regulations and UAF rules and procedures. For additional information and details about the Student Code of Conduct, please visit http://www.uaf.edu/deanofstudents/.

Student Behavioral Standards

Education at the university is conceived as training for citizenship as well as for personal self-improvement and development. Generally, UAF behavioral regulations are designed to help you work efficiently in courses and live responsibly in the campus environment. They are not designed to ignore your individuality but rather to encourage you to exercise self-discipline and accept your social responsibility. These regulations, in most instances, were developed jointly by staff and students. Contact the dean of students for more information.

UAF provides one level of administrative oversight for decisions made by university employees. Individuals are encouraged to first attempt informal resolution with the employee making the decision or the employee’s supervisor. An individual seeking further review has the option of filling a written request with the employee’s supervisor for decisions made by university employees that are not covered in other university policies, regulations and procedures. The request must be signed and include all relevant information to be considered during the review. The supervisor will consider the information available at the time of the review and provide written notification of the outcome to the individual who filed the request. The supervisor’s written response will be the final decision within the university.

Information Release and FERPA

The Office of Admissions and the Registrar is responsible for keeping student education records. The Family Educational Rights and Privacy Act of 1974, as amended, protects the privacy of education records, establishes the right of students to inspect and review their education records, and provides guidelines for the correction of inaccurate or misleading data through informal and formal hearings.

FERPA affords students certain rights with respect to their education records. They are:

1. The right to inspect and review the student’s education records within 45 days of the day the university receives a request for access. Students should submit a written (letter or fax) request to the Office of Admissions and the Registrar that identifies the record(s) they wish to inspect. The registrar will make arrangements for access and notify the student of the time and place where records may be inspected. If the records are not maintained by the Office of Admissions and the Registrar, registrar-designated staff will refer the student to the appropriate personnel or office to access the record.
2. The right to request the amendment of a record they believe is inaccurate or misleading. A student may ask the university to amend the student’s education records if he/she believes they are inaccurate or misleading or otherwise in violation of the student’s privacy or other rights. If the university decides not to amend the record as requested by the student, the university will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. If the university denies the amendment request after the hearing, the student is given the right to insert a statement in the education record.
3. The right to consent to disclosures of personally identifiable information contained in the student’s education records, except to the extent that FERPA authorizes disclosure without consent. The university may release, without consent, certain directory information.

The university discloses education records without a student’s written consent under the FERPA exception for disclosure to school officials with legitimate educational interests. A school official is a person designated by the university to perform an assigned function on behalf of the university, including an individual employed by the university as an administrator, supervisor, instructor or administrative staff member (including law enforcement unit personnel and health staff).
or a volunteer; a person or company with whom the institution has contracted to perform a service instead of using university employees (such as an auditor, attorney or other third party); a member of the board of regents; a government entity or any other entity with which a student is placed as part of his or her education; or a student serving on an official committee (such as a judicial or academic review committee or scholarship committee) or helping another university official perform his or her tasks. A university official has a legitimate educational interest if the official needs the student’s education record to perform work appropriate to his or her position.

Upon request, the university also discloses education records without consent to officials of another school in which a student seeks or intends to enroll, or where the student is already enrolled.

The following information is designated as directory information by the university:

a. Names of students
b. Dates of attendance at the university
c. Program/major field(s) of study
d. Degrees and certificates received including dates
e. Participation in officially recognized university activities
f. Academic and co-curricular awards, honors, and scholarships received and dates received
g. Weight and height of students on athletic teams
h. Students’ email addresses
i. Hometown, city and state

Students may inform the Office of Admissions and the Registrar in writing that they do not give permission for the university to release their directory information, or they may submit the request through UAOonline at http://uaonline.alaska.edu. The request is valid until a subsequent request to release directory information is received in writing or through UAOonline.

Students have the right to file a complaint with the U.S. Department of Education concerning alleged failures by the university to comply with the requirements of FERPA. The name and address of the office that administers FERPA is:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202-5920

The University of Alaska Board of Regents’ Policy and University Regulation (09.04.) regarding education records can be reviewed at http://www.alaska.edu/bor/policy-regulations/.

Non-discrimination Policy and Disclaimer

It is the policy of the University of Alaska Fairbanks to provide equal education and employment opportunities and to provide services and benefits to all students and employees without regard to race, creed, color, religion, national origin, sex, age, disability, status as a Vietnam-era or disabled veteran, marital status, changes in marital status, pregnancy or parenthood, pursuant to laws enforced by the Department of Education and the Department of Labor, including Presidential Executive Order 11246, as amended, Title VI and Title VII of the 1964 Civil Rights Act, Title IX of the Education Amendments of 1972, the Public Health Service Act of 1971, the Veteran’s Readjustment Assistance Act of 1974, the Vocational Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, the Age Discrimination in Employment Act of 1967, the Equal Pay Act of 1963, the 14th Amendment, and Alaska Statutes Title 18, Chapter 80 and Title 14, Chapter 18. Inquiries regarding application of these and other regulations should be directed either to the University of Alaska Fairbanks, Assistant Director of Human Resources, 108 College Road, phone 907-474-6259 or the Director of the Office of Equal Opportunity, 316 Signers’ Hall, phone 907-474-7599, Equal Employment Opportunity Commission; the Office of Civil Rights, Department of Education, Washington, D.C.; or to the Office of Federal Contract Compliance Programs, Department of Labor, Washington, D.C.

This catalog and its contents shall not be construed as a contract between the University of Alaska Fairbanks and prospective or enrolled students. The catalog is merely a vehicle of information, including university policies, regulations, rules and procedures. Although every effort is made to ensure its correctness, regulations of the university and its program requirements change from time to time during the period any student is attending the University of Alaska Fairbanks; to the extent there is a conflict between this catalog and university policies, regulations, rules or procedures, the university policies, regulations, rules or procedures will control.

Accordingly, if regulations or program requirements of the university in any way conflict with information contained in this catalog, the current regulations and program requirements govern. The university reserves the right to initiate changes in any of its regulations or program requirements affecting operation of the university and its program requirements; such changes shall become effective upon whatever time periods are required by applicable statutes, university regulations or program requirements.

UAF is accredited by the Northwest Commission on Colleges and Universities, 8060 165th Ave. NE, Suite 100, Redmond, WA 98052.

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Honors and Scholarships

Names of students receiving awards or scholarships or who appear on the dean’s list or chancellor’s list are released to the media unless a student has requested that no directory information be released. Instructions for electing FERPA confidentiality are available at http://www.alaska.edu/studentservices/ferpa/elect/.
COSTS AND FINANCIAL AID

Tuition and Fees

Tuition

Tuition is determined by the number of credit hours in which the student is enrolled, the level of the courses and the student's residency status (see the 2016-2017 tuition table below).

- Undergraduate students are considered full time at 12 or more credits.
- Graduate students are considered full time at 9 or more credits.
- Students enrolled in no more than 4 credits per semester pay tuition at the resident rate.

2016-2017 TUITION

<table>
<thead>
<tr>
<th>Level</th>
<th>Resident</th>
<th>Nonresident</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-200-level courses</td>
<td>$192/credit</td>
<td>$681/credit</td>
</tr>
<tr>
<td>300-400-level courses</td>
<td>$232/credit</td>
<td>$721/credit</td>
</tr>
<tr>
<td>500-level courses</td>
<td>varies</td>
<td>varies</td>
</tr>
<tr>
<td>600-level courses</td>
<td>$444/credit</td>
<td>$907/credit</td>
</tr>
</tbody>
</table>

Note: Audited credits are charged at the same rate as other credits.

RESIDENT AND NONRESIDENT TUITION

Students eligible for Alaska resident tuition generally include:

- an Alaska resident, defined as a person who is a U.S. citizen or eligible noncitizen who has been physically present in Alaska for at least the past two years;
- students who received a State of Alaska Permanent Fund Dividend within the last 12 months and can certify they have been in Alaska for the past 12 months;
- military personnel on active duty, their spouses and dependent children;
- members of the National Guard, their spouses and dependent children;
- veterans of the U.S. armed forces, and their dependents, who are eligible for Veterans Affairs educational benefits;
- dependent children of a person who graduated and holds an associate, bachelor's, master's or doctoral degree from the University of Alaska;
- dependent children of an Alaska resident as evidenced by the most current federal income tax return filed within the past 16 months;
- students participating in the Western Interstate Commission on Higher Education Western Regional Graduate Program;
- students enrolled in 4 or fewer credit hours within the UA system during a semester;
- students from other states or provinces whose public universities waive nonresident tuition surcharges for Alaska residents, or who are from foreign cities and provinces with established Alaska sister city or sister province relationships;
- students designated by the UA Scholars Program as UA Scholars;
- participants of the University of Alaska College Savings Plan;
- spouse or dependent children of a University of Alaska employee; or
- students who graduated within the past 12 months from a qualified Alaska high school.

Students will be considered nonresident if within two years prior to applying for residency they:

- were absent from Alaska for an aggregate of more than 120 days for other than documented absences due to illness or attendance at another educational institution while maintaining Alaska residency;
- committed any act inconsistent with Alaska residency, such as claiming residency in another state or voting as a resident of another state;
- registered as a resident in an educational institution in another state; or
- paid tuition at the University of Alaska at the Western Undergraduate Exchange program rate.

To prove physical presence, students must provide documentation of one of the following:

- student moved household goods to Alaska at least two years ago;
- student's lease, rental or ownership of real property in Alaska for at least the prior two years;
- student's permanent employment in Alaska for at least the prior two years; or
- other documentation of Alaska residency for the two prior years deemed satisfactory by the UAF Office of Admissions and the Registrar.

Students applying for resident tuition assessment must file a residency form with the Office of Admissions and the Registrar before the published end of the add/drop period for regular semester-length courses for the semester for which residency is sought. Failure to file and provide adequate proof of physical presence by this date will waive any claim that the student was eligible for resident tuition assessment for that semester or prior semesters unless otherwise determined by the Office of Admissions and the Registrar.

Residency criteria, as paraphrased above, are determined by UA Board of Regents residency policy and regulations found at http://www.alaska.edu/bor/policy/05-10.pdf. For more information and applications, students should contact the Office of Admissions and the Registrar.
Basic Student Fees

<table>
<thead>
<tr>
<th>Basic Student Fees</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(per semester unless otherwise indicated)</td>
</tr>
<tr>
<td>ASUAF</td>
<td>$42</td>
</tr>
<tr>
<td>Athletics</td>
<td>$10/credit to a maximum of $120</td>
</tr>
<tr>
<td>Course Fees</td>
<td>varies</td>
</tr>
</tbody>
</table>

International Student Health Insurance

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual</td>
<td>$1,195</td>
</tr>
<tr>
<td>Fall semester</td>
<td>$436</td>
</tr>
<tr>
<td>Spring semester</td>
<td>$433</td>
</tr>
<tr>
<td>Spring/summer</td>
<td>$759</td>
</tr>
<tr>
<td>Summer</td>
<td>$327</td>
</tr>
</tbody>
</table>

Parking Permit

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>8 credits or fewer</td>
<td>$41</td>
</tr>
<tr>
<td>9 or more credits</td>
<td>$78</td>
</tr>
<tr>
<td>Annual permit</td>
<td>$143</td>
</tr>
<tr>
<td>Spring/summer</td>
<td>$143</td>
</tr>
<tr>
<td>Multivehicle</td>
<td>additional $10</td>
</tr>
</tbody>
</table>

Student Health and Counseling Center

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall or spring semester</td>
<td>$135</td>
</tr>
<tr>
<td>Summer semester (6 or more credits)</td>
<td>$70</td>
</tr>
</tbody>
</table>

Student Recreation Center       | $75

Student Sustainability          | $20

Technology                      | $5/credit to a maximum of $60

Transportation

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1-3 credits</td>
<td>none</td>
</tr>
<tr>
<td>4 or more credits</td>
<td>$15</td>
</tr>
</tbody>
</table>

UA Facilities                   | $6 per credit

UA Network                      | varies

Wood Center Student Life

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1-8 credits</td>
<td>none</td>
</tr>
<tr>
<td>9 or more credits</td>
<td>$35</td>
</tr>
</tbody>
</table>

Note: All fees are subject to change.

ASUAF

Cost: $42 per semester

Who pays: All Fairbanks-area students (Fairbanks campus or Community and Technical College sites) enrolled in 3 or more credits.

What’s covered: The Associated Students of the University of Alaska Fairbanks represents student views and concerns to the university administration, University of Alaska Board of Regents and Alaska Legislature. The ASUAF fee also partially funds publication of the UAF student newspaper, the Sun Star; the student-managed ASUAF Concert Board; and KSUA, the student radio, as well as other multimedia. Other services provided through ASUAF include a half-hour attorney consultation, academic travel funding, international student identification cards, subsidized student club activities and much more. Contact ASUAF at 907-474-7355 or visit http://www.asuafstudentgov.org.

ATHLETICS

Cost: $10 per credit hour (to a maximum of $120 per semester)

Who pays: All Fairbanks-area students (Fairbanks campus or Community and Technical College sites) enrolled in 3 or more credits.

What’s covered: The athletics fee provides admission to all home athletic competitions. Admission is guaranteed only until the start of each event. The fee excludes postseason competitions. For more information regarding event and ticket policies visit http://www.alaskananooks.com.

COURSE FEES

Cost: Varies

Who pays: Students enrolled in courses with special fees. See the class schedule for individual classes.

What’s covered: Some courses require special equipment, supplies or services and charge a materials fee in addition to tuition.

HEALTH INSURANCE

Cost: Annual — $1,195; fall semester 2016 — $436; spring semester 2017 — $433; spring/summer — $759; summer 2017 — $327

Who pays: Students with F-1 and J-1 visas (including Canadian students) must have health insurance coverage. If you do not already have health insurance, you must buy the student health insurance provided through the university. Coverage is not valid until your account is paid or you are enrolled in a payment plan. Please visit http://www.uaf.edu/chc/ for more information.

PARKING PERMIT

Cost: Single vehicle, $41 for 8 or fewer credits; $78 for 9 or more credits; $143 annual permit

Multivehicle — With any of the permit options, you can register up to four vehicles for an additional $10. You will receive a hang tag that will allow you to park one vehicle on campus at a time. (Campus residents may not purchase the multivehicle option. Employees are not eligible to purchase parking permits at student rates.)

Who pays: Students who park a vehicle at any on- or off-campus UA, UAF or Community and Technical College location are required to have a parking permit displayed on the vehicle at all times, including evenings.

Costs are based on the combined total credit hour enrollment at UA, Community and Technical College, e-Learning & Distance Education, or any class held at a UAF location where credit is given through another location.

What’s covered: Parking in permit-required and general-use lots/ spaces at any on- or off-campus UA, UAF or Community and Technical College location in Fairbanks

How to order your permit: Request your permit through UAF’s online parking system at http://www.uaf.edu/bursar/parkingservices/. Select the type of parking permit(s) needed, your delivery option and
payment method. You may instantly print a two-week temporary permit for use until your permit arrives in the mail or you pick it up.

How to pay: Complete your permit purchase at http://www.uaf.edu/bursar/parkingservices/. Payment options are MasterCard, Visa, Discover or “student account,” if you have added parking to your student account. You may also pay for the permit at the Bursar’s Office in Signers’ Hall with cash, check or money order.

How to acquire permit: Depending on the method chosen, you may pick up the permit at the location indicated at the time of purchase, or if the mail option was chosen, it will be mailed to you. Permits may always be picked up at the Bursar’s Office in Signers’ Hall. Bring your current state vehicle registration with you to ensure correct information for your file.

It is the responsibility of all students parking a vehicle on any UAF property (on or off campus) to be knowledgeable of UAF parking regulations, available online at http://www.uaf.edu/bursar/parkingservices/. For more information, call 474-7384 or email uaf-bursar@alaska.edu.

STUDENT HEALTH AND COUNSELING CENTER

Cost: $135 per fall or spring semester; $70 summer

Who pays: Fall and spring semesters — students enrolled in 9 or more on-campus credits (optional for students taking 6-8 credit hours), students living in university housing, and all students purchasing student health insurance. Summer sessions — students enrolled in 6 or more on-campus credits (optional for students enrolled in fewer than 6 credits if they are enrolled in the upcoming fall semester for 6 or more credits and were eligible for student health center services in the preceding spring semester).

What's covered: Basic medical and counseling services at the UAF Student Health and Counseling Center on the Fairbanks campus.

Waivers: Students who meet all the following conditions may waive the health center fee:

1. no courses on the Fairbanks campus or at University Park,
2. not living in university housing and
3. not purchasing the university student health insurance plan.

Pick up a health center fee waiver form from the UAF Bursar’s Office on the Fairbanks campus or call 907-474-7043.

STUDENT RECREATION CENTER

Cost: $75 per semester

Who pays: All Fairbanks-area students (Fairbanks campus or Community and Technical College sites) enrolled in 9 or more credits (correspondence classes do not count towards this total). Students enrolled in 3-8 credits who want access to the Student Recreation Center can pay the access fee to use the facilities. This fee is not available for students enrolled in fewer than 3 credits. Students taking courses outside the Fairbanks area are not required to pay this fee.

What's covered: The SRC fee provides for use of the SRC and its facilities. Anyone under the age of 18 using the SRC and its facilities must be accompanied by a parent or guardian whose minimum age is 21, unless he or she is a full-time student. Call 907-474-5886 for more information.

STUDENT SUSTAINABILITY

Cost: $20 per semester

Who pays: Students enrolled in 3 or more Fairbanks section credits (Fairbanks or Community and Technical College sites)

What's covered: The Student Sustainability fee is a student-initiated fee that funds energy-efficiency programs and renewable energy projects or other sustainability issues. Preference is given to projects that reduce UAF’s nonrenewable energy consumption at the Fairbanks campus and CTC sites. For more information visit http://www.uaf.edu/sustainability/.

TECHNOLOGY

Cost: $5 per credit hour (to a maximum of $60 per semester)

Who pays: All students

What's covered: The fee remains at the campus at which it was collected and is used to support technology that enhances academics.

TRANSPORTATION

Cost: $15 per semester

Who pays: All Fairbanks-area students (Fairbanks or Community and Technical College sites) enrolled in 3 or more credits per semester during fall or spring semesters.

What's covered: The transportation fee pays a portion of the costs of operating shuttle buses throughout campus and to various university facilities off campus.

UA FACILITIES FEE

Cost: $6 per credit

Who pays: All undergraduate and graduate students, including those enrolled in eLearning or distance education courses.

What's covered: The UA facilities fee is assessed to all undergraduate and graduate students to address the capital reinvestment for university facilities and academic equipment. Capital reinvestment funds construction that modernizes university classrooms, laboratories, residence halls and other buildings so students have learning and living facilities that enhance the academic experience.

UA NETWORK FEE

Cost: 4 percent of tuition

Who pays: All students

What's covered: The UA network charge covers rapidly rising costs, especially in the maintenance and enhancement of the universitywide technology infrastructure. The 4 percent network charge is applied on a per-credit-hour basis (rounded to the nearest dollar) to tuition, nonresident surcharges if applicable, and fees in lieu of tuition for credit and non-credit courses. The minimum network charge per course is $8.
WOOD CENTER STUDENT LIFE

Cost: $35 per semester

Who pays: All Fairbanks-area students (Fairbanks campus or Community and Technical College sites) enrolled in 3 credits or more. Students taking courses outside the Fairbanks area are not required to pay the Wood Center Student Life fee.

What’s covered: The Wood Center Student Life fee supports Nanook traditions such as Starvation Gulch, Winter Carnival and SpringFest as well as student activities and projects.

Other Fees

Other Fees (per use unless otherwise indicated)

<table>
<thead>
<tr>
<th>Application for Admission</th>
<th>$40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certificate or associate degree</td>
<td>$50</td>
</tr>
<tr>
<td>Baccalaureate</td>
<td>$60</td>
</tr>
<tr>
<td>Graduate</td>
<td>$60</td>
</tr>
<tr>
<td>Application for Graduation</td>
<td>$50 ($80 if late)</td>
</tr>
<tr>
<td>Campus Housing</td>
<td></td>
</tr>
<tr>
<td>Residence halls (per semester)</td>
<td>$2,070-$3,050¹</td>
</tr>
<tr>
<td>Fairbanks campus family housing (per month)</td>
<td>$745-$1,640²</td>
</tr>
<tr>
<td>Kuskokwim Campus housing</td>
<td>Contact campus</td>
</tr>
<tr>
<td>Credit by Examination</td>
<td>$40/credit</td>
</tr>
<tr>
<td>Credit Card Transaction</td>
<td>2.75 percent ($3 minimum)</td>
</tr>
<tr>
<td>Credit for Prior Learning</td>
<td>$50 plus $10/credit</td>
</tr>
<tr>
<td>Duplicate Tuition/Fees Receipt</td>
<td>$5/copy</td>
</tr>
<tr>
<td>eLearning &amp; Distance Education</td>
<td>$25/credit</td>
</tr>
<tr>
<td>Graduate Student Reinstatement</td>
<td>$50</td>
</tr>
<tr>
<td>Late Add/Late Registration</td>
<td>$50</td>
</tr>
<tr>
<td>Late Payment Fees</td>
<td>$35, $100, $150</td>
</tr>
<tr>
<td>Late Placement Test or Guidance Test</td>
<td>$5</td>
</tr>
<tr>
<td>Meal Plans (per semester)</td>
<td>$295-$2,195</td>
</tr>
<tr>
<td>New Student Orientation (Fairbanks area)</td>
<td></td>
</tr>
<tr>
<td>Fall</td>
<td>$115</td>
</tr>
<tr>
<td>Spring</td>
<td>$35</td>
</tr>
<tr>
<td>Payment Plan</td>
<td>$30-$75</td>
</tr>
<tr>
<td>Post Office Box</td>
<td></td>
</tr>
<tr>
<td>Semester</td>
<td>$45</td>
</tr>
<tr>
<td>Summer Only</td>
<td>$30</td>
</tr>
<tr>
<td>Records Duplication</td>
<td>$0.25/page</td>
</tr>
<tr>
<td>Reinstatement Fee</td>
<td>$100</td>
</tr>
<tr>
<td>Returned Check Fee</td>
<td>$30</td>
</tr>
<tr>
<td>Textbooks (approximate)</td>
<td>$250-$1,100/semester</td>
</tr>
<tr>
<td>Transcripts</td>
<td></td>
</tr>
<tr>
<td>Electronic, $12; paper, $15</td>
<td>$12-$15</td>
</tr>
<tr>
<td>Expedited paper</td>
<td>$30</td>
</tr>
<tr>
<td>UAF SOM and CEM Tuition Surcharge</td>
<td>20 percent of tuition</td>
</tr>
</tbody>
</table>

¹ Plus one-time application fee of $40 and a refundable $315 damage deposit
² Plus one-time application fee of $75 and a refundable $600 damage deposit

Note: All fees are subject to change

APPLICATION FOR ADMISSION

Cost: $40-$60

Who pays: Applicants to certificate and associate degree programs should include $40 with their admissions application. Applicants to
bachelor’s programs should include $50, and applicants to graduate programs, $60.

What's covered: Assessment and processing of prospective student applications

APPLICATION FOR GRADUATION
Cost: $50 ($80 if late)

Who pays: Students planning to graduate in a given semester must apply for graduation. Early applications are encouraged and can be submitted the semester before expected graduation. Application deadlines are Oct. 15 for fall; Feb. 15 for spring and June 15 for summer graduation.

What's covered: Credit check, degree requirement audit and certification of eligibility to graduate

CAMPUS HOUSING

Fairbanks Campus Single-Student Housing
Cost: $355 deposit ($40 nonrefundable application fee; $315 refundable damage deposit).

<table>
<thead>
<tr>
<th>Housing Type</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double rooms</td>
<td>$2,070</td>
</tr>
<tr>
<td>Single rooms</td>
<td>$2,535</td>
</tr>
<tr>
<td>Double room/single occupancy</td>
<td>$3,050</td>
</tr>
<tr>
<td>Cutler Apartment Complex</td>
<td>$2,350-$2,825</td>
</tr>
<tr>
<td>Sustainable Village single</td>
<td>$2,895</td>
</tr>
</tbody>
</table>

Kuskokwim Campus Housing
For information about campus housing at the Kuskokwim Campus in Bethel, visit http://www.bethel.uaf.edu or call 907-543-4562.

CREDIT BY EXAMINATION
Cost: $40 per credit hour

Who pays: Students using the credit-by-exam option for earning UAF course credit

What's covered: The fee pays for coordinating the exam or other evaluation requirements between student and professor, grade recording and transcription.

CREDIT CARD TRANSACTION FEE
Cost: 2.75 percent ($3 minimum)

Who pays: Anyone making credit or debit card payments via UAOnline. Note: credit and debit card payments are not accepted in person, by mail or over the phone.

What's covered: Fees charged by credit card companies. Note: the university does not receive any of this fee.

CREDIT FOR PRIOR LEARNING
Cost: $50 fee payment plus $10/credit hour for credits earned

Who pays: Students using the credit-for-prior-learning option to earn UAF course credits

What's covered: The fee pays for the portfolio or license/certificate review by faculty evaluation committee. If credit is awarded, the fee per credit hour earned pays for grade recording and transcription.

ELEARNING & DISTANCE EDUCATION
Cost: $25 per credit hour

Who pays: Students enrolled in an eLearning & Distance Education course

What's covered: The fee pays for academic and advising support, online student resources, exam proctoring services, technology upgrades, and enhancements to course delivery.

GRADUATE STUDENT REINSTATEMENT
Cost: $50

Who pays: Graduate students who do not meet registration requirements and fail to file an approved leave of absence may request reinstatement from the dean of the Graduate School and will be charged $50.

What's covered: Reinstatement processing

LATE ADD/LATE REGISTRATION
Cost: $50

Who pays: Students given permission to add a class after the last day to pay tuition and fees will be charged a late registration fee of $50 that must be paid within five business days. This includes drop/add (swap) courses. No late fee will be charged when:

- you add a late-start course during the regular registration period for that course, or
Late Placement Test or Guidance Test

Cost: $5

Who pays: Students who take a placement or guidance test outside of scheduled testing sessions

What's covered: Test oversight, administration and recording

Meal Plans

Cost: $295-$2,195

Who pays: All students living in a residence hall are required to purchase a meal plan, with the exception of graduate students and residents in the Sustainable Village. UAF also offers meal plans to students not living on campus. For more information on meal plan options and plan details please review the Dining Services program terms and conditions. All prices are per semester.

What's covered (per semester): Meal plans are combinations of block dinners and Munch Money. All-you-care-to-eat block dinners can be used at Dine Forty-nine and as cash equivalency up to $7 at most Fairbanks campus dining locations (excluding Subway) from 4:30 p.m. until closing. Munch Money is used like cash at all dining locations and most vending machines on campus.

All unused block dinners expire at the end of each semester. Any remaining Munch Money from the fall semester will be added to the spring meal plan but expires at the end of the academic year after May 8, 2017. Unused dinners and Munch Money will not be refunded. See Dining Services (p. 67) page for details of specific meal plans.

Applications to purchase meal plans are available at http://www.uaf.edu/dining/. Forms may be submitted electronically from the website or sent to Dining Services via email at uaf-dining@alaska.edu or P.O. Box 75815, Fairbanks, AK 99775.

Note: The Wood Center food court is closed for campus holidays.

New Student Orientation

Cost: $115 for fall semester, covers all programs except special Outdoor Adventures activities; $10 for one-day fall transfer student orientation, and $25 (plus $10 for each additional guest) for two-day fall family orientation. $35 for spring orientation.

Who pays: Any new student may participate in New Student Orientation on the Fairbanks campus. NSO is required for all first-time bachelor’s degree students (regardless of the number of earned college credits) and international students (undergraduate F-1 and international exchange J-1 status). Domestic transfer students are also encouraged to attend.

What's covered: All materials, sessions, general entertainment and meals not included in student meal plans

Payment Plan

Cost: $30-$75 depending on when you sign up. Discount only applies to online enrollment via UAOnline.

Who pays: Students unable to pay all tuition and fees at the beginning of a semester

What's covered: Budgeting by distributing the costs of tuition and fees across two or more payment dates. See http://www.uaf.edu/bursar/ for more information.

Placement Test Fee

Cost: $25

Who pays: Undergraduate students taking the ALEKS PPL mathematics placement assessment

What's covered: Mathematics course placement assessment and six-week prep and learning module to place, practice, improve and enroll. Up to four retests may be taken.

Post Office Box

Cost: $45 per box per semester, $30 summer only

Who pays: Students who wish to receive U.S. Postal Service mail on campus may rent a post office box in the full-service post office in Constitution Hall. USPS mail is delivered on campus to post office boxes only, not to street addresses. The fee can be paid at UAOnline or at the Bursar’s Office in Signers’ Hall.

What's covered: Post office box space, postal and mail forwarding services

Records Duplication

Cost: $0.25 per page

Who pays: Anyone who requests copies of their own academic records

What's covered: Copies of records in your academic file in the Office of Admissions and the Registrar (except transcripts from another school). Students need to submit a written request for copies. The Office of Admissions and the Registrar provides document copies as time permits. All copies provided through this service are stamped “unofficial.”
REINSTATEMENT FEE
Cost: $100

Who pays: Students dropped from classes due to nonpayment will be charged $100 to have classes reinstated

What's covered: Reinstatement processing

RETURNED CHECK FEE
Cost: $30

Who pays: If a check is returned for any reason, a hold will be placed on the student's account which will prevent the student from registering, viewing grades, participating in graduation activities and receiving transcripts until the check clears and a $30 fee is paid.

What's covered: Processing returned checks

TEXTBOOKS
Cost: Varies according to course load. You can expect to pay about $250-$1,100 per semester for textbooks. The cost for books averages about $90-$115 per course.

Who pays: Students in classes with required texts are responsible for the cost of textbooks assigned by instructors

What's covered: Texts, assigned readings or other course materials

TRANSCRIPTS
Cost: $12-$30

Electronic = $12
Paper = $15
Expedited paper = $30

Who pays: Anyone who requests their own transcripts from the Office of Admissions and the Registrar

What's covered:

- Official transcripts can be issued electronically (secure PDF delivery to an email address) or on special transcript paper in a sealed envelope sent by U.S. mail. Official transcript requests are handled by Avow Systems Inc. (accessible via UAOnline) and by the Office of Admissions and the Registrar. Electronic transcripts can be delivered within minutes of the request as long as there are no holds on the student account. Processing time for paper transcripts is normally three to five business days. Transcript requests are processed as they are received and cannot be held for grades or degrees.

- Unofficial transcripts are accessible via UAOnline.

UAF SOM AND CEM TUITION SURCHARGE
Cost: 20 percent of tuition

Who pays: Students enrolled in upper-level and graduate courses in School of Management departments, and students enrolled in lower-level, upper-level and graduate courses in College of Engineering and Mines departments

Paying Tuition and Fees

Students are not considered registered for any classes until all tuition and fees are paid or other payment arrangements have been made by the fee payment deadline. This includes room rent, meal plan costs, student activity fees, health fees and deposits. Any charges unpaid at the end of the previous semester are also due and must be paid before you can re-enroll. If you owe money to the university and submit an enrollment form and payment for the current semester, you will not be enrolled in your classes; instead the payment will be applied toward your outstanding balance.

Other than tuition and fees, which are due according to every semester's payment schedule, any charges owed to the university are due within 30 days.

A $30 charge and a hold will be placed on your account if your check is returned. This will prevent you from registering, viewing grades, receiving transcripts and graduation activity.

CONSEQUENCES OF NOT PAYING

Failure to pay in full or make other payment arrangements by the fee payment deadline may result in cancellation of your class schedule. UAF may withhold transcripts, grades and other services, and cancel meal plans and housing. If you do not pay your financial obligations. If the university takes such action, you will still be responsible for your account balance in full.

Registration may be withheld from any student who is delinquent in paying any amount due to the university. The registration process is not complete until the student has paid all fees and charges due. UAF may drop you from your courses after the fee payment deadline if you owe a balance to the university. A $100 reinstatement fee will be charged to re-enroll in any dropped courses.

FAILURE TO MEET FINANCIAL OBLIGATIONS

University policy requires a financial hold be placed on your student account if you fail to meet your financial obligations. The hold will prevent any registration, transcript or graduation activity.

Past due accounts will be sent to a collection agency. Interest, late fees and/or collection costs will be added to your account. Past due balances may be reported to a local credit bureau. The university is authorized to garnish Alaska Permanent Fund Dividends for payment of past due accounts.

TUITION WAIVERS

- Senior Citizen Tuition Waiver
  UA Board of Regents policy waives regular tuition for Alaska residents at the age of eligibility for full Social Security retirement benefits. You are eligible to use the senior citizen tuition waiver and enroll in UAF courses if:
  • you are a permanent resident of Alaska;
  • you are age-eligible to receive full Social Security retirement benefits; and
  • there is space (i.e., no waitlist) in the class or classes you want.

If you are using a senior tuition waiver, you may not register until the first day of instruction for each class. You must meet both age and residency requirements by one of the following dates to be eligible for the corresponding semester: Sept. 1 for fall; Jan. 1 for spring; May 1 for
summer. Reimbursements will not be made to senior citizens who pay for a course and then request a waiver.

- **Employee Tuition Waiver**
  
  Employee tuition waivers pay only for tuition. Tuition waiver forms must be turned in by the fee payment deadline. The employee is responsible for all other fees. The employee must be employed for at least six months to be eligible and must maintain a cumulative GPA of 2.0 for undergraduate courses and 3.0 for graduate courses. Employees who pay for a course and later become eligible for a waiver will not be reimbursed. Late fees and payment deadlines apply. More information is available at http://www.uaf.edu/bursar/.

**Refunds**

**TUITION AND FEES**

Students who withdraw from courses or cancel enrollment must submit a completed official withdrawal form to the Office of Admissions and the Registrar. UAF may fully or partially refund undergraduate, graduate and nonresident tuition and fees. The following conditions apply:

1. If UAF cancels a course, students’ tuition and fees will be refunded in full.
2. If a student formally withdraws from a course, UAF will make refunds according to the date of the withdrawal.
   a. Students have until the third Friday of the semester to drop classes and receive a 100 percent refund. The parking decal fee will be refunded in full if the student returns the parking decal at the time of withdrawal.
   b. If a student withdraws from a class and adds another on the same day through the third Friday of the semester, UAF will exchange tuition. **NOTE:** If the exchange is uneven — e.g., lower level to upper level, or 3 credits to 4 credits — tuition and any fees owed are due the same day.
   c. If withdrawal is after the third Friday of the semester, no refund or exchange of tuition is available.

- **Courses Meeting Four Weeks or More But Less Than a Semester**
  
  a. If a student withdraws within five business days of the first class meeting, UAF will refund 100 percent of tuition and fees.
  b. If a student withdraws on or after the sixth business day after the first class meeting, no refund or exchange of tuition is available.

- **Courses Meeting Less Than Four Weeks**
  
  If a student withdraws before the first day of class, UAF will refund 100 percent of tuition and fees. No refund or exchange of tuition is available to students who withdraw on or after the first day of class.

**REFUND PROCESSING**

Financial aid will be disbursed to student accounts 10 days before the first day of class, and the Bursar’s Office will begin processing refunds at that time. Contact the Bursar’s Office for an advance if you need your funds for books and supplies. Refund processing is automatic for students who officially drop courses by the published refund deadlines. Remember to return parking permits if you drop during the 100 percent refund time.

All refunds are processed electronically or by mail. The Bursar’s Office does not issue refund checks for amounts less than $10. It is your responsibility to check your account and contact the Bursar’s Office to receive your refund as cash or to apply it to your PolarExpress card as a nonrefundable payment.

If you paid tuition and fees by credit card only, the card will be credited up to the amount charged.

If your tuition was paid through external sources such as financial aid, federal loans, scholarships or grants, you will receive your refund as a check sent to your mailing address of record or direct deposited in your bank account.

Once processed by the Bursar’s Office, direct deposit takes three to five business days to disburse to your bank account.

Your refund is subject to federal regulations. If you receive a refund due to dropped classes or a total withdrawal, you may no longer qualify to receive scholarships or financial aid. In that case, the funds may be returned to the lender or grantor pursuant to all applicable rules and regulations.

If you paid by cash or check, a refund check will be sent to your mailing address of record or direct deposited in your bank account. If you notify the Bursar’s Office that you have not received the check due to an incorrect address, a fee of $18.50 will be charged for all checks reissued due to a stop-pay request by the student. Please be sure we have your current mailing address.

If you paid your tuition and fees by check, refund processing will begin after your check has cleared the bank.

Any balance owed to the university will be deducted from your refund.

Students who drop during the 100 percent refund period and want to maintain health insurance coverage should contact the Student Health and Counseling Center at 474-7043.

**DIRECT DEPOSIT OF REFUNDS**

Enrolling in direct deposit allows your refunds to be electronically deposited into your bank account. It’s simple, safe and convenient. Enrollment is available through our secure self-service website. Sign up for direct deposit of your refund through UAOnline (http://uonline.alaska.edu) by following these steps:

- At the “Student Services & Accounting Information” menu select the “Direct Deposit Enrollment” link.
- Select “1st time setup of direct deposit”
- Select the account type
- Enter the bank routing code
- Enter account number
- Re-enter account number
- Select “Submit”

**EXCEPTION TO POLICY: APPEAL FOR REFUND OF TUITION**

Appeals for refund of tuition are exceptions to policy and are only approved in events that are unanticipated and unavoidable. Approval is not automatic, and you need to provide documented evidence to support your request (physician’s note, letters of support from instructors, etc.). Acceptable unanticipated and unavoidable reasons may include:

1. death in immediate family;
2. serious illness or injury of student or immediate family member; and
3. factors outside of the student's control (e.g., fire, flood).

Work-related issues, personal hardships, changing your mind about college, poor academic performance, disciplinary withdrawal, not receiving expected financial assistance or failure to read UAF’s published documents are considered to be the result of personal choices and actions and will not be considered.

Appeals for refund of tuition must be submitted within 30 class days after the beginning of the next regular semester. Forms for an appeal for refund of tuition are available online at http://www.uaf.edu/bursar/forms/, through the Bursar’s Office in Signers’ Hall on the Fairbanks campus or at CTC. Once received, the appeal will be evaluated by a campuswide committee which will return a decision to the student. The decision of the committee is final, and a student who files a written appeal under these procedures shall be expected to abide by the final disposition of the review, as provided, and may not seek further appeal of the matter under any other procedure within the university. Submission of appeals and appropriate documentation after published deadlines will not be considered. Contact the Bursar’s Office for more information.

HOUSING
Students who move off campus or withdraw from the university will receive room refunds according to the schedule on their housing agreement.

Any refund of room charges will be based upon the housing agreement.

MEALS
Please refer to your meal plan agreement for specific information about meal plan refunds.

Where To Get More Information
Office of the Bursar
University of Alaska Fairbanks
130 Signers’ Hall
P.O. Box 757640
Fairbanks, AK 99775-7640
Email: uaf-bursar@alaska.edu
Online: http://www.uaf.edu/bursar/
Fax: 907-474-5898

Financial Aid

What Is Financial Aid
Most students will need financial aid to help pay for the cost of attending college. Financial aid in the form of scholarships, grants, loans and employment is available at UAF to eligible students who need assistance to attend school.

Financial aid can be used to help pay for tuition, fees, books, supplies and living expenses such as room and board.

The Financial Aid Office provides counseling and information to students and parents, and administers a comprehensive program of financial assistance. Specific information regarding financial aid programs at UAF can be found online at http://www.uaf.edu/finaid/. The Financial Aid Office is in 107 Eielson. Contact Financial Aid at 907-474-7256, toll free at 888-474-7256, or at uaf-financialaid@alaska.edu.

Who Receives Financial Aid
To receive financial aid you must:
1. Be admitted to a financial aid-eligible certificate or degree program at UAF;
2. Be a U.S. citizen or eligible noncitizen (F-1 and J-1 students are not eligible for state or federal financial aid, but may apply for University of Alaska Foundation or UAF privately funded scholarships, and graduate fellowships or assistantships);
3. Be registered with Selective Service if you are a male 18 or more years old;
4. Have a valid social security number;
5. Be making satisfactory academic progress as defined by the financial aid office policy (policies and forms can be found online at http://www.uaf.edu/finaid/);
6. Not be in default on any federal education loan and not owe a refund because of overpayment of a previous federal grant or loan at any college or university;
7. Have earned a high school diploma, GED or equivalent.

How to Apply for Financial Aid
The forms to apply for federal, state and UAF financial aid programs are available at the Financial Aid Office or at http://www.uaf.edu/finaid/.

All students must complete the Free Application for Federal Student Aid to be considered for grants, scholarships, tuition waivers, loans and work study.

FAFSA forms may be completed at http://www.fafsa.ed.gov. The earliest date students may begin completing the form is Jan. 1.

The priority application deadline for UAF is Feb. 15. If you miss the deadline, you may still apply for financial aid, but you might not be eligible for institutional scholarships or some state/federal grants.

Costs of Attending UAF
The information in the Estimated UAF Living Expenses (p. 60) table for a typical full-time undergraduate student for the school year will help you estimate the total cost of attending UAF.

<table>
<thead>
<tr>
<th></th>
<th>Single student living alone off campus</th>
<th>Single student living in UAF residence hall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition and fees</td>
<td>$7,798</td>
<td>$7,798</td>
</tr>
<tr>
<td>Books, supplies</td>
<td>$2,000</td>
<td>$2,000</td>
</tr>
<tr>
<td>Room and board²</td>
<td>$12,080</td>
<td>$8,530</td>
</tr>
<tr>
<td>Transportation</td>
<td>$2,000</td>
<td>$400</td>
</tr>
<tr>
<td>Misc./personal</td>
<td>$2,250</td>
<td>$2,250</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$26,128</td>
<td>$20,978</td>
</tr>
</tbody>
</table>

¹ Estimate includes Alaska resident tuition costs for freshmen/sophomores. Includes Wood Center student life, student government, technology, transportation, UA facilities, UA network, athletics, Student Recreation Center and health center fees. Does not include health insurance, parking, travel or special costs associated with international or exchange students. Add $14,670 for nonresident tuition. Costs are subject to change.

² Double room and meal plan
Standard budgets do not always fit everyone. Financial Aid staff will try to provide methods of covering unusual expenses such as medical bills, special child care or emergency items. Since eligibility is based on prior year income, you may request a review of your eligibility if your income changes from loss of job, divorce, death or disability.

How Eligibility Is Determined

Within two to four weeks after the FAFSA is filed, the Financial Aid Office receives a student aid report from the U.S. Department of Education. The information on this form is used to determine a student’s eligibility for financial aid at UAF.

Once the office has received this report, students will receive an email either requesting more information (such as copies of income tax forms, proof of citizenship, etc.) or an award notice detailing your eligibility for financial aid. This information is also available via UAOnline at http://uaonline.alaska.edu. Students should respond to requests for more information promptly to avoid delays.

The total amount of financial aid awarded will be based on the FAFSA results and the student’s cost of attendance.

Scholarships, Grants and Tuition Waivers

Grants are usually based on financial need, whereas scholarship awards are based on academic achievement as well as financial need. These types of aid do not have to be repaid. Most grants and scholarships are designed for undergraduate students.

• University of Alaska Scholars Program
UA Scholars are exceptional graduates of Alaska high schools who are offered a unique opportunity to attend the University of Alaska with an $11,000 scholarship paid over eight semesters at $1,375/semester. The UA Scholars Program encourages Alaska’s high school graduates to pursue their advanced education in the 49th state. Alaska high schools designate the top 10 percent of the junior class at the end of their junior year for the UA Scholars Award. UA Scholars may use their awards at any of the UA system campuses. The award may also be applied to costs of qualified student exchange programs. Contact the UA Scholars coordinator at the Office of Admissions and the Registrar at 907-474-7500 or 800-478-1823.

• Chancellor’s Scholarship
This award is available to high school students transitioning to college for the first time. A UAF application for admission and scholarship application must be received by Feb. 15 to be considered for this award. You may apply online at http://uaonline.alaska.edu. For more information contact the Office of Admissions and the Registrar at 907-474-7500 or 800-478-1823.

• Alaska Performance Scholarship
The Alaska Performance Scholarship is available to Alaska residents who graduated from an Alaska high school (public, private or home school) in 2011 or later. Students must complete high school, achieve a high school GPA of at least 2.5, earn a minimum score on a college or career readiness test, enroll at least half time, remain in good standing, and have qualifying education costs remaining after using all other nonloan aid. Students can receive up to eight semesters of award with three maximum annual award levels: up to $4,755, $3,566 and $2,378. To qualify, students must complete the FAFSA as soon as possible. For more information visit http://acpe.alaska.gov/FINANCIAL_AID/Grants_Scholarships/Alaska_Performance_Scholarship or call 800-441-2962.

• Human Achievement Award
This service award is given to graduating high school seniors and transfer students who demonstrate a record of volunteerism, community service and a commitment to high academic standards. A UAF application for admission, including the scholarship supplement form that is part of the application, must be received by Feb. 15 to be considered for this award. You may apply online at http://uaonline.alaska.edu. For more information contact the Office of Admissions and the Registrar at 907-474-7500 or 800-478-1823.

• UAF Privately Funded Scholarships
Several hundred privately funded scholarships are available to all prospective and current students in a variety of academic majors. A UAF application for admission, including the scholarship supplement form that is part of the application, must be received by Feb. 15 to be considered for most scholarships. Continuing students must complete the scholarship supplement form only. You may apply online at http://uaonline.alaska.edu. For more information contact the Office of Financial Aid at 907-474-5372 or 888-474-7256.

• University of Alaska Foundation Scholarships
Scholarships are available for students attending any campus in the UA system. Applications are submitted at http://uaonline.alaska.edu. The deadline is Feb. 15. For information telephone 907-474-7687, email sdfnd@alaska.edu or visit http://www.alaska.edu/foundation/.

• Army ROTC Scholarships
The U.S. Army awards four-year scholarships to high school students based on nationwide competitions. Students may use these scholarships to attend the university of their choice, provided that university is also host to an Army ROTC program. The UAF Army ROTC program supports campus-based competition for four-, three- and two-year scholarships for qualified UAF students. These scholarships may be used for undergraduate or graduate programs. Army ROTC scholarships pay UAF tuition and mandatory fees, $900 annually for books and supplies, and a monthly stipend for living expenses ranging from $300-$500 depending on the length of the scholarship.

For more information about the Army scholarship program, eligibility requirements and the application process, contact the Department of Military Science at 907-474-6852 or email rotc@uaf.edu.

• Bureau of Indian Affairs and Native Corporation Scholarships
The federal Bureau of Indian Affairs offers grants to undergraduate full-time students. Applicants must be at least one-quarter American Indian or Alaska Native. These grants supplement other financial aid and are based on financial need. Grants range from $50-$3,000 or more each year. The average grant at UAF is $1,600. More information on BIA grants can be obtained from the BIA Regional Office, 1675 C Street, Anchorage, AK, 99501-5198, or by telephone at 907-271-4115.

Some regional and village corporations provide scholarships to shareholders. Contact your local corporation for details on eligibility and application procedures.

• University of Alaska Grant
This need-based tuition assistance grant is awarded to eligible students who have completed fewer than 60 credits toward an undergraduate degree. Applicants must complete the Free Application for Federal Student Aid by April 15 and be an Alaska resident, admitted to a degree program, enrolled in at least 6 credits and maintaining satisfactory academic progress. Award amounts vary and are capped at a maximum of $1,000.

• Pell Grant
The federal Pell Grant is a need-based grant available to undergraduate students to help pay college costs. Since this grant is based on financial need, students must complete the Free
Application for Federal Student Aid. A federal processor will send applicants a student aid report indicating whether they qualify. Federal Pell Grants award up to $5,815 for the 2016-2017 academic year.

- **Federal Supplemental Educational Opportunity Grant**
  This grant is for exceptionally needy undergraduate students. Award amounts range from $600-$1,000 each year.

- **Student Support Services Grants**
  Student Support Services offers scholarships to qualified program participants who have made use of the SSS academic support services and are on a limited income. To be eligible to participate, you must be a first generation college student (neither parent has a college degree), have a documented learning or physical disability, or qualify as a low-income student. Visit http://www.uaf.edu/sss/ for more information.

- **AlaskAdvantage Grant**
  The AlaskAdvantage need-based grant is awarded to Alaska residents attending Alaska institutions. Priority is given to students pursuing degrees in Alaska workforce priority programs (such as allied health, social and community services, or teaching) or who have an ACT score of 25 or higher or SAT score of 1180 or higher. Part-time awards range from $500-$1,000 per academic year. Full-time awards range from $1,000-$3,000 per academic year.

- **Western Undergraduate Exchange Award**
  UAF participates in the Western Undergraduate Exchange administered by the Western Interstate Commission for Higher Education. Only new undergraduate degree applicants claiming residency in Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington or Wyoming are considered for a WUE award that reduces nonresident tuition to 1.5 times the resident tuition rate. WUE award applicants must submit an application for admission and clearly mark their interest in WUE on the form. Admission is restricted to an approved list of degree programs. Priority deadline for reviewing WUE applications is Feb. 15. For more information contact the Office of Admissions and the Registrar at 800-478-1823 or 907-474-7500, or online at http://www.uaf.edu/admissions/.

  Note: Students attending any campus of the University of Alaska system under the Western Undergraduate Exchange program are assumed to be receiving the benefit of reduced tuition because of their residency in a partner state. Therefore, time spent in WUE does not count toward the time required to establish residency in Alaska for tuition purposes. If students end their participation in WUE, they could begin establishing residency for tuition purposes as set forth in the resident and nonresident tuition policy (p. 52).

### Graduate Assistantships

You must be admitted to a graduate program to receive an assistantship. Research and teaching assistantships are awarded to qualified graduate students by each department or program. For application information, contact the department or program directly. For more information, see How to Earn a Graduate Degree (p. 242).

Fellowships are available through the University of Alaska Foundation, the Graduate School and private organizations. A limited number of these awards are granted each year, and the amounts vary. For information, contact the UA Foundation, 907-474-7687, or the Graduate School, 907-474-7464, or visit http://www.uaf.edu/gradsch/.

### Loans

Loans represent a major source of assistance as you try to meet the full costs of your education. Educational loans generally have long-term repayment schedules and offer low interest rates. They often have provisions for deferring payments and may offer more benefits related to financial need.

Any student who borrows money for college should understand the specific conditions and requirements regarding disbursements, deferments and repayment options. Students who fail to meet the conditions of the satisfactory academic progress policy may be denied all federal aid.

UAF participates in the Federal Student Loan Program. The Federal Stafford Loan provides loans from the federal government. The program offers subsidized and unsubsidized loans. Subsidized loans are for students who have financial need; the government makes interest payments on the loan while the student is in school, in grace period or in deferment. Unsubsidized loans are those for which interest accrues while in school. A student may receive subsidized federal loans for up to 150 percent of his/her program’s published length. If a student exceeds this time frame, his/her loans will lose the interest subsidy and interest will begin to accrue on those loans. Loan repayment calculations are available at http://www.finaid.org.

Students must be enrolled in at least 6 credits to qualify for a state or federal loan. Yearly limits for dependent students are $5,500 for first-year students, $6,500 for second-year students and $7,500 for upper-level undergraduates. Independent students may borrow, including the subsidized federal loan, up to $9,500 as first-year students, $10,500 as second-year students and $12,500 as third- or fourth-year students. Graduate students may borrow $20,500. The interest rate varies annually and is capped at 8.25 percent.

The Federal Parent Loan for Undergraduate Students is a program for parents of dependent students. The cost of attending UAF determines the annual loan limits. A variable interest rate or finance charge, not to exceed 9 percent, is determined each year for the federal PLUS programs.

The Alaska Commission on Postsecondary Education offers both federal and state loan programs. These loans are available to all students attending UAF. Through its federal component, AlaskAdvantage offers Stafford (subsidized and unsubsidized) and PLUS loans. State loans include the Alaska Supplemental Education Loan, the Family Education Loan and the Winn Brindle Scholarship Loan.

Students seeking an Alaska Supplemental Education Loan, or ASEL, must apply using the Free Application for Federal Student Aid and the ASEL Master Promissory Note.

The ASEL loan can be used as a supplement to any other aid, provided the total amount of aid does not exceed a student’s calculated cost of attendance. ASEL approval also requires a student to have good credit. Undergraduates may borrow up to $8,500 and graduate students up to $9,500. Repayment begins no later than six months after the borrower stops attending school at least half time. The interest rate is variable and is made public every July. Interest is charged from the day of disbursement.

The Alaska Family Education Loan Program allows the student’s family to share the cost of the student’s education. A family member can borrow up to $14,000 for an undergraduate and up to $15,000 for a
graduate student. The interest rate is 5 percent, and the borrower begins repayment within 60 days of the final disbursement.

The Winn Brindle Scholarship loan can be used only for specific fields of study. For information, please contact the Alaska Commission on Postsecondary Education, 3030 Vintage Blvd., Juneau, AK 99801, 800-441-2962 or http://www.state.ak.us/acpe/.

Applicants must apply each year. Applications are available for all Alaska loan programs via the ACPE website or through their offices. UAF receives ACPE loan disbursements via electronic funds transfer. Loans are processed within seven to 10 days from time of receipt at ACPE offices in Juneau or Anchorage and can be disbursed to a student's UAF account within two days of receipt by the Financial Aid Office.

Advance of funding (previously known as a textbook loan) may be available to students with enough certified financial aid available to cover all semester expenses and the requested advance of funding. Financial aid must be verified and guaranteed before an advance will be issued. In order to obtain an advance of funding, applicants must provide a textbook list, verified financial aid and a completed and signed advance of funding form. A $10 service charge is assessed and due when the advance of funding form is submitted. Applications and more information are available at the UAF Bursar's Office.

**Student Employment**

Campus jobs help many UAF students pay college costs. Many student positions are available across UAF campuses, as well as the University of Alaska statewide system offices in Fairbanks. More than 1,000 students are employed in these jobs. Full-time student status is not required unless specified by a department. However, students who are less than full time are subject to FICA withholding, and departments that hire part-time student employees are subject to the applicable benefit rate charge.

Student employees may work up to 20 hours each week while classes are in session and up to 40 hours when classes are not in session. Pay rates are based on the job classification. The average pay varies from $300-$500 each month. Since there is no "pool" for workers, students apply directly to the departments with position vacancies. Job announcements and information on how to apply for positions are available from Career Services, 110 Eielson, 907-474-7596, or from Human Resources, Administrative Services Center, 907-474-7700, or at http://alaska.edu/jobs/.

The Federal Work Study program provides jobs for graduate and undergraduate students with financial need. Job placement and working conditions are similar to regular student employment. To qualify for FWS, students must be eligible for federal financial aid as determined based on information provided on the required FAFSA form.

**Veterans’ Services**

The UAF Financial Aid and Veterans’ Services offices advise and monitor the educational progress and status of veterans who attend UAF using VA educational benefits. They also help veterans, service members and eligible dependents with the paperwork needed to begin and continue certification under the various GI Bill benefits. If you qualify and wish to use your benefits, you must be fully admitted to UAF and in a state-approved degree or certificate program. A complete list of benefit programs is available at http://www.uaf.edu/veterans/va-educational-benefits/. If you are unsure whether you are entitled to GI Bill benefits, contact the Department of Veterans Affairs in Muskogee, Okla., at 888-442-4551 (888 GI BILL 1) or http://www.gibill.va.gov.

Specific questions regarding vocational rehabilitation should be directed to the Fairbanks Vet Center, 540 Fourth Ave., Suite 100, Fairbanks, AK 99701, or call 907-456-4238.

Because the Department of Veterans Affairs processes benefit payments as a reimbursement, you should initiate your VA paperwork 60-90 days before your classes start. You can apply for veteran benefits online at https://vabenefits.vba.va.gov/vonapp/main.asp. You can request certification for your UAF VA educational benefits at http://www.uaf.edu/veterans/forms/, or visit our office at 107 Eielson, call 907-474-6391, toll free at 888-474-7256 or email uaf-financialaid@alaska.edu.

**Remaining Eligible for Aid**

Students receiving financial aid are required to maintain satisfactory academic progress. Undergraduate students must satisfactorily complete a minimum of 67 percent of total credits attempted each year and have a cumulative grade point average of 2.00 (3.00 for graduate students).

Students may appeal the suspension of aid. Appeals must be in writing and must state the reasons for failure to maintain satisfactory standards of progress, as well as the steps the student will take to meet those standards in the future. Appeals should be directed to the Financial Aid Office, which will determine if the requirements for satisfactory academic progress will be waived. Academic progress requirements are subject to changes in federal or state law and institutional policy. A complete description is available at the Financial Aid Office or at http://www.uaf.edu/financialaid/.

**Payment to the Student**

Disbursement of financial aid is usually in equal amounts. Students are given half the total award at the beginning of each semester. Tuition, fees and all other amounts due to UAF at the time financial aid is released to the student must be paid before the balance of aid is released to the student.

All financial aid checks as well as checks from outside organizations (such as Native corporations, clubs, etc.) are initially credited to the student’s account to pay for any debt owed to the university. Any balance remaining is refunded to the student in accordance with the university’s refund policy. Students who receive federal financial aid and totally withdraw from classes during a semester may have to pay back a portion of the federal financial aid received for that semester. The amount to be repaid is based on the number of class days attended before withdrawal compared to the total days in the semester and amount of federal aid received. If the withdrawing student is entitled to a refund of tuition and fees charges, all or part of the refund may be returned to the federal financial aid programs. The amount of a refund, repayment or return of federal financial aid is based on U.S. Department of Education regulations concerning return of federal financial aid. Any refund or repayment calculation exceeding the amount of refund determined by university policy will be charged to the student. Financial aid recipients are strongly encouraged to confirm the amount of any personal liability before processing a total withdrawal from classes.

**Important Financial Aid Dates**

- Jan. 1
Apply for federal aid with the Free Application for Federal Financial Aid. It is best to apply well before the time you will need the financial aid.

- **February**
  Apply for admission to UAF. Financial aid cannot be processed for students who have not been admitted to a UAF degree or certificate program.

- **Feb. 15**
  UAF scholarship application due. This application usually requires two to three weeks to complete, so applicants should start early.

- **May to July**
  Complete federal loan promissory note and entrance counseling at http://www.studentloans.gov. Processing time is three to four weeks. If sent to UAF in time, loans will be disbursed during fee payment.

- **June 1 for fall; Oct. 15 for spring**
  Deadline for admission to graduate programs, with all supporting documentation, transcripts and test scores.

- **July 1**
  Deadline for undergraduate admission to UAF for the fall semester. This is an absolute MUST. UAF cannot process financial aid for students who have not been admitted.

## Rights and Responsibilities of Accepting Financial Aid

As a financial aid recipient at UAF, you have the right to:

1. Know what financial programs are available to you.
2. Know how to apply, how eligibility is determined and what terms and conditions are related to your aid.
3. Know how the university determines whether you are making satisfactory academic progress toward your degree and what happens if you are not making such progress.
4. Request an explanation of your financial aid package, including what portion is gift and what portion must be repaid and the terms of repayment.
5. Know the costs of attending UAF and the refund policy for students who withdraw.

For continued receipt of financial aid you must:

1. Complete and file all financial aid forms accurately and on time.
2. Read and understand all documents you sign. You should also keep copies for your records.
3. Know the limits and conditions of financial aid programs.
4. Notify the Financial Aid Office of any change of address, name, marital status, attendance status or receipt of additional financial awards.

## Where to Get More Information

**Office of Financial Aid**
University of Alaska Fairbanks
107 Eielson Building
P.O. Box 756360
Fairbanks, AK 99775-6360
Email: uaf-financialaid@alaska.edu
Online: http://www.uaf.edu/finaid/
Telephone: 907-474-7256
Toll free: 888-474-7256
Housing

Single-Student Housing

Your educational experience at UAF will be one of the great adventures of your life. The Department of Residence Life can be a vital part of that adventure through programs that give you a comfortable, energetic environment in which to live and learn. The community fosters close friendships and academic achievement, helps you develop individual leadership ability and provides opportunities for personal growth.

UAF’s residence halls are some of the best in the state, and they are the only residence halls in the nation that boast a view of the Alaska Range and Denali, the tallest peak in North America.

Residence Life offers living environments to meet every need. Options include coed buildings by floor, small community atmospheres for rural Alaskans, apartment-style options, single rooms, alcohol-free environments and first-year experience halls. All single-student residential units are pet and smoke free.

Residence hall students have the conveniences of home within walking distance to class. Benefits include:

- cable television service
- optional local telephone service
- wireless and high-speed connections
- laundry facilities
- gender-inclusive housing (pilot program)
- trained staff on call 24 hours
- more than 400 programs each year

ELIGIBILITY

All students are eligible for campus housing, but students are not guaranteed housing until approved by the Department of Residence Life. To better manage occupancy, Residence Life requires that students be registered for a minimum of 6 in-class credit hours (online or distance education classes do not apply) to live in campus housing.

APPLICATION PROCESS

Applications are available through the Office of Admissions and the Registrar upon admittance to UAF or through Residence Life at http://www.uaf.edu/reslife/. Applicants must send $355 ($315 deposit, $40 nonrefundable application fee) with the signed housing application. Upon acceptance, Residence Life will send a written confirmation and receipt to the student.

COSTS

On-campus costs are comparable to off-campus living costs. When amenities such as cable television, wireless and computer connections, transportation and laundry facilities are added in, the on-campus costs are even more favorable. Residential fees (room and board) are due in full at fee payment along with all other fees.

Residence hall and board plan fees are listed on Tuition and Fees (p. 52) page. All room and board costs are subject to change. Students whose housing applications have been accepted will be able to withdraw (minus the application fee) if rates increase after they apply. Contact Residence Life about residence hall fees. Questions about the board plan should be directed to Dining Services at 907-474-6661.

CONSEQUENCES OF CANCELING A HOUSING CONTRACT

After July 31, students who have submitted a housing application are expected to live on campus and pay appropriate housing fees for their reserved space. Students who do not occupy their reserved space by the first day of classes or who cancel their reserved space after July 31 will be assessed a minimum of 10 percent of the room rate and forfeit their deposit. Dining plans also carry cancellation consequences. Direct questions about meal plans to Dining Services at 907-474-6661.

On-campus housing applications are for the academic year. Students living on campus for the fall semester are obligated to live on campus for the remainder of the academic year, so long as they are UAF students. Exceptions may be granted for the conditions listed under the “termination/forfeits” section of the agreement.

Room charges and refunds are processed according to the following schedule:

Housing and Dining Refund Schedules

FALL 2016

<table>
<thead>
<tr>
<th>Cancellation Date</th>
<th>Housing Refund</th>
<th>Forfeit? Dining Refund</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before Aug. 1</td>
<td>100% refund</td>
<td>No</td>
</tr>
<tr>
<td>Aug. 1-24</td>
<td>100% refund</td>
<td>Yes</td>
</tr>
<tr>
<td>Aug. 25-Sept. 9</td>
<td>90% refund</td>
<td>Yes</td>
</tr>
<tr>
<td>Sept. 10-23</td>
<td>75% refund</td>
<td>Yes</td>
</tr>
<tr>
<td>Sept. 24-Oct. 7</td>
<td>50% refund</td>
<td>Yes</td>
</tr>
<tr>
<td>Oct. 8-21</td>
<td>25% refund</td>
<td>Yes</td>
</tr>
<tr>
<td>After Oct. 21</td>
<td>No refund</td>
<td>Yes</td>
</tr>
</tbody>
</table>

SPRING 2017

<table>
<thead>
<tr>
<th>Cancellation Date</th>
<th>Housing Refund</th>
<th>Forfeit? Dining Refund</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before Dec. 1</td>
<td>100% refund</td>
<td>No</td>
</tr>
<tr>
<td>Dec. 1-Jan. 14</td>
<td>100% refund</td>
<td>Yes</td>
</tr>
<tr>
<td>Jan. 15-27</td>
<td>90% refund</td>
<td>Yes</td>
</tr>
<tr>
<td>Jan. 28-Feb. 10</td>
<td>75% refund</td>
<td>Yes</td>
</tr>
<tr>
<td>Feb. 11-24</td>
<td>50% refund</td>
<td>Yes</td>
</tr>
<tr>
<td>Feb. 25-March 10</td>
<td>25% refund</td>
<td>Yes</td>
</tr>
<tr>
<td>After March 10</td>
<td>No refund</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Deposits will be carried forward to subsequent academic years for students with applications. Deposits can be forfeited for several reasons. Please refer to the back of the residence hall application for specific details.

HALLS AND ROOMS

Every residence hall has common areas — including recreation lounges, study lounges, small kitchens and laundry facilities — to foster academic and personal growth. Recreational lounges typically have televisions, couches, tables, chairs and pool tables or pingpong tables. Hall kitchens generally include a range/oven, refrigerator, microwave, sink, table and...
chairs. Kitchens are for preparing snacks and not designed to replace the university meal plan.

All student rooms have high-speed connections, local telephone service and cable television service. Students must furnish their own twin-long linens, blankets, pillows, towels and telephone. Custodial service is provided for all common areas such as hallways, lounges and centrally located bathrooms.

**EDGE PROGRAM**

The Education, Development, Growth and Experience program provides support and resources to help traditional first-time freshmen achieve academic success. The EDGE program is mandatory for all first-time freshmen under 20 years of age who live on campus. EDGE halls have live-in tutors and twice the number of resident advisors as other halls. Alcohol is prohibited in EDGE halls. Participants receive instruction in academic success skills, campus resources and other topics that foster success.

**ROOM USE DURING VACATION PERIODS**

All halls are open during Thanksgiving and spring break, but most are closed during the winter break, with the exception of Cutler Apartments and the Sustainable Village. All students living on campus in the fall and spring are eligible to remain on campus over the winter break provided they apply to do so and pay the winter break fee. Space is limited and is available on a first-come, first-served basis. The winter break fee for Cutler Apartments and the Sustainable Village is included in the fall semester rates. Food service is not available during the winter and spring breaks. Summer housing assignments are made through Residence Life.

**Family Housing/Graduate Housing**

UAF offers a variety of on-campus housing for student families. The university owns and maintains 180 furnished apartments on campus, ranging from one- to three-bedroom units. They are affordable, comfortable and conveniently located near the center of campus. All apartments are smoke-free.

**ELIGIBILITY**

Students who are married and accompanied by their spouse, single parents with legal custody of their children, financially interdependent domestic partners and graduate students are eligible for family/graduate housing options at UAF. At least one adult family member must be enrolled as a full-time UAF student. Students planning to be married by the time they move in may apply. However, students may not sign an occupancy agreement until they present a marriage certificate or obtain financial interdependence approval.

**APPLICATION PROCESS**

Residence Life will mail an application for family housing upon request (also available online at http://www.uaf.edu/reslife/). Applicants should return the completed form as soon as possible with a nonrefundable $75 application fee. Residence Life establishes waitlists according to the order in which it receives applications. The application is not a guarantee of accommodations, but it gives Residence Life the information it requires to meet the applicant’s needs. All apartment preferences are honored on a first-come, first-served basis.

**PET POLICY**

Residents of family, faculty and staff housing may keep fish, dogs, cats and small caged animals (including hamsters, gerbils and mice — limit of two small caged animals per household). No other animals may be kept as pets in campus housing. Visit the Residence Life website at http://www.uaf.edu/reslife/ for details about the application process. Applying to keep a pet does not guarantee approval.

**COSTS**

Costs for families living on campus are comparable to the costs of living off campus. On-campus family apartment rental rates include all utilities except telephone and Internet in some units.

Deposits for family housing are $600. Upon acceptance of your assigned apartment, $300 of the deposit is due. The balance of your $600 deposit and your first month’s rent is due when you check in. Your occupancy agreement is for the entire academic year, but you may cancel the agreement for spring semester without forfeiting your deposit if you graduate or are not enrolled at UAF. Cancellation requests must be submitted in writing to Residence Life with a 30-day notice of intent to vacate. See the cancellation/termination section of your agreement for more detailed information.

**APARTMENTS**

The Fairbanks campus maintains five apartment complexes: Stuart Hall and Walsh Hall offer one-bedroom apartments (400 square feet) for couples without children; Hess Village offers one-bedroom (425 square feet), two-bedroom (720 square feet) and three-bedroom (900 square feet) apartments for families with children; and Garden Apartments is a six-plex offering shared two-bedroom apartments. Harwood Hall offers efficiencies (380 square feet) and one-bedroom apartments (470 square feet) for graduate couples without children and single graduate students. All complexes are equipped with laundry facilities.

Campus apartments are fully furnished and usually include computer connections, cable television service, laundry facilities and local telephone service.

**Immunization Policy and Housing**

The University of Alaska strictly enforces immunization and test requirements for students living in high-density housing. To live in residence halls and single-student apartment complexes, all students and other persons born after 1956 must complete, sign and submit a health inventory form to the Student Health and Counseling Center. The form must show:

1. Proof of immunization against or immunity for measles, mumps and rubella (two MMR are required).
2. Proof of immunization against diphtheria and tetanus (within the past 10 years).
3. PPD screening for tuberculosis (within the past year). If your screening was positive, you must provide evidence of a negative chest X-ray.

Although the university urges all students to be immunized against communicable diseases, these requirements are specifically intended to help ensure the health of all resident students.

**Mandatory Immunizations and Tests**

Your application for housing may be withheld for your second semester if you have not submitted these items. The university may require additional or expanded immunization and testing if the university community’s health and safety warrants it.

The university may grant exemptions from immunization requirements based on medical or religious reasons. The chancellor may also grant
exemptions to people who will occupy student residence facilities for less than a semester. Those exempted from immunization or testing for a disease may be removed from student residence facilities should an outbreak of that disease occur or threaten to occur. Residence Life cannot authorize exceptions to this policy.

See Board of Regents’ Policy, Part IX—Student Affairs, Chapter XI—Student Health. For more information, contact the Student Health and Counseling Center at 907-474-7043, uaf-sh-cc@alaska.edu or http://www.uaf.edu/chncc/.

Where To Get More Information
Department of Residence Life
University of Alaska Fairbanks
Main Floor, Moore-Bartlett-Skarland Complex
P.O. Box 756860
Fairbanks, AK 99775-6860
Email: uaf-housing@alaska.edu
Online: http://www.uaf.edu/reslife/
Telephone: 907-474-7247
Fax: 907-474-6423

Dining Services
The UAF Dining Experience
UAF Dining offers a welcoming, affordable dining experience for Fairbanks residential and commuter students. With six locations on the Fairbanks campus, you will find something to satisfy all your dining needs. All of them accept cash, BearBucks, Munch Money and credit cards. Please visit http://www.uaf.edu/dining/ for more information on each location.

MEAL PLAN OPTIONS
Meal plans are combinations of block dinners and Munch Money. All-you-care-to-eat block dinners can be used at Dine Forty-nine and as cash equivalency up to $7 at most Fairbanks campus dining locations (excluding Subway) from 4:30 p.m. until closing. Munch Money is used like cash at all dining locations and most vending machines on campus.

Freshmen residing on campus must select either the Block 105 or Block 75 meal plan.

MEAL PLANS
All freshmen living in campus housing may only select either Block 150 or Block 75 meal plan.

<table>
<thead>
<tr>
<th>Meal Plan</th>
<th>Block Dinners</th>
<th>Munch Money</th>
<th>Price per semester</th>
<th>Available to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block 105</td>
<td>105</td>
<td>$1,250</td>
<td>$2,195</td>
<td>All</td>
</tr>
<tr>
<td>Block 75</td>
<td>75</td>
<td>$1,450</td>
<td>$2,195</td>
<td>All</td>
</tr>
<tr>
<td>Blue plan</td>
<td>0</td>
<td>$1,995</td>
<td>$1,995</td>
<td>All</td>
</tr>
<tr>
<td>Gold plan</td>
<td>0</td>
<td>$995</td>
<td>$995</td>
<td>Wickersham/Cutler and commuter students only</td>
</tr>
<tr>
<td>Block 30</td>
<td>30</td>
<td>$300</td>
<td>$595</td>
<td>Cutler residents and commuter students only</td>
</tr>
</tbody>
</table>

USING YOUR MEAL PLAN
Blocks and Munch Money are accessed using the PolarExpress student ID card. With all meal plans, you have the option to eat at any campus dining location or to make purchases at most campus vending machines.

All students living in a residence hall are required to purchase a meal plan, with the exception of graduate students and residents living in the Sustainable Village. UAF also offers meal plans to students not living on campus. Students wishing to share meals with others may do so as long as they are present. For more information on meal plan options and plan details, please review the Dining Services program terms and conditions at http://www.uaf.edu/dining/.

All pricing is per semester. Students will automatically be enrolled in the same meal plan in the spring semester unless Dining Services is notified in writing of a different selection. These plans are nontransferable. All remaining block dinners will expire on the final day of each semester. Leftover Munch Money from the fall semester will be added to the spring meal plan, but expires at the end of the academic year in May if not used. Unused dinners and Munch Money will not be refunded.

Dining services on campus are provided by UAF partner Chartwells Higher Education Dining Services, an international food and facilities management services company. Check Dining Services’ website at http://www.uaf.edu/dining/ for additions or changes.

Where To Get More Information
Dining Services
University of Alaska Fairbanks
110 Eielson Building
P.O. Box 757815
Fairbanks, AK 99775-7815
Email: uaf-dining@alaska.edu
Online: http://www.uaf.edu/dining/
Telephone: 907-474-6661
Fax: 907-474-5707
SERVICES AND RESOURCES

Academic Advising and Learning Assistance

Academic advising is a vital part of your experience as a student at UAF. In fact, academic advising is so important that UAF requires you to meet with your academic advisor at least once a semester before you can schedule your courses. Your academic advisor help you develop an educational plan encompassing your academic and career goals, requirements of your major, and your semester-by-semester study plan to make the best use of your credits. Students can also see their degree and major requirements through DegreeWorks at http://uaonline.alaska.edu. UAF students admitted into a major will be advised by a faculty or staff advisor from their department. Visit http://www.uaf.edu/advising/ for academic advisor contact information.

The Academic Advising Center, on the Fairbanks campus, helps general studies and pre-major students as well as students in majors who are exploring other bachelor’s or pre-professional degree programs. Certificate, associate, vocational and technical program students are advised at the Community and Technical College Student Advising and Registration Center in downtown Fairbanks. Native and rural Alaska students are encouraged to seek an academic advisor from Rural Student Services in the Brooks Building. Students at community campuses outside Fairbanks can contact their local student services staff for information on registration, deadlines and other policies unique to their campuses or regions.

Academic Advising Center

Academic Advising Center staff and advisors offer guidance for general studies students (undeclared and exploratory), pre-major, AHEAD students, student-athletes, nondegree students and students in transition from a declared major to another degree program. The center is also a clearinghouse for general university and degree information. Academic advisors also help students with information about nontraditional credit options like credit for prior learning and pre-professional academic programs like veterinary science, law, dentistry or pharmacy.

The Academic Advising Center, in cooperation with other departments, sponsors student success workshops on a variety of special topics, including study skills, deciding on a major and overcoming math anxiety. Staff provide academic support with reference materials, referrals and study assistance to build and refresh knowledge in writing, math, reading and science. Staff can also help students discover their interests, abilities and aptitudes using software programs, inventories and other tools and assessments that provide guidance about careers and academic majors. These programs are free to students.

Contact the Academic Advising Center at 510 Gruening Building, 907-474-6396, toll free at 888-823-8780 or uaf.advising@alaska.edu. Specific information for students can be found at http://www.uaf.edu/advising/.

Community and Technical College Student Advising and Registration Center

The Community and Technical College Student Advising and Registration Center provides advising and support for students in A.A. and A.A.S. degree, certificate and specialized training programs to contribute to a successful learning experience and transition to a career. Staff recognize the unique concerns of adult and returning students as well as traditional students entering college. Academic advisors can help with pre-admission advising, academic assessment and placement, financial aid information and applications, and choosing a major.

The center offers academic support through developmental courses, workshops, classroom presentations and one-on-one assistance to help conquer academic hurdles. In addition, advising staff provide personalized career advice based on job market information and a student’s personal goals. Staff ensure that students have a broad base of support as they plan the move from college to career.

For more information, contact the Student Advising and Registration Center, Community and Technical College, 604 Barnette St., Fairbanks, AK 99701, call 907-455-2800 or visit http://www.ctc.uaf.edu/student/.

Rural Student Services

Rural Student Services is the vital link between the Fairbanks campus and rural Alaska communities. RSS provides comprehensive academic advising services with a focus on the freshman and sophomore years. Advisors at RSS recognize and are sensitive to the unique cultural components of Native and rural students at UAF. RSS advisors provide comprehensive advising and referrals to various support services on the Fairbanks campus. RSS advisors register students for classes, explain academic requirements and explore degree options. Other RSS services include assistance with admissions and financial aid, career advising and student advocacy.

RSS functions as a student center in the Brooks Building where students can share Native cultural traditions on campus and attend a variety of Native student club activities. Students who are enrolled at UAF and are Alaska Native or come from a rural area are encouraged to use RSS as their home base.

For more information contact Rural Student Services, Brooks Building main floor, call 907-474-7871 or 888-478-1452, email uaf-rss@alaska.edu or visit http://www.uaf.edu/ruralss/.

International Student Advising

Students from other countries face many situations that American students do not encounter. International students must comply with immigration regulations, adapt to a new and often strange culture, and adjust to the American system of higher education. International student advisors are a liaison between the student and various U.S. immigration agencies. Advisors issue documents so students can apply for visas, help students adjust to UAF, and provide immigration and personal assistance. For more information, contact the Office of International Programs and Initiatives at 907-474-7677 or 907-474-7157, uaf-internationalprograms@alaska.edu or http://www.uaf.edu/oip/.

Student Support Services

Student Support Services is a free program that gives students opportunities for academic development, helps them meet college requirements and motivates them to complete their degree program. SSS addresses the unique challenges faced by students from non-college-going and limited-income backgrounds by helping them take advantage of academic support resources at UAF. The program is funded by a TRiO grant from the U.S. Department of Education.

Services include comprehensive advising, certified tutoring, math skills instruction, academic and STEM mentoring, cultural and social...
engagement, laptop and media loan, scholarships, and a supportive environment. Eligible incoming local freshmen are encouraged to apply to Emerging Scholars Academy summer bridge program held every fall.

All services are free to eligible students. The program is staffed with certified student tutors.

To receive SSS program services, a student must have academic need and meet one of the following criteria:

- be financially limited according to federal criteria,
- be a first-generation college student (meaning neither parent has earned a bachelor’s degree), or
- have a documented physical or learning disability.

Participants must also be U.S. citizens or permanent residents, be enrolled in at least 6 credit hours and intend to obtain a bachelor’s degree.

For information, contact Student Support Services in 514 Gruening Building, at 907-474-6844 or trio.sss@alaska.edu, or visit http://www.uaf.edu/sss/ for an application.

Tutoring Services

Information about lab hours for all Fairbanks campus academic support resources as well as tutoring options is on the Academic Advising Center website at http://www.uaf.edu/advising/lr/. Many of these resources are free or cost a nominal fee.

- Accounting Lab
  The Accounting Lab provides tutoring services to students enrolled in accounting courses. Located in 219 Bunnell Building, the lab is staffed by accounting graduate students and outstanding undergraduate students. Lab hours are assigned (but flexible) Monday through Saturday. For more information contact the Department of Accounting and Information Systems at 907-474-1945.

- Chemistry Learning Center
  For more information contact the Department of Chemistry and Biochemistry at 907-474-6287 or http://www.uaf.edu/chem/clc/.

- Developmental Education Math, English and Reading Labs
  The Department of Developmental Education provides academic support labs in math, English and reading. These labs are at each rural campus, at the Community and Technical College, and on the Fairbanks campus. Labs provide tutoring and small-group instruction for students taking developmental, academic or vocational math, and reading and writing courses. Academic support labs supplement and support student learning as well as improve and expand student skills in these areas. For further information contact your local campus or the Department of Developmental Education at 907-474-1112.

- Foreign Language Laboratory
  The language lab, in 609 Gruening, provides assistance in French, Spanish, Japanese, German and Russian. Computer programs, CDs, cassettes and spell-checkers are available. Call the Department of Foreign Languages and Literatures at 907-474-7396 for lab hours.

- Math and Statistics Laboratory
  This lab provides flexible-hour assistance seven days a week to students enrolled in mathematics and statistics courses. The lab is coordinated by faculty, and services are provided by students. For more information, contact the Math Department at 907-474-5427.

- Speaking Center
  The Speaking Center in 307 Gruening provides coaching on refining presentation topics and presentation organization. Students receive immediate, constructive suggestions from a Speaking Center coach. The center is usually open weekdays and some evenings. Visit http://www.uaf.edu/speak/ for center hours. For more information, contact the Speaking Center at 907-474-5470 or fyspeak@uaf.edu.

- Writing Center
  The Writing Center is open Sunday through Friday for tutoring all enrolled students. The staff, composed of English graduate teaching assistants and outstanding undergraduate students, reviews student writing projects at any stage, from planning to drafting and revising. Tutors are available to help students improve grammar and usage. For information, contact the Writing Center, 907-474-5314.

Academic Records, Registration and Graduation

The Office of Admissions and the Registrar provides guidance for all students in registration, academic records support, academic policy interpretation, classroom scheduling, degree audits, graduation certification and transcript processing. The office offers training workshops for students and staff on a variety of topics, including DegreeWorks, UAOnline, faculty grading and registration. All services (e.g., registration, grades, degree audits and unofficial transcripts) are available through UAOnline at http://uonline.alaska.edu. Information about how to register is available at http://www.uaf.edu/register/.

For more information, contact the Office of Admissions and the Registrar on the first floor of Signers’ Hall, call 907-474-7500, email registrar@uaf.edu or visit http://www.uaf.edu/reg/.

Alumni Association

The UAF Alumni Association is an network of graduates and former students who support the university and advocate on its behalf. The association offers scholarships and sponsors various campus events and projects. The association’s alumni mentor program helps students with degree program and career planning. Through the association, students have the opportunity for lifelong involvement with UAF and their former classmates. For more information contact the alumni association at 907-474-7081, uaf-alumni@alaska.edu or http://www.uaf.edu/alumni/.

Army ROTC

UAF is home to the only Army Reserve Officers Training Corps in Alaska. The military science program is staffed with regular Army and Alaska National Guard officers and non-commissioned officers. The curriculum challenges students to develop interpersonal, mental and physical skills, cultivating leaders of character capable of bearing the responsibilities of tomorrow’s civil and military leadership positions.

The focus of ROTC is academic excellence and preparing leaders. All students enrolled in at least one course are assigned a faculty member to provide leadership and academic counseling.

ROTC offers a variety of resources, including scholarships, athletic teams and academic assistance. Neighboring Fort Wainwright offers students numerous opportunities to participate in military activities such as the Arctic biathlon competition, mentorships and recreational activities in an Arctic environment. For more information visit http://www.uaf.edu/rotc/ or call 907-474-7501.
Financial Assistance

Army ROTC provides financial assistance in the form of scholarships and stipends. The current stipend ranges between $300-$500 monthly depending on military science class level, and is tax free for all committed cadets. ROTC scholarships also pay 100 percent of tuition and mandatory fees and provide $900 annually for books and supplies. Scholarships are available for two to four years and may be used for graduate studies.

Army ROTC also offers partnership, or simultaneous membership, programs with the Reserves and National Guard. These partnerships provide a suite of financial assistance programs for ROTC cadets, including tuition assistance, GI Bill benefits, bonuses, stipends and pay. In addition, Army ROTC at UAF is granted a limited number of room waivers and chancellor’s tuition waivers for qualified students. For more information call 907-474-7501 or visit http://www.uaf.edu/rotc/.

Curriculum

The military science curriculum is an approved minor which includes credit for one writing- and one oral-intensive course. Classes, including outdoor skills labs, are offered every semester. Labs give students hands-on instruction in areas such as rappelling, skiing, first aid, land navigation and survival.

Army ROTC comprises two levels: the basic course followed by the advanced course. Credit for the basic course can be earned in three ways: by completing freshman and sophomore military science classes, by completing a four-week summer camp or by having prior military basic training. Students incur no obligation to Army ROTC or the Armed Forces during the basic course.

Students who complete the basic course may enter the advanced course, which is normally reserved for juniors and seniors pursuing a commission in the regular Army, Army Reserves or Army National Guard. For more information contact the Department of Military Science at 907-474-6852/7501, rotc@uaf.edu or http://www.uaf.edu/rotc/.

ASUAF

The Associated Students of the University of Alaska Fairbanks is in Wood Center. All students enrolled in 3 or more credits are ASUAF members. ASUAF runs service departments and programs dedicated to the interests and welfare of UAF students. ASUAF represents UAF students to the university administration, the board of regents and the Alaska Legislature. Officers are selected by the student body in elections held every fall and spring semester. For information, visit ASUAF at www.asuafstudentgov.org (http://www.asuafstudentgov.org) or call 907-474-7355.

Athletics

The National Collegiate Athletic Association is the primary association that governs and controls intercollegiate athletics on the national level. The Alaska Nanook athletic program is a multidivisional member of the NCAA, with 10 teams competing at the Division I and Division II levels, including men’s and women’s basketball, men’s and women’s cross country, men’s and women’s Nordic skiing, coed rifle, women’s volleyball, women’s swimming, and men’s ice hockey. For intercollegiate athletics information, call 907-474-6665 or visit http://www.alaskananooks.com.

The Alaska Nanooks have conference affiliations with the Great Northwest Athletic Conference, Western Collegiate Hockey Association, Rocky Mountain Intercollegiate Ski Association, and Pacific Collegiate Swim and Dive Conference. The 10-time NCAA champion Alaska Nanook rifle team competes in the Patriot Rifle Conference.

The Ernest N. Patty Center, home of the Alaska Nanook teams, was completed in 1963 and houses a 1,650-seat gymnasium, a 25-yard swimming pool, courts for handball, squash and racquetball, a varsity weight room, a rifle range, offices, and locker rooms with saunas. In 1979, the 1,300-seat Patty Ice Arena was built to the west of the Patty Center. The Alaska Nanook men’s hockey team practices at the Patty Ice Arena and also practices and competes off campus at the 4,595-seat Carlson Center.

Campus Recreation

Recreational opportunities are organized by the Department of Recreation, Adventure and Wellness. Activities are housed primarily in the Student Recreation Center, the Patty Ice Arena and the Patty Center. For information on hours, recreational activities or intramurals, call 907-474-5886 or visit http://www.uaf.edu/draw/.

The SRC offers a wide variety of structured and unstructured recreational activities. The SRC provides a weight room and a large gym floor that can be divided into courts for volleyball, tennis, badminton, soccer and basketball. A two-story indoor climbing wall, an eight-lap-per-mile running track, aerobics/dance floor and cardiovascular machines provide many options for a well-rounded workout. Eligible students have access to SRC facilities when your fees are paid — just remember to bring your workout shoes as street shoes are not allowed on the courts or floors.

Intramural leagues and competitions, aerobic workouts, and fitness and recreation instruction give students many opportunities to stay fit, learn lifetime skills and use the skills they already have. DRAW staff members develop and support sports clubs in response to student interests and available resources.

Outdoor fields for soccer and Ultimate Frisbee, an outdoor climbing wall — which in winter is converted to an ice climbing wall — and a disc golf course are next to the SRC, and the campus has many miles of cross-country trails for running, walking and skiing, including a lighted ski trail. In addition, recreational skating, recreational hockey, intramural broomball and intramural hockey take place at the Patty Ice Arena, also next to the SRC. The Hulbert Nanook Terrain Park is near the sledding hill. Students with an SRC membership can ski or ride for free. The park maintains about 15 elements, including jumps and rails.

Explore Alaska’s wild frontier by joining an Outdoor Adventures excursion. OA organizes a variety of outings, such as hikes, whitewater raft trips and rock climbing excursions. OA also offers courses such as ice climbing, sea kayaking and wilderness leadership, and rents equipment, including backpacks, canoes, cross-country skis and much more. Visit the Outdoor Adventures office in Wood Center or at http://www.uaf.edu/draw/ for more information.

Students with disabilities are encouraged to participate in campus recreation programs. Anyone confronted with any barrier to participation is urged to contact the SRC office.

Career Services

Career Services provides career counseling and job search assistance, and also reviews statements for graduate school applications. The Career Services coordinator reviews resumes and cover letters and conducts
practice interviews during office visits or through the online resource on the Career Services website. Information about employment, internships and on-campus jobs is available 8 a.m.–5 p.m., Monday–Friday year-round.

Students and alumni can network with employers and explore careers by participating in on-campus recruitment events, career weeks focused on specific fields, and job fairs where students can apply for full-time employment and internships with local, statewide and national employers. Career Services is on the first floor of the Eielson Building. For more information call 907-474-7596, email uaf-career@alaska.edu or visit http://www.uaf.edu/career/.

**Continuing Education and Professional Development**

The Community and Technical College offers training and continuing education programs to meet employment needs in the trades and professions. In response to individual and community demands, CTC provides short courses, noncredit workshops, supervisory and customer service skill seminars for local businesses and agencies, and general programs for cultural enrichment. Programs can be tailored to a specific group or need, and offer an economical way to improve workforce development skills. Call 907-455-2858 for more information about professional development.

**Cooperative Extension Service**

The Cooperative Extension Service is part of the largest informal education system in the world, connecting Extension programs and land-grant colleges and universities in every U.S. territory and state.

Whether teaching people how to can salmon, build a house or compost with worms, Extension Service staff have provided research-based, practical education to Alaskans since 1930. Extension now offers community outreach and engagement programs in all areas of the state.

UAF’s outreach role is filled in part by Extension faculty and staff in Anchorage, Bethel, Delta Junction, Fairbanks, Juneau, Kodiak, Nome, Palmer, Sitka and Soldotna, and in affiliate offices with the Tanana Chiefs Conference, Eielson Air Force Base and Thorne Bay.

As the state’s gateway to the university system, Extension serves some 90,000 Alaskans annually, providing a link between Alaska’s diverse people and communities by interpreting relevant knowledge of interest to Alaska residents. Major issue areas include food safety and security; health; climate change; energy; youth, families and communities; and economic development.

Extension has produced hundreds of publications and videos on a variety of topics with practical information that Alaskans can use. These are available at district offices or online at http://www.uaf.edu/ces/.

For more information, call 907-474-5211 or 877-520-5211 toll free, or visit http://www.uaf.edu/ces/.

**Developmental Education**

The mission of developmental education at UAF is to make educational opportunity and success possible for all students by developing the skills and attitudes necessary to achieve academic excellence and student success, and to develop lifelong learning skills.

Developmental education courses prepare students for university academic and vocational/technical programs by improving skills in math, writing and reading. Study skills courses prepare students to successfully negotiate the university experience. A student’s need for developmental education courses is determined by high school transcripts, test scores, other achievement data and discussions with counselors, advisors and instructors. Students may also take developmental education courses when they want to improve their skills or proficiency.

There are three categories of developmental education courses:

- developmental math
- developmental English (writing skills)
- developmental studies (reading and study skills)

Descriptions of developmental education classes are listed in the courses section under developmental math, developmental English and developmental studies.

For more information, contact the Department of Developmental Education offices at 907-474-1112 or visit http://www.uaf.edu/deved/.

**Disability Services**

The Disability Services program, in 208 Whitaker, provides services to students with documented disabilities on the Fairbanks campus as well as the Bristol Bay, Chukchi, Interior Alaska, Kuskokwim, Northwest, and Community and Technical College campuses, Distance Education, and the College of Rural and Community Development. The goal of Disability Services is to ensure equal access to educational opportunities at UAF. Academic accommodations are free and available to any student who qualifies as an individual with a disability and is enrolled in at least 1 credit hour.

Disability Services operates an assistive technology lab with specialized software. UAF has an accessible shuttle bus service equipped with a wheelchair lift for transportation on campus, and most campus buildings are accessible. Accessible living accommodations are available through Residence Life. There is a swimming pool with a hydraulic lift in the Patty Center.

For more information contact the director of Disability Services at 907-474-5655 or 907-474-1827 (TTY), email uaf-disability-services@alaska.edu or at http://www.uaf.edu/disability/.

**Diversity and Equal Opportunity**

Staff in the Diversity and Equal Opportunity office lead a focused effort to build inclusive systems and a welcoming environment at UAF. Staff provide conflict resolution and mediation services, ensure equality of employment and educational opportunity, and work to eradicate discriminatory practices.

DEO staff investigate complaints of discrimination and sexual harassment and work with parties to find resolution. If students or employees believe they are being treated differently because of their race, color, national origin, gender, religion, disability, age (over 40), genetic code, sexual orientation or retaliation, they can lodge a complaint with DEO. Complaints can be filed online at http://www.uaf.edu/ooe/ or by visiting the office.

DEO is in the Nordic House at 739 Columbia Circle. For more information call 907-474-7300 or visit http://www.uaf.edu/ooe/.
E-learning

UAF’s eLearning & Distance Education offers an alternative for anyone preferring an online educational option. The advantage of e-learning, also known as online learning, is its flexibility. Students select their own hours of study and work in surroundings they choose. E-learning offers the freedom to structure a personal academic schedule and continue educational progress, even when it is impossible or challenging to attend scheduled, face-to-face classes.

UAF eLearning & Distance Education offers more than 350 courses in 60 disciplines and offers degrees and certificates completely online. eLearning courses follow all university calendars and deadlines and must be completed within the semester time frame. These courses use the Blackboard Learning Management System. You are required to have reliable Internet access to complete eLearning courses.

For UAF students, eLearning courses count as residence credit. When a student enrolls in an eLearning course, the course may be used to determine full-time/part-time status and eligibility for financial aid and scholastic action. The grade will average in your semester and cumulative GPAs.

Information on course offerings, online certificates and degrees, enrollment information, withdrawal deadlines, fees, materials and course descriptions can be found at http://elearning.uaf.edu. For more information contact UAF eLearning & Distance Education in 131 Bunnell Building, by phone at 800-277-8060 or 907-455-2060, via email at uaf-elearning@alaska.edu or at http://elearning.uaf.edu.

The University of Alaska provides many possibilities for students to take distance-delivered courses. The campuses at Anchorage, Fairbanks and Juneau, along with their community college networks, offer hundreds of courses using a variety of delivery modes. Opportunities for students who prefer distance-delivered courses can be found at the University of Alaska Distance Learning website at http://distance.alaska.edu.

General Studies

Students pursuing a bachelor’s degree who haven’t declared a major or haven’t decided which major to pursue are admitted as general studies students. General studies students usually take courses required for the university general education. Many of these courses are the same for all majors and allow you to make progress toward completing degree requirements while at the same time investigating subject areas that may help you choose a major or career. General studies students work with academic advisors in the Academic Advising Center who encourage exploring, selecting and committing to an appropriate major. All general studies students must declare a major before they have earned 75 credits. To declare a major, simply complete a change of major form available from the Office of Admissions and the Registrar or at http://www.uaf.edu/reg/. Students receiving GI assistance or veteran's benefits may be required to change to a declared major to keep their benefits award. Students must have declared a major in order to participate in the Western Undergraduate Exchange program.

The director of the Academic Advising Center functions as the department chair, and the vice provost functions as the dean for general studies and oversees academic assistance and actions concerning general studies students. For more information about general studies, contact the Academic Advising Center, 907-474-6396 or toll free at 888-823-8780, or contact the vice provost’s office at 907-474-2764.

Pre-Major

Students admitted in pre-major standing have not met the admission requirements for bachelor’s degrees but are intending to major in a bachelor’s degree. As a bachelor’s-intended student, you will generally work with advisors in the Academic Advising Center, Rural Student Services or a community campus, but it is helpful to also contact the department of your intended major. Because not all requirements for immediate admittance to a bachelor’s degree will have been met, pre-major students will work with an academic advisor to determine the best selection of courses to pursue. Students who are in good standing and have completed 14 credits at the 100 level or above with a C grade average (2.0) or better, of which 9 credits must satisfy baccalaureate general education requirements, will be changed to major status. The vice provost will notify students of their change of status and inform the registrar. Pre-major students do not use the change of major form to move from pre-major to major status but may use the form to change from pre-major status in one program to another program. Academic assistance and actions are processed the same as for general studies students.

Greek Life at UAF

Sigma Phi Epsilon, the first national fraternity in Alaska, was installed at UAF in 1997. The fraternity began nationally in 1901, founded on the principles of virtue, diligence and brotherly love. It is one of the oldest and most respected fraternities in the nation. Through community service, campus leadership and fraternalism, Sigma Phi Epsilon gives its members the opportunity to live a balanced life.

Alpha Phi Omega is a national, coed service fraternity that has set the standard for college campus-based volunteerism since 1925. The organization strives to help each individual member develop leadership skills, experience friendship on many levels and provide service to others.

For more information on Sigma Phi Epsilon and Alpha Phi Omega, visit http://www.uaf.edu/live/clubs/ or contact the LIVE Program (Leadership, Involvement, Volunteer Experience) at 907-474-1959.

Honor Societies

These honor societies are active at UAF:

- Chi Epsilon (civil engineering)
- Gamma Theta Upsilon (geography)
- Golden Key International Honour Society (all disciplines)
- National Society of Collegiate Scholars (all disciplines)
- Phi Alpha Theta (history)
- Pi Sigma Alpha (political science)
- Phi Sigma Iota (foreign languages)
- Psi Chi (psychology)
- Tau Beta Pi (engineering)

For more information contact the Honors Program at 907-474-6612 or the LIVE Program at 907-474-1170.

Honors Program

The UAF Honors Program provides opportunities for students to pursue excellence in academic and personal development. We foster critical and independent thinking and help students become informed, responsible and active citizens. Honors students have access to small classes,
research opportunities, intensive advising and scholarships. Students are encouraged to participate in service, leadership, research, study abroad, internships and other opportunities that contribute to their personal growth.

Eligibility
Undergraduate students who have demonstrated high academic achievement and are pursuing a baccalaureate degree are encouraged to apply to the Honors Program. Entering freshmen must have a cumulative high school GPA of 3.6 and a composite SAT score of 1820 or a composite ACT score of 27. Current UAF students and transfer students must have a combined cumulative GPA of 3.5 that includes at least 24 credits of college courses. The Honors Program accepts applications all year. The application form is at http://www.uaf.edu/honors/.

Program Features
Honors students complete a flexible schedule of courses that includes honors sections of the core curriculum courses, courses developed specifically for the honors program, and standard courses contracted for honors credit by students with individual professors. With approval by the director, students who study abroad may earn up to 12 honors credits for academic courses they take at their host universities. Undergraduate students who complete graduate courses may count those courses toward their honors course requirement. In all cases, courses will only count toward the honors distinction if the student earns a grade of B (3.0) or higher. Honors students must be enrolled full-time and are expected to complete a minimum of 6 honors credits each academic year.

The Honors Program offers students intensive advising with an opportunity to develop a personal plan for their UAF years that builds in extracurricular opportunities, research, leadership, service and more to meet the goals of each student.

The Honors House, located in the heart of campus, provides honors students a casual and comfortable home away from home. The house includes computer labs, a smart classroom, quiet study areas and a place for social gatherings.

Program Requirements
To graduate with a distinction from the Honors Program, students must fulfill GPA, capstone project and honors credit requirements.

GPA Requirement
To graduate with a distinction from the Honors Program, in addition to the other program requirements, students must have a cumulative GPA of 3.25. Students whose cumulative GPA falls below 3.25 for two consecutive semesters will be removed from the program unless an appeal is approved by the honors director.

Capstone Project Requirement
To graduate with a distinction from the Honors Program, in addition to the other program requirements, students must work with a faculty mentor to complete a capstone project, including a written component and an oral presentation.

Honors Credit Requirement
University Honors Scholar distinction is awarded at commencement to students who complete 27 or more credits of honors course work and/or study abroad and graduate-level courses in addition to the other program requirements. Honors Program Scholar distinction is awarded to students who complete 12 credits of honors course work in addition to other program requirements.

Additional Information
For more information contact the Honors Program at the Honors House, 520 Copper Lane, 907-474-6612, uaf.honors@alaska.edu or http://www.uaf.edu/honors/.

Libraries
UAF has two libraries on the Fairbanks campus and libraries on four rural campuses. Elmer E. Rasmuson Library, on the Fairbanks campus, is the largest academic library in the state, with more than a million volumes. The Keith B. Mather Library, also on the Fairbanks campus, holds collections in the geological and biological sciences and is Alaska’s U.S. Patent and Trademark Office depository. Both libraries offer wireless and wired networking, public computer terminals, and designated quiet study spaces with natural lighting. Rasmuson Library also has group study rooms and a secure 23-hour study space with a student computer lab.

Rasmuson and Mather libraries provide extensive reference and instructional services for students. Library faculty and staff help students conduct library research using print materials and online databases and collections. The library information and research course, LS F101X, is part of the core curriculum and gives students an introduction to effective methods of identifying, locating and evaluating information resources.

Online catalogs and databases provide access to library resources at UAF libraries and, through interlibrary loan, worldwide. The library website is a gateway to more than 300 online resources, with broad coverage in the sciences, humanities and social sciences, management, and engineering. Web-based indexes and collections link to full-text articles from more than 60,000 periodical titles. Additional web-based resources include reference tools, electronic books, specialized sources for Arctic and polar information, and indexes to special formats such as government documents and dissertations. ScholarWorks, the University of Alaska online institutional repository, makes theses, dissertations, articles and other scholarly works by UA students and faculty available to the public.

Rasmuson Library is a federal documents depository and receives about one-third of the titles available for selection from the U.S. Government Printing Office. Special collections in the library include the internationally recognized Alaska and Polar Regions Collections & Archives, which houses historical books, periodicals, documents, manuscripts, photographs, film, oral histories and maps. APRCA hosts Alaska’s Digital Archives and continues to digitize archival materials to make additional specialized materials available to the public.

Get more Rasmuson Library information at 907-474-7481, AskRasmusonLibrary@uaf.libanswers.com or http://library.uaf.edu.

New Student Orientation
New Student Orientation helps incoming students establish a foundation for success. All new students are strongly encouraged to participate in New Student Orientation on the Fairbanks campus. Orientation is required for all first-year bachelor’s degree students (regardless of the number of earned college credits) and international students
(undergraduate F-1 and international exchange J-1 status). Domestic transfer students are also encouraged to attend.

New Student Orientation features a variety of workshops and activities to address the needs of incoming students, including campus tours, opportunities to meet faculty and staff, numerous campus resource presentations, and many fun social events. Fall semester includes the popular family orientation for parents and other family members of new students. Fees are $115 per student for fall orientation, which covers all programs except special Outdoor Adventures activities; $10 for one-day fall transfer student orientation; $25 (plus $10 each additional guest) for two-day fall family orientation; and $35 for spring orientation. For more information, contact the New Student Orientation office at 907-474-1103 or visit http://www.uaf.edu/orientation/.

**Northern Military Programs**

Northern Military Programs is Interior Alaska’s point of contact for University of Alaska programs. UAF has been designated a Military Friendly Institution since 2008, and UAF CTC maintains offices on Fort Wainwright and Eielson Air Force Base to serve military personnel and their families. CTC offers university classes at Fort Wainwright, Eielson Air Force Base, North Pole High School and via distance education. In addition, NMP offers courses to the Delta community at Fort Greely and the Career Advancement Center in Delta Junction.

CTC actively supports the Wounded Warrior Transition Unit with academic advising and future career preparation. CTC offers Accuplacer (English), ALEKS (math) and CLEP/DANTES placement testing on post.

For information contact Northern Military Programs offices at Eielson Air Force Base, 2623 Wabash Ave., Room 105, 907-377-1396; Fort Wainwright, 4391 Neely St., Room 137, 907-356-3826; or Delta Career Advancement Center, 1696 N. Clearwater Ave., 907-895-4605.

**PolarExpress Identification Card**

The PolarExpress card is the official UAF photo identification card used by students, staff and faculty for access to UAF facilities and to make purchases.

Your PolarExpress card lets you check out library books, vote in student elections, and access health and other student services. The card’s magnetic stripe holds a unique key that provides secure access to residence halls, laboratories and the Student Recreation Center. You can deposit money into your Bear Bucks account, which can be used at all Dining Services locations, vending machines, photocopiers, the Wood Center counter and the Bookstore. See the complete list at http://www.uafbearbucks.com.

For PolarExpress card information, call 907-474-7384 or visit http://www.uaf.edu/bursar/polarexpress/.

You can access your account balance and add money to your PolarExpress card through eAccounts, a secure way to check all your stored value accounts (Bearbucks, Munch Money, copy card, etc.), add money to your card, view your transaction history, deactivate a lost or stolen card, and more. Visit https://eaccounts-uaf/AnonymousHome.aspx.

**Police and Fire Departments**

The UAF Police Department was founded in 1991 to meet the increasing needs of the university community. Since then it has become a progressive, proactive department striving toward active community involvement as well as the protection of people and property on the Fairbanks campus. In addition to patrol duties the department makes presentations on topics of importance to the community and supports a college-oriented crime prevention program.

The University Emergency Communications Center serves the Fairbanks campus 24 hours a day. In addition to handling campus law enforcement calls, the center also receives emergency calls from communities along the Parks Highway from Fairbanks to Cantwell. The center employs full-time career dispatchers.

The University Fire Department provides fire, rescue, EMS response, public assistance and hazardous materials response to the Fairbanks campus as well as the University Fire Service Area and EMS district. The department provides protection for a 26-square-mile area and more than 22,000 people. The department is nationally recognized and staffed full-time at two stations, one on campus and one in the fire service area. The department provides plan review and inspection services to the Fairbanks-area and rural campuses. The hands-on, interactive program develops highly skilled individuals able to perform all the duties of professional career firefighters. The fire department provides exceptional employment and career opportunities for students interested in a career in emergency services.

The emergency telephone for both police and fire is 911. For more information, call 907-474-7721 for the police department, 907-474-5770 for the fire department, or visit http://www.uaf.edu/police/ or http://www.uaf.edu/fire/.

**Post Office**

Students who want to get mail on campus can rent post office boxes in 107 Constitution Hall. Rent is $45 per semester and is billed automatically once a box is open until it is closed. Small packages may be mailed using the automated kiosk at the same location.

Renting, updating address information and closing boxes is done through UAOnline (http://uaonline.alaska.edu).

Post office boxes are for individual or family use. They are not to be shared with other students. Mail not addressed to the box holder will be returned. U.S. Postal Service mail is delivered to box holders only through their post office boxes; UPS and FedEx will deliver to the Residence Life office. There is a $15 lost key charge.

For more information visit http://www.uaf.edu/fs/services/postoffice/.

Questions? Email campus.postoffice@uaf.edu, call 907-474-7215 or write UAF Campus Post Office, P.O. Box 750100, Fairbanks, AK 99775-0100.

**Student Health and Counseling Center**

At the Student Health and Counseling Center, students may receive health care, counseling, substance abuse evaluation and referral, health education and assistance with health insurance. Students must pay the health center fee to be eligible for these services.

The medical staff provides primary health care and referrals for specialty medical services when appropriate. General office visits for preventive care, illness and injury are provided at no charge. Medications, laboratory services, medical supplies and some physical examinations are provided
at reduced cost. Students should call for appointments. Urgent care appointments are available when necessary.

The counseling staff offers individual, group and crisis intervention counseling. Counselors, all with graduate-level training, assist with a variety of personal and interpersonal issues. Students should call to schedule appointments. Students in emergency situations are usually seen the same day. The counseling staff also provide specialized evaluation and referral for alcohol and other drug problems at no charge when requested on a voluntary basis.

Professional staff provide information, health education and referral for individuals and groups seeking to maintain or improve physical and mental health.

The student health insurance program is administered through the center. An insurance coordinator is available to answer questions about policy coverage and to help with information about how to file claims.

The Student Health and Counseling Center, on the second floor of the Whitaker Building, is open weekdays during the regular academic year and from Monday to Thursday during the summer. For more information, call 907-474-7043 or 474-7045 (TTY), fax 907-474-5777, email uaf-sh-cc@alaska.edu or visit http://www.uaf.edu/chc/.

**Student Services**

University and Student Advancement provides student-centered programs and services to help students achieve their personal, academic and career goals. In collaboration with the academic deans, USA leads the university in recruiting a diverse student body. With the creative use of ongoing assessment, USA supports and develops programs and communities that contribute to the retention, success and leadership development of students.

University and Student Advancement departments include the Office of Admissions and the Registrar; Associated Students of UAF; the Athletics Department; the Bookstore; Career Services; the Office of the Dean of Students; the Department of Recreation, Adventure and Wellness; the Office of Development and Alumni Relations; Dining Services; Disability Services; Financial Aid; International Programs and Initiatives; KUAC; New Student Orientation; Residence Life; Student Health and Counseling Center; Student Leadership Development; Sustainability; University Relations; Veterans Resource Center; and Wood Center.

The Office of the Vice Chancellor for University and Student Advancement is a resource and referral center where any student who does not know where to look for a solution to a problem at UAF will find help. Each department and office has its own web page detailing its student services, or students can visit http://www.uaf.edu/usas/ for a complete list of all departments. For more information contact University and Student Advancement at uaf-vcsusa@alaska.edu or 907-474-2600.

The Dean of Students office is also a resource and referral center where students can get help with concerns, issues or needs. You can get more information at http://www.uaf.edu/deanofstudents/, uaf-deanofstudents@alaska.edu or 907-474-7317.

**Study Away Programs**

**National Student Exchange**

UAF is a member of the National Student Exchange. Through this program, qualified students may apply for exchange enrollment at any one of almost 200 public colleges and universities throughout the United States, its territories and Canada. NSE enables students to study at member institutions and to take advantage of specialized courses or unique programs. Participation in the program is limited to one year.

Exchanges generally take place during the student’s sophomore or junior year. Applicants must have completed a minimum of two full-time semesters at UAF as a degree student and have a minimum 2.5 cumulative GPA. Tuition is assessed by the host institution at the in-state rate, or the student may pay tuition at UAF. The application deadline is Feb. 15 before the term of exchange. For more information, visit http://www.nse.org and contact the NSE coordinator in the Office of International Programs and Initiatives at 907-474-7192 or uaf-studyaway@alaska.edu, or visit http://studyabroad.uaf.edu.

**Note:** Students attending any campus of the University of Alaska system under the National Student Exchange program are assumed to be receiving the benefit of reduced tuition because of their enrollment at an NSE partner university in another state. Therefore, time spent in NSE does not count toward the time required to establish residency in Alaska for tuition purposes. If students end their participation in NSE, they could begin establishing residency for tuition purposes as set forth in the UA Resident and Nonresident Tuition policy (p. 52) on the Tuition and Fees page.

**Study Abroad And International Exchange Programs**

Studying abroad or participating in an international exchange or internship is an excellent opportunity for every UAF student to learn about other cultures and gain international experience while earning academic credit. Students participating in approved international exchange, study abroad or internship programs enroll at UAF and receive UAF credit. The Alaska Student Loan and most other forms of financial aid may be used to cover costs of international academic programs; scholarships are also available for many programs. Students interested in gaining international experience should begin planning early in their UAF careers, particularly because prior study of a foreign language may be required for some programs and is highly recommended for others. Applicants must have completed a minimum of two full-time semesters at UAF as a degree student and have a minimum 2.5 cumulative GPA. Other requirements may also apply, and all applications are subject to approval by the Office of International Programs and Initiatives. Application deadlines are Oct. 1 for spring semester programs and March 1 for summer, fall semester or academic-year programs.

Students approved to participate in study abroad or exchange programs pay a $300 study abroad fee to UAF each semester they are abroad. For study abroad programs, all tuition, housing and student fees are paid directly to the program provider or host institution. Students participating in exchange programs pay for 15 credits of undergraduate or 9 credits of graduate UAF tuition, the UAF technology fee and a 4 percent of tuition network fee in addition to the $300 study abroad fee. Tuition and fees are assessed on a semester basis.

UArctic organizes north2north, one of UAF’s student exchange programs. Programs are focused on studies in and of the North and are designed to enhance the Arctic perspective of UAF academic programs.

Programs are available in more than 70 countries worldwide.

Contact International Programs and Initiatives for more information at 907-474-7192 or uaf-studyaway@alaska.edu, or visit http://studyabroad.uaf.edu.
Summer Sessions and Lifelong Learning

Summer Sessions and Lifelong Learning provides a variety of academic opportunities. Courses are open to undergraduate and graduate students seeking degrees and to professionals renewing their licenses, as well as community members and qualifying high school students. Summer programs begin with MAYmester, a two-week intensive term where students can earn up to 3 credits. This is followed by a 12-week session that runs concurrently with two six-week sessions.

In the fall and spring, SSSL offers courses in the Weekend College. In early January, WINTERmester offers credit and noncredit classes in a two-week intensive session, giving students the opportunity to earn up to 3 credits before spring semester begins. Professional and continuing education courses are offered throughout the year.

In addition to standard collegiate academic programs, weekend focus and special interest classes, for credit and noncredit, are offered to community members and college students. Campus activities for youth include summer day camps for school-age children, business and leadership training, and the Visual Arts Academy. Summer Sessions also houses the Osher Lifelong Learning Institute, which offers opportunities for continued learning for adults 50 and older.

Each summer SSSL hosts free lectures, movies, concerts and recreational activities for students and community members. In January, a community lecture is associated with WINTERmester.

SSLL educational travel programs take groups overseas several times each year to study the cultural, political and natural history of destination countries.

For more information, contact Summer Sessions and Lifelong Learning, 216 Eielson Building, phone or text 907-474-7021, email summer@uaf.edu, or visit http://www.uaf.edu/summer/.

Technology on Campus

The Office of Information Technology, in the Bunnell Building on the Fairbanks campus, is the computing help desk and a gateway to many of the services OIT offers UAF students, faculty and staff. The OIT service desk also has two walk-up locations at 231 Bunnell and 102 Butrovich.

Contact the OIT service desk at 907-450-8300, toll free at 866-404-7021, email summer@uaf.edu, or visit http://www.uaf.edu/summer/.

Internet Access, Computing Labs and Smart Classrooms

Wireless internet is available in most public areas and in all buildings on the Fairbanks campus. The residence halls can also connect via wired access.

OIT operates and maintains two student computer labs in 404 Rasmuson and 110 Moore-Bartlett-Skarland. The newest addition in computing spaces is the Nook, in Bunnell 319. The Nook is a collaborative commons space that offers a variety of seating options with accessible power outlets, virtual computer stations, wired and wireless network access for student devices, mobile printing, and conference tables where students can share content on their devices with others on a large screen.

On the Fairbanks campus there are 75 smart rooms (classrooms, auditoriums and lab spaces), furnished with instructional technologies such as in-room computers, digital projectors, DVD playback devices, document cameras and digital monitors. Five of these smart classrooms are equipped to provide automated lecture capture/recording.

Additional OIT Services in Bunnell

The Student Computer Repair Center provides free help and advice for students having issues with their personal computers.

OIT Video Conferencing Services provides consultation, planning, installation, training and scheduling for videoconferencing classrooms and other video-enabled rooms on the Fairbanks campus and across the University of Alaska system. VCS can also schedule and support job interviews for students, faculty and staff. For more information visit http://www.alaska.edu/oit/services/video-conferencing/.

Testing Services

As a national test center, UAF Testing Services administers paper-and-pencil and computer-based exams. The office advises UAF students, prospective students and the community on national testing matters for college admissions and placement and for career and professional certification. Testing Services also coordinates credit by examination for local tests and for the College-Level Examination Program. The office also does private proctoring. For more information and registration materials, visit Testing Services in 211 Grunening Building, call 907-474-5277, email uaf-testing-dept@alaska.edu or visit http://www.uaf.edu/testing/.

Undergraduate Research and Scholarly Activity

As a research university, UAF offers students opportunities to participate in experimental and observational research and creative scholarship. The Office of Undergraduate Research and Scholarly Activity supports, develops, documents and institutionalizes UAF’s diverse and robust programs of undergraduate research and scholarly activity. Building on existing efforts and capacities, URSA enables UAF students to pursue varying levels of research engagement from a single credit of a first-year seminar to independent scholarly investigations, a B.F.A. exhibit or performance, or a senior thesis.

Eligibility

Undergraduate students from all disciplines are eligible to engage in research or creative scholarly activity for academic credit or for pay. All UAF students are eligible to enroll in URSA courses and apply for URSA awards that support their research or creative projects with funding for travel, supplies and stipends. First-year students and new transfer students are encouraged to attend the UAF Research Showcase to learn about research and creative opportunities across all disciplines at UAF. Students can use URSA as a resource to help find a faculty mentor with whom they might work on a research or creative project. The project may be designed by the student or the faculty mentor and will lead to creation of knowledge.

For more information contact the URSA office at 301 Bunnell Building, 907-450-8772 or ursa.uaf@alaska.edu, or visit http://www.uaf.edu/ursa/.
Upward Bound

The goal of the Upward Bound College Bound program is improving the graduation rates of high school students and increasing the number of UB College Bound graduates who enter colleges and universities. UB College Bound offers two strands: a school year program that works with 10 high schools in Alaska, called “target schools,” along with three distinct six-week summer residential programs held on the UAF campus: UB College Bound (freshman/sophomore), Pre-College Academy (juniors), and the Pathways-2-College bridging program (graduating seniors).

Upward Bound College Bound serves 160 low-income, first-generation college students who demonstrate potential for academic success and whose parents have not earned college degrees. Services offered in target schools include tutorial sessions; educational, recreational or cultural events; group activities; exploration of postsecondary education opportunities and visits to campuses; financial aid application assistance; and participation in the six-week summer program on the Fairbanks campus.

The residential summer program emphasizes academic development for 50 students selected for participation from the target schools. The summer experience helps UB students become familiar with the Fairbanks campus, residence life, services provided and, most importantly, places an emphasis on academic development and growth.

Participation in this program is only available to active UB College Bound target school participants. Upward Bound College Bound is a federally funded program.

For more information, call 907-474-5685 or email ub.classic@alaska.edu.

Wood Center

The William Ransom Wood Center, under the Division of Student Services, is the focal point of campus activities and services for the university and Fairbanks communities.

Services at Wood Center include event scheduling, campus information, dining facilities, a television lounge, meeting rooms, laundry and shower facilities, and a recreation area with pool tables, video games and a bowling alley. Wood Center also has the campus lost-and-found center, an ATM, and tickets to cultural and sporting events.

Wood Center is home to the Student Activities Office, which oversees Nanook Traditions. Student Activities organizes events designed to entertain, educate and inspire the UAF community. Nanook Traditions are among UAF’s most highly anticipated annual events. These include the Starvation Gulch bonfires in September, Winter Carnival in February and SpringFest in late April. For more information visit http://www.uaf.edu/activity/.

The UAF Leadership, Involvement and Volunteer Experience program provides opportunities for students to learn about and practice leadership skills and become involved on campus and in the community. Through the LIVE program students can complete and earn Co-Curricular Opportunities for Leadership Development certificates. The COLD certificates provide tangible ways for students to be recognized for leadership development within the UAF community and beyond. Students who complete the COLD certificate are eligible for graduation with leadership honors and/or distinction. To find out more about the LIVE Program, visit the Wood Center or online at http://www.uaf.edu/live/.

The Nanook Diversity and Action Center (formerly known as the Women’s Center) is a student-run programming board that promotes a community of inclusion, social justice and cultural pluralism by providing educational activities in collaboration with student organizations that honor and support areas of age, gender, religion, ability, socioeconomic status, race, ethnicity, culture and sexual orientation.

NDAC goals include:

- Increasing student awareness and appreciation for other identities/cultures.
- Providing guidance and support to student organizations that want to program cultural events, create diversity initiatives, or provide educational opportunities that encourage cultural pluralism.
- Providing programs that challenge the use of stereotypes.

More than 140 student organizations (http://www.uaf.edu/live/clubs/list) are active on campus, including clubs, honor societies and Greek life organizations. Membership in a student organization can help you make social connections. It can also help in career and leadership development and enhance your resume. Each semester a student organizations fair provides an opportunity to learn more about these diverse groups. You can also contact the LIVE program office to learn more about UAF student organizations.

The Wood Center Pub offers evening entertainment for those 21 and older with live music, an open mic night, movies, trivia games and karaoke. Special events include theme nights, beer and wine tastings, comedy performances, casino night and more.

For more information call 907-474-7037 or visit http://www.uaf.edu/woodcenter/.
OCCUPATIONAL ENDORSEMENTS

To earn a UAF occupational endorsement, you must satisfy three sets of requirements: general university requirements; occupational endorsement and program (major) requirements. These requirements are all described in this section of the catalog. Requirements for your major are found in the Occupational Endorsement Programs (p. 78) section.

If your endorsement program is delivered collaboratively within the UA system (e.g., information technology specialist, early childhood education, human services and rural human services), then the credits you earn from each UA institution will be counted toward fulfillment of the program requirements and fulfillment of the minimum institutional residency requirements. Institutional residency requirements are the minimum number of credits you must earn from the campus where you earn a degree.

Occupational Endorsements

Occupational endorsement programs are designed to give students occupational training in a specific field. These programs are 9-29 credit hours and will be posted to the student’s transcript upon completion and after approval by the academic department. The credit hours may be applied to other undergraduate degree programs where applicable.

General University Requirements

You must earn at least 9 semester credits at the 100 level or above for an occupational endorsement. At least 30 percent of the program must be earned at UAF. A minimum of a 2.0 cumulative GPA is required in all work as well as in your major field. In addition, you must earn a minimum C- grade in courses required for your occupational endorsement. Some programs may require higher GPAs for major course work.

Unless otherwise specified by the appropriate academic unit, a course may be taken more than once toward fulfilling endorsement requirements. However, credit hours for such courses count only once toward total credits required for the endorsement.

Students seeking an occupational endorsement do not apply for graduation. Certifying that you have met all major requirements is the responsibility of your department faculty, who will notify the Office of Admissions and the Registrar.

If you want to use correspondence study credits from a school other than UAF to satisfy degree requirements, you must have the approval of those courses by the dean of the school or college from which you will graduate; otherwise, you take the risk the courses will not be accepted.

RESIDENCE CREDIT

Residence credit is course credit earned through any unit of UAF. Formal classroom instruction, correspondence study, distance-delivered courses, individual study or research at UAF are all considered residence credit. On the other hand, transfer credit, advanced placement credit, credit for prior learning, military service credit and credit granted through nationally prepared examinations are not considered residence credit, nor are credit-by-examination credits earned through locally prepared tests. None of these types of credit can be applied to UAF residency requirements.

RESIDENCY REQUIREMENT

Most universities have residency requirements that call for a certain number of credits toward a degree to be earned at the degree-granting school. At UAF, the residency requirement for occupational endorsements is 30 percent of the program.

Occupational Endorsement Requirements

In order to earn an occupational endorsement, students must be admitted to the program and complete the requirements listed in the program section of this chapter. A minimum of 9 credits is required to earn an occupational endorsement. At least 30 percent of the program must be completed in residence at UAF. Additional residency credit requirements may be established to meet discipline or accreditation standards.

You must have a cumulative GPA of at least 2.0 in all course work. Some occupational endorsement programs require higher GPAs.

Students may elect to complete their program under the requirements of the catalog in effect at the time of formal acceptance to an occupational endorsement program or the catalog in effect at the time of completion. If the requirements for the occupational endorsement are not met within five years of formal acceptance into the program, admission expires and the student must reapply for admission and meet the admission and program requirements in effect at the time of formal acceptance. Program requirements may require completion in less than five years.

Students may earn more than one occupational endorsement by completing all requirements for each additional program. Additional occupational endorsements must differ by 3 or more credits.

See a list of all Occupational Endorsement programs here. (p. 78)

Occupational Endorsement Programs

Administrative Assistant

College of Rural and Community Development
907-474-7143

Community and Technical College
907-455-2800

www.ctc.uaf.edu/programs/aaa/ (http://www.ctc.uaf.edu/programs/aaa)

Occupational Endorsement

The administrative assistant occupational endorsement may be earned in one semester and represents a large portion of the course work required for the applied business management certificate. Students must complete all courses with a grade of C- or better and satisfactorily complete a two-week practicum at the culmination of training in order to earn the endorsement. This program is open to those who have completed the university application process and are at an appropriate English level for ABUS F170 (as shown by English placement scores). Applicants must be 16 years old to be admitted.

Complete the following admissions requirement:

• Be at least 16 years old by the first day of the semester in which you are admitted.

Minimum Requirements for Occupational Endorsement: 16 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 78)

**Occupational Endorsement Requirements**
Complete the occupational endorsement requirements. (p. 78)

**Program Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABUS F102A</td>
<td>Keyboarding: Touch Typing</td>
<td>1</td>
</tr>
<tr>
<td>or ABUS F102C</td>
<td>Keyboarding: Document Formatting</td>
<td>3</td>
</tr>
<tr>
<td>ABUS F154</td>
<td>Human Relations</td>
<td>3</td>
</tr>
<tr>
<td>ABUS F170</td>
<td>Business English</td>
<td>3</td>
</tr>
<tr>
<td>or ABUS F271</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>ABUS F182</td>
<td>Office Procedures</td>
<td>3</td>
</tr>
</tbody>
</table>

Select 6 credits of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABUS F183</td>
<td>Professional Skills for Job Hunt</td>
<td>3</td>
</tr>
<tr>
<td>ABUS F199</td>
<td>Practicum in Applied Business</td>
<td>3</td>
</tr>
<tr>
<td>CIOS F130</td>
<td>Microcomputer Word Processing</td>
<td>3</td>
</tr>
<tr>
<td>CIOS F135</td>
<td>Microcomputer Spreadsheets</td>
<td>3</td>
</tr>
<tr>
<td>CIOS F150</td>
<td>Computer Business Applications</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits 16

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**Bookkeeping Technician**

Community and Technical College  
907-455-2800  
www.ctc.uaf.edu/programs/abus/ (http://www.ctc.uaf.edu/programs/abus)

**Occupational Endorsement**

The bookkeeping technician occupational endorsement provides students with the education and training to qualify for bookkeeper positions in both small and large businesses. The occupational endorsement may be earned in one semester and represents one-half of the credits required for the accounting technician certificate. This program is open to students with a high school diploma or GED. Applicants must be 16 years old to be admitted.

Complete the following admissions requirement:

- Be at least 16 years old by the first day of the semester in which you are admitted.

Minimum Requirements for Occupational Endorsement: 15 credits

Students must earn a C- grade or better in each course.

**General University Requirements**

Complete the general university requirements. (p. 78)

**Occupational Endorsement Requirements**

Complete the occupational endorsement requirements. (p. 78)

**Program Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABUS F101</td>
<td>Principles of Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>ABUS F141</td>
<td>Payroll Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ABUS F201</td>
<td>Principles of Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>ABUS F203</td>
<td>Accounting Capstone</td>
<td>3</td>
</tr>
<tr>
<td>ABUS F220</td>
<td>Microcomputer Accounting: QuickBooks</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits 15

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**Carpentry, Basic**

College of Rural Community Development  
907-474-7143  
www.uaf.edu/rural/ (http://www.uaf.edu/rural)

**Occupational Endorsement**

The occupational endorsement in basic carpentry is the beginning for both a career in the construction industry and pursuing a certificate and degree in construction trades technology. Training consists of basic construction safety, introduction to hand and power tools, construction mathematics, floor systems, roof framing, and window and exterior door installation. Students develop a basic understanding of how to communicate, understand, anticipate and complete the work on a construction job site. Applicants must be 16 years old to be admitted.

Complete the following admissions requirement:

- Be at least 16 years old by the first day of the semester in which you are admitted.

Minimum Requirements for Occupational Endorsement: 14.5 credits

Students must earn a C- grade or better in each course.

**General University Requirements**

Complete the general university requirements. (p. 78)

**Occupational Endorsement Requirements**

Complete the occupational endorsement requirements. (p. 78)

**Program Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTT F100</td>
<td>Basic Construction Safety</td>
<td>3</td>
</tr>
<tr>
<td>or CTT F101</td>
<td>and Introduction to Hand and Power Tools</td>
<td>3</td>
</tr>
<tr>
<td>and CTT F102</td>
<td>and Introduction to Blueprint Reading</td>
<td>3</td>
</tr>
<tr>
<td>CTT F106</td>
<td>Construction Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>CTT F110</td>
<td>Residential Carpentry I</td>
<td>8.5</td>
</tr>
<tr>
<td>or CTT F111</td>
<td>and Materials and Tools Used in the Trade</td>
<td>3</td>
</tr>
<tr>
<td>and CTT F112</td>
<td>and Floor Systems, Wall and Ceiling Framing</td>
<td>3</td>
</tr>
<tr>
<td>and CTT F113</td>
<td>and Roof Framing, Windows and Exterior Doors</td>
<td>3</td>
</tr>
<tr>
<td>and CTT F114</td>
<td>and Introduction to Concrete Materials and Forms</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits 14.5

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**Facility Maintenance**

College of Rural and Community Development  
907-474-7143  
www.uaf.edu/rural/ (http://www.uaf.edu/rural)

**Occupational Endorsement**

The facility maintenance program trains participants in dealing with challenges unique to rural Alaska structures. Training consists of identifying, troubleshooting and customizing solutions to a building or home, learning the importance of working with community advocates, tracking and analyzing past maintenance trends, and developing strategies for future maintenance needs. Applicants must be 16 years old to be admitted.

Complete the following admissions requirement:
Financial Services Representative

College of Rural and Community Development
907-474-7143
Community and Technical College
907-455-2800
www.ctc.uaf.edu/abus/ (http://www.ctc.uaf.edu/abus)

Occupational Endorsement

The financial services representative program provides education and training to qualify students for customer service and teller positions in banks, credit unions and other financial institutions. This 15-credit occupational endorsement may be earned in one semester and represents half the credits required for the applied business management certificate in finance. Upon completion of the course work, students may enroll in BA F253 for an optional additional 1-3 credits and get practical work experience in a financial institution.

This program is open to students who can document a high school diploma or GED. To be hired in any financial institution, graduates must be able to pass credit and criminal background checks. Applicants must be 16 years old to be admitted.

Complete the following admissions requirement:

- Be at least 16 years old by the first day of the semester in which you are admitted.

Minimum Requirements for Occupational Endorsement: 15 credits

Students must earn a C- grade or better in each course.

General University Requirements

Complete the general university requirements. (p. 78)

Occupational Endorsement Requirements

Complete the occupational endorsement requirements. (p. 78)

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTT F130</td>
<td>Introduction to Facilities Maintenance</td>
<td>1</td>
</tr>
<tr>
<td>CTT F131</td>
<td>Interior Repairs: Drywall, Woodwork Trim, Window Replacement</td>
<td>1</td>
</tr>
<tr>
<td>CTT F132</td>
<td>Flooring Installation: Vinyl, Wood and Parquet</td>
<td>1</td>
</tr>
<tr>
<td>CTT F133</td>
<td>Cabinet Installation with Countertops</td>
<td>1</td>
</tr>
<tr>
<td>CTT F135</td>
<td>Boiler Troubleshooting and Repair</td>
<td>2</td>
</tr>
<tr>
<td>CTT F137</td>
<td>Appliance Troubleshooting and Repair</td>
<td>2</td>
</tr>
<tr>
<td>CTT F138</td>
<td>Residential Heating Controls</td>
<td>2</td>
</tr>
<tr>
<td>CTT F151</td>
<td>Introduction to Plumbing Tools and Drawings</td>
<td>1</td>
</tr>
<tr>
<td>CTT F153</td>
<td>Plastic and Copper Pipe and Fittings</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credits</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

Occupational Endorsement Requirements

Complete the occupational endorsement requirements. (p. 78)

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABUS F233</td>
<td>Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>ABUS F155</td>
<td>Business Math (or MATH F100-level or above)</td>
<td>3</td>
</tr>
<tr>
<td>ABUS F154</td>
<td>Human Relations</td>
<td>3</td>
</tr>
<tr>
<td>ABUS F175</td>
<td>Customer Service</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select 6 credits from the following:</td>
<td>6</td>
</tr>
<tr>
<td>ABUS F160</td>
<td>Principles of Banking</td>
<td></td>
</tr>
<tr>
<td>ABUS F161</td>
<td>Personal and Business Finance</td>
<td></td>
</tr>
<tr>
<td>ABUS F234</td>
<td>Introduction to Investing</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total Credits</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

Health, Allied

Occupational Endorsement

The occupational endorsements in allied health give students the knowledge and technical skills for employment in health care. Occupational endorsements are available in medical billing, medical coding, medical office reception and nurse aide.

Special admission, licensing or certification requirements may apply to students in this program. Applicants should familiarize themselves with these and speak with a faculty advisor if they have any questions or concerns.

MEDICAL BILLING AND MEDICAL CODING

The occupational endorsements in medical billing and medical coding prepare students for employment in medical offices, clinics, hospitals and other medical facilities. Students in the program learn analysis of medical records and the assigning of codes for indexing diagnoses and procedures to provide information for reimbursement purposes.

MEDICAL OFFICE RECEPTION

Students receive education in the theory and skills for both office work and clinical care. Prerequisites for the program include a high school diploma or GED.

NURSE AIDE

The nurse aide occupational endorsement provides education and training to students in theory and basic nursing skills necessary to become efficient and productive health care team members. Students who successfully complete the program will be prepared to sit for the state of Alaska nurse aide examination for certification. This program is open to those who can document a high school diploma or GED and 10th-grade reading level by exam, or who have the instructor’s permission. Students must also be in good physical condition (capable of repeatedly lifting 50 pounds) and have the following immunizations: hepatitis B full series, two MMRs, chickenpox vaccine (or titer to prove immunity to...
MMR/chickenpox) and have a negative PPD for tuberculosis within the past year.

Information on any of the allied health programs is available from the Allied Health Division at the Community and Technical College, PO Box 758040, Fairbanks, AK 99775; by calling 907-455-2822; by email at fyhealth@uaf.edu; or at www.ctc.uaf.edu/health/ (http://www.ctc.uaf.edu/health).

Medical Billing, Medical Coding and Medical Office Reception

Complete the following admissions requirement:

- Be at least 16 years old by the first day of the semester in which you are admitted.

Nurse Aide

Complete the following admissions requirement:

- Be at least 18 years old by the first day of the semester in which you are admitted.

Medical Billing — Occupational Endorsement Program

Minimum Requirements for Endorsement: 12 credits

Students must earn a C- or better in each course.

General University Requirements

Complete the general university requirements. (p. 78)

Occupational Endorsement Requirements

Complete the occupational endorsement requirements. (p. 78)

Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIOS F150</td>
<td>Computer Business Applications (or documentation of computer skills and approved elective)</td>
<td>3</td>
</tr>
<tr>
<td>HLTH F100</td>
<td>Medical Terminology</td>
<td>3</td>
</tr>
<tr>
<td>HLTH F236</td>
<td>Outpatient Health Care Reimbursement</td>
<td>3</td>
</tr>
<tr>
<td>HLTH F237</td>
<td>Inpatient Health Care Reimbursement</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits 12

1 Must complete HLTH F235 with a B grade or better.

Medical Office Reception — Occupational Endorsement Program

Minimum Requirements for Endorsement: 12 credits

Students must earn a C- or better in each course.

General University Requirements

Complete the general university requirements. (p. 78)

Occupational Endorsement Requirements

Complete the occupational endorsement requirements. (p. 78)

Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIOS F150</td>
<td>Computer Business Applications (or documentation of computer skills and approved elective)</td>
<td>3</td>
</tr>
<tr>
<td>HLTH F100</td>
<td>Medical Terminology</td>
<td>3</td>
</tr>
<tr>
<td>HLTH F110</td>
<td>Professional Skills for the Workplace</td>
<td>2</td>
</tr>
<tr>
<td>HLTH F118</td>
<td>Medical Law and Ethics</td>
<td>2</td>
</tr>
<tr>
<td>HLTH F132</td>
<td>Administrative Procedures I</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Credits 13

Medical Coding — Occupational Endorsement Program

Minimum Requirements for Endorsement: 13 credits

Students must earn a C- or better in each course.

General University Requirements

Complete the general university requirements. (p. 78)

Occupational Endorsement Requirements

Complete the occupational endorsement requirements. (p. 78)

Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
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<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIOS F150</td>
<td>Computer Business Applications (or documentation of computer skills and approved elective)</td>
<td>3</td>
</tr>
<tr>
<td>HLTH F107</td>
<td>Nurse Aide Training</td>
<td>9</td>
</tr>
<tr>
<td>or HLTH F111 and HLTH F113</td>
<td>Personal Care Attendant Training and Personal Care Attendant to Nursing Assistant Bridge</td>
<td>9</td>
</tr>
</tbody>
</table>

Total Credits 21

Homeland Security

School of Management

907-474-7461

Occupational Endorsement

Minimum Requirements for Occupational Endorsement: 12 credits

The occupational endorsement in homeland security provides the basic academic preparation and sought after critical thinking skills necessary for mid-level careers in the TSA agency or homeland security field while also serving as a stepping-stone into a homeland security and emergency
management-related degree programs such as the HSEM bachelor’s degree at SOM. Applicants must be 18 years old to be admitted.

Complete the following admissions requirement:

- Be at least 18 years old by the first day of the semester in which you are admitted.

Minimum Requirements for Occupational Endorsement: 12 credits

**General University Requirements**
Complete the general university requirements. (p. 78)

**Occupational Endorsement Requirements**
Complete the occupational endorsement requirements. (p. 78)

**Program Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSEM F120</td>
<td>Introduction to Emergency Management</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>HSEM F121</td>
<td></td>
</tr>
<tr>
<td>Select at least 9 credits from the following:</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>HSEM F223</td>
<td>Terrorism: A Global Threat</td>
<td></td>
</tr>
<tr>
<td>HSEM F225</td>
<td>Intelligence Analysis and Security Management</td>
<td></td>
</tr>
<tr>
<td>HSEM F227</td>
<td>Transportation and Border Security</td>
<td></td>
</tr>
<tr>
<td>HSEM F231</td>
<td>The Threat of Weapons of Mass Destruction</td>
<td></td>
</tr>
<tr>
<td>HSEM F233</td>
<td>Critical Infrastructure Protection</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits 12

---

### Law Enforcement Academy

College of Rural and Community Development
907-474-7143
www.ctc.uaf.edu/programs/lawacad/ (http://www.ctc.uaf.edu/programs/lawacad)

**Alaska Police Standards Council Certification**

The Law Enforcement Academy prepares students for a career in law enforcement in the state of Alaska. APSC certification will allow a qualified candidate to work as a commissioned officer in any of approximately 65 state and municipal law enforcement organizations.

The law enforcement academy is an intense semester of full-time study. Students attend class 40 hours per week for one semester. The certification is approved by the Alaska Police Standards Council in compliance with Title 13.85.050 of the Alaska Administrative Code. Courses are not offered separately but must be taken as part of the entire law enforcement academy package.

Special admission, licensing or certification requirements may apply to students in this program. Applicants should familiarize themselves with these and speak with a faculty advisor if they have any questions or concerns. Applicants must be 21 years old to be admitted.

Complete the following admissions requirement:

- Be at least 21 years old by the first day of the semester in which you are admitted.

### LAW ENFORCEMENT CERTIFICATION BY THE ALASKA POLICE STANDARDS COUNCIL

Minimum Requirements for Certification: 16 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LE F110</td>
<td>Cultural and Behavioral Strategies for Law Enforcement Officers</td>
<td>1</td>
</tr>
<tr>
<td>LE F115</td>
<td>Enforcement Skills for Law Enforcement Officers</td>
<td>3</td>
</tr>
<tr>
<td>LE F120</td>
<td>Law Enforcement Operations</td>
<td>4</td>
</tr>
<tr>
<td>LE F125</td>
<td>Basic Police Procedures</td>
<td>4</td>
</tr>
<tr>
<td>LE F205</td>
<td>Criminal Law for Police</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Credits 16

---

### Mining Mill Operations

College of Rural and Community Development
Community and Technical College
907-479-2436
www.ine.uaf.edu/mirl/taaccct/mining-mill-op/ (http://ine.uaf.edu/mirl/taaccct/mining-mill-op)

**Occupational Endorsement**

The occupational endorsement in mining mill operations provides education and training in the skills and knowledge required of a mining mill operator.

This program is open to those who have a high school diploma or GED.

Minimum Requirements for Occupational Endorsement: 17 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRT F110</td>
<td>Introduction to Occupational Safety, Health and Environmental Awareness</td>
<td>3</td>
</tr>
<tr>
<td>PRT F140</td>
<td>Industrial Process Instrumentation I</td>
<td>3</td>
</tr>
<tr>
<td>AMIT F129</td>
<td>Surface Mine Safety</td>
<td>1</td>
</tr>
<tr>
<td>AMIT F130</td>
<td>Surface Mining Operations</td>
<td>3</td>
</tr>
<tr>
<td>AMIT F135</td>
<td>Introduction to Mining Systems and Equipment</td>
<td>4</td>
</tr>
<tr>
<td>AMIT F145</td>
<td>Introduction to Mineral Beneficiation</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits 17

---

### Paramedic Academy

Community and Technical College
907-455-2800
www.ctc.uaf.edu/programs/paramedic/ (http://www.ctc.uaf.edu/programs/paramedic)

The paramedic academy prepares students to take the national paramedic exam. A passing score qualifies students to apply for a paramedic license through the Alaska State Medical Board.

The paramedic academy offers the highest level of education available to prepare for work in the pre-hospital environment. The most common
entry-level positions for paramedics are in an ambulance within an emergency response system or in a nonemergency transport service. Paramedics also work in doctors’ offices, urgent care clinics, hospital emergency rooms, intensive care units, laboratories, aeromedical transport services, and safety departments in corporate and industrial settings.

UAF’s paramedic academy offers an intensive three-semester course of full-time study. Students may apply their paramedic course credits to more advanced degrees, including the A.A.S. in emergency services.

The paramedic academy meets or exceeds the national standards curriculum for the EMT-paramedic. During the first two semesters, the student will complete 500 hours of classroom education and 250 hours of clinical experience. The clinical component includes rotations in a hospital setting, including placements in respiratory therapy and in the emergency room, operating room and intensive care unit. In the third semester the student will complete a field internship outside Alaska with an ambulance company supervised by paramedic field preceptors. During the internship the student is responsible for all costs of housing, travel and living expenses in addition to tuition and fees.

The paramedic student should be emotionally stable and have good dexterity, agility and physical coordination. Paramedics must also have the strength to lift and carry heavy loads.

Special admission, licensing or certification requirements may apply to students in this program. Applicants should familiarize themselves with these and speak to a faculty advisor if they have questions or concerns.

Complete the following admissions requirement:

• Be at least 18 years old by the first day of the semester in which you are admitted.

Application packets for the paramedic academy may be obtained from the Community and Technical College at 907-455-2895 or jyrong@alaska.edu. Applications will be reviewed by CTC’s Paramedic Academy Advisory Board. In keeping with certification requirements, class size is limited to 25 students. Completion of EMS F170 (6 credits) is a prerequisite for the paramedic academy. Completion of HLTH F114 (4 credits) is recommended. Applicants must be 18 years old to be admitted.

Complete the following admissions requirement:

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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS F181</td>
<td>Clinical Rotation I</td>
<td>4</td>
</tr>
<tr>
<td>EMS F183</td>
<td>Clinical Rotation II</td>
<td>4</td>
</tr>
<tr>
<td>EMS F280</td>
<td>Paramedicine I</td>
<td>12</td>
</tr>
<tr>
<td>EMS F282</td>
<td>Paramedicine II</td>
<td>12</td>
</tr>
<tr>
<td>EMS F283</td>
<td>Paramedic Internship</td>
<td>12</td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>44</td>
</tr>
</tbody>
</table>

**Rural Human Services**

College of Rural and Community Development
907-474-7143
www.uaf.edu/rhs/ (http://www.uaf.edu/rhs)

**Occupational Endorsement**

The rural human services programs are designed to develop strong and healthy rural Alaska Native individuals, families and communities. They provide entry-level training for students preparing for careers as natural helpers/healers in village-based public, private and volunteer human service organizations. The curriculum draws extensively on resource people from the Native community and reflects a strong multicultural orientation that validates, incorporates and builds on Native values and principles.

The occupational endorsement is a concentrated course of study focused on rural behavioral health services. The endorsement meets the training requirements for Behavioral Health Aide I credentials as developed by the Alaska Native Tribal Health Consortium. The endorsement can also serve as a steppingstone to the certificate. Both the Alaska Division of Behavioral Health and the Alaska Native Tribal Health Consortium are currently developing and defining competencies and credentials for Alaska behavioral health care workers. The occupational endorsement program directly parallels the entry-level competencies training required under these new systems.

Admission is open to anyone employed by a regional Native health corporation or local entity providing village-based human services, or to individuals recognized by their communities as natural helpers/healers. A high school diploma or GED and/or previous training or work experience in the delivery of village-based human services are recommended but not required.

This program is delivered collaboratively within the UA system. Applicants must be 18 years old to be admitted.

Complete the following admissions requirement:

• Be at least 18 years old by the first day of the semester in which you are admitted.

Minimum Requirements for Occupational Endorsement: 16 credits

**General University Requirements**

Complete the general university requirements. (p. 78)

**Occupational Endorsement Requirements**

Complete the occupational endorsement requirements. (p. 78)

**Program Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>RHS F110</td>
<td>Cross-Cultural Bridging Skills</td>
<td>1</td>
</tr>
<tr>
<td>RHS F115</td>
<td>Issues of Personal Development</td>
<td>2</td>
</tr>
<tr>
<td>RHS F120</td>
<td>Family Systems I</td>
<td>2</td>
</tr>
<tr>
<td>RHS F130</td>
<td>Processes of Community Change</td>
<td>2</td>
</tr>
<tr>
<td>RHS F140</td>
<td>Alaska Native Values and Principles</td>
<td>1</td>
</tr>
<tr>
<td>RHS F150</td>
<td>Introduction to Rural Counseling</td>
<td>2</td>
</tr>
<tr>
<td>RHS F260</td>
<td>Addictions: Intervention and Treatment</td>
<td>2</td>
</tr>
<tr>
<td>RHS F275</td>
<td>Introduction to Recovery and Mental Illness</td>
<td>2</td>
</tr>
<tr>
<td>RHS F285</td>
<td>Case Management</td>
<td>2</td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

**Note:** See your advisor if you are not sure which catalog year to use.

**Rural Surface Water Quality Testing**

College of Rural and Community Development
907-474-5029

This program provides education and training to conduct water quality monitoring and assessment by developing and following a Quality Assurance Project Plan (QAPP). Course work focuses on issues related to rural Alaska communities and provides basic academic preparation for entry-level water quality technician careers. Students gain a foundation of
knowledge that prepares them to continue into science and engineering-related certificate, associate or baccalaureate programs.

Admission is open to students with a high school diploma or GED.

Minimum Requirements for Occupational Endorsement: 9 credits

Students must earn a C- grade or better in each course.

**General University Requirements**

Complete the general university requirements. (p. 78)

**Occupational Endorsement Requirements**

Complete the occupational endorsement requirements. (p. 78)

**Program Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABUS F183</td>
<td>Professional Skills for Job Hunt</td>
<td>1-3</td>
</tr>
<tr>
<td>CIOS F150</td>
<td>Computer Business Applications</td>
<td>1-3</td>
</tr>
<tr>
<td>ENVI F101</td>
<td>Introduction to Environmental Science</td>
<td>3</td>
</tr>
<tr>
<td>ENVI F110</td>
<td>Introduction to Water Quality I: Measurement</td>
<td>1</td>
</tr>
<tr>
<td>ENVI F111</td>
<td>Introduction to Water Quality II: Monitoring and Assessment</td>
<td>1</td>
</tr>
<tr>
<td>ENVI F112</td>
<td>Introduction to Water Quality III: Data Quality Assurance</td>
<td>1</td>
</tr>
<tr>
<td>ENVI F160</td>
<td>Internship in Environmental Studies</td>
<td>1-2</td>
</tr>
</tbody>
</table>

Total Credits 9-14

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**Rural Waste Management and Spill Response**

College of Rural and Community Development
Bristol Bay Campus
907-842-5109
www.uaf.edu/rural/ (http://www.uaf.edu/rural)

**Occupational Endorsement**

The occupational endorsement in rural waste management and spill response provides education and training in how to handle municipal waste. Emphasis is placed upon providing students with the skills and experience necessary to implement solutions to challenging solid waste stream issues facing rural waste managers. The program introduces students to best practices in waste management that are in compliance with state and federal governmental regulations. Exceptional focus is placed on workplace safety and students are assessed on proficiency in operational safety and safety planning. Upon completion of the occupational endorsement, students will be prepared to help protect rural communities from many of the environmental risks associated with waste disposal by safely managing municipal solid and hazardous waste streams.

Complete the following admissions requirement:

- Be at least 16 years old by the first day of the semester in which you are admitted.

**OCCUPATIONAL ENDORSEMENT PROGRAM**

Minimum Requirements for Occupational Endorsement: 10 credits

**General University Requirements**

Complete the general university requirements. (p. 78)

**Occupational Endorsement Requirements**

Complete the occupational endorsement requirements. (p. 78)

**Major Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABUS F183</td>
<td>Professional Skills for Job Hunt</td>
<td>1</td>
</tr>
<tr>
<td>ENVI F110</td>
<td>Introduction to Water Quality I: Measurement</td>
<td>1</td>
</tr>
<tr>
<td>ENVI F115</td>
<td>Rural Solid and Hazardous Waste Management</td>
<td>1</td>
</tr>
<tr>
<td>ENVI F116</td>
<td>Rural Alaska Landfill Operator</td>
<td>1</td>
</tr>
<tr>
<td>ENVI F117</td>
<td>Community Spill Response</td>
<td>1</td>
</tr>
<tr>
<td>FIRE F110</td>
<td>Introduction to Hazardous Waste Operations and Emergency Response</td>
<td>3</td>
</tr>
</tbody>
</table>

Select 2 credits of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIOS F135</td>
<td>Microcomputer Spreadsheets</td>
</tr>
<tr>
<td>CTT F130</td>
<td>Introduction to Facilities Maintenance</td>
</tr>
<tr>
<td>ENVI F130</td>
<td>Introduction to the National Environmental Policy Act</td>
</tr>
<tr>
<td>ENVI F160</td>
<td>Internship in Environmental Studies</td>
</tr>
</tbody>
</table>
Sustainable Energy
College of Rural and Community Development
907-474-7143
www.uaf.edu/rural/ (http://www.uaf.edu/rural)

Occupational Endorsement
Providing education and training in energy efficiency and renewable energy, the sustainable energy occupational endorsement addresses many of the energy issues that influence Alaska communities and provides the basic academic preparation for entry-level sustainable energy careers. It also serves as a steppingstone into science- and engineering-related certificate, associate or bachelor’s programs.

The program is structured as 6 credits of foundation knowledge and a minimum of 6 credit electives that allow students (in consultation with their advisor) to specialize in specific areas of sustainable energy. Some examples of how the electives can be formed into specific areas of study follow. Applicants must be 16 years old to be admitted.

Energy Science
ENV F101 Introduction to Environmental Science 3
PHYS F102X Energy and Society 4

Photovoltaic
CTT F100 Construction Technology Core 3
CTT F160 Photovoltaic Systems I 5
CTT F161 Photovoltaic Systems II 5

Biomass
CTT F100 Construction Technology Core 3
CTT F250 Current Topics in Construction Trades 2
ENV F120 Home Energy Basics 1

Wind
CTT F100 Construction Technology Core 3
CTT F250 Current Topics in Construction Trades 1-3
ENV F120 Home Energy Basics 1

Energy-Efficient Construction
CTT F100 Construction Technology Core 3
CT S201 Cold Climate Construction 1

Other
Other areas of study related to sustainable energy

1. CT S201 is offered by the University of Alaska Southeast.

Complete the following admissions requirement:

• Be at least 16 years old by the first day of the semester in which you are admitted.

Tribal Justice
College of Rural and Community Development
907-474-7143
www.uaf.edu/rural/ (http://www.uaf.edu/rural)

Occupational Endorsement
The occupational endorsement in tribal justice provides education specific to tribal courts and tribal justice in Alaska, preparing tribal court judges, clerks and administrators for employment in the tribal justice field. The endorsement also provides a pathway for continuing education for tribal justice professionals in Alaska. Applicants must be 16 years old to be admitted.

Complete the following admissions requirement:
• Be at least 16 years old by the first day of the semester in which you are admitted.

**OCCUPATIONAL ENDORSEMENT PROGRAM**  
Minimum Requirements for Occupational Endorsement: 9 credits

**General University Requirements**  
Complete the general university requirements. (p. 78)

**Occupational Endorsement Requirements**  
Complete the occupational endorsement requirements. (p. 78)

**Program Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TM F110</td>
<td>Tribal Court Development for Alaska Tribes</td>
<td>1</td>
</tr>
<tr>
<td>TM F111</td>
<td>Children's Topics in Tribal Justice</td>
<td>1</td>
</tr>
<tr>
<td>TM F112</td>
<td>Federal Indian Law for Alaska Tribes</td>
<td>1</td>
</tr>
<tr>
<td>TM F113</td>
<td>Tribal Code Development</td>
<td>1</td>
</tr>
<tr>
<td>TM F114</td>
<td>Tribal Justice Responses to Community and Domestic Violence</td>
<td>1</td>
</tr>
<tr>
<td>TM F115</td>
<td>Tribal Court Administration</td>
<td>1</td>
</tr>
<tr>
<td>TM F116</td>
<td>Juvenile Justice in Tribal Court</td>
<td>1</td>
</tr>
<tr>
<td>TM F117</td>
<td>Tribal Court Enforcement of Decisions</td>
<td>1</td>
</tr>
<tr>
<td>TM F118</td>
<td>Tribal Community and Restorative Justice</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Credits 9

**Wildland Fire Science**  
College of Rural and Community Development  
907-474-7143  
Community and Technical College  
907-455-2800  
www.ctc.uaf.edu/programs/emergency/ (http://www.ctc.uaf.edu/programs/emergency)

**Occupational Endorsement**  
The wildland fire science occupational endorsement provides students with the knowledge and skills to perform at the first level of wildland fire management. This includes managing a squad on a wildland fire crew, correct methods of operation for wildland fire chainsaws and pumps, and working around fire helicopters and aircraft. Completion of this program can lead to employment in the field, provide a foundation for wildland fire management, including in- and out-of-state wildland fire assignments, and act as a steppingstone to the Associate of Applied Science degree in wildland fire control. Completion of the wildland fire science occupational endorsement will create a well-rounded entry-level firefighter capable of filling positions on wildland fires. Applicants must be 18 years old to be admitted.

Complete the following admission requirement:

• Be at least 18 years old by the first day of the semester in which you are admitted.

**OCCUPATIONAL ENDORSEMENT PROGRAM**  
Minimum Requirements for Occupational Endorsement: 11 credits

**General University Requirements**  
Complete the general university requirements. (p. 78)

**Occupational Endorsement Requirements**  
Complete the occupational endorsement requirements. (p. 78)

**Program Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRE F151</td>
<td>Wildland Firefighter I</td>
<td>3</td>
</tr>
<tr>
<td>FIRE F152</td>
<td>Wildland Firefighter II</td>
<td>3</td>
</tr>
<tr>
<td>FIRE F153</td>
<td>Wildland Firefighter III</td>
<td>2</td>
</tr>
<tr>
<td>FIRE F157</td>
<td>Wildland Air Operations</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits 11

**Welding, Entry-level**  
Community and Technical College  
907-455-2800  
www.ctc.uaf.edu/programs/weld/ (http://www.ctc.uaf.edu/programs/weld)

**Occupational Endorsement**  
The entry-level welding occupational endorsement provides training to succeed in the structural welding industry and to pass the American Welding Society test, used as an industry standard. The program also covers the safety requirements and mathematics needed in this high-demand occupation. Applicants must be 16 years old to be admitted.

Complete the following admissions requirement:

• Be at least 16 years old by the first day of the semester in which you are admitted.

**OCCUPATIONAL ENDORSEMENT PROGRAM**  
Minimum Requirements for Occupational Endorsement: 9 credits

**General University Requirements**  
Complete the general university requirements. (p. 78)

**Occupational Endorsement Requirements**  
Complete the occupational endorsement requirements. (p. 78)

**Program Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>WMT F130</td>
<td>Shielded Metal Arc Welding</td>
<td>3</td>
</tr>
<tr>
<td>WMT F140</td>
<td>Metal Fabrication</td>
<td>3</td>
</tr>
<tr>
<td>WMT F160</td>
<td>Gas Metal Arc Welding</td>
<td>3</td>
</tr>
<tr>
<td>WMT F290</td>
<td>Welding Proficiency Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>WMT F150</td>
<td>Gas Tungsten Arc Welding</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits 9
CERTIFICATES & ASSOCIATE DEGREES

To earn a UAF degree, you must satisfy three sets of requirements: general university requirements; certificate or degree requirements; and program (major) requirements. These requirements are all described in this section of the catalog. Requirements for your major are found in the Certificate and Associate Degree Programs (p. 97) section.

If your degree program is delivered collaboratively within the UA system (e.g., information technology specialist, early childhood education, human services, rural human services), then the credits you earn from each UA institution will be counted toward fulfillment of the degree requirements and fulfillment of the minimum institutional residency requirements. Institutional residency requirements are the minimum number of credits you must earn from the campus where you earn a degree.

General University Requirements

You must earn at least 30 semester credits for a certificate and 60 semester credits for an associate degree, including transfer credits, at the 100-level or above. At least 15 semester credits applicable to any certificate or associate degree must be earned at UAF. A minimum cumulative GPA of 2.0 is required in all work as well as in your major field. In addition, you must earn a minimum C- grade in courses required for your associate degree major. Some majors require higher GPAs for major course work.

Unless otherwise specified by the appropriate academic unit, a course may be taken more than once toward fulfilling degree, certificate or major requirements. However, credit hours for such courses count only once toward total credits required for the degree or certificate.

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Certificate</th>
<th>Associate Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum number of credits</td>
<td>30 credits</td>
<td>60 credits</td>
</tr>
<tr>
<td>Credits that must be earned</td>
<td>15 credits</td>
<td>15 credits</td>
</tr>
<tr>
<td>(residence credit)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade point average required</td>
<td>2.0 cumulative and in major</td>
<td>2.0 cumulative and in major</td>
</tr>
<tr>
<td>Minimum grades required for major</td>
<td>No grade lower than C- in courses required for major. Some departments have higher requirements</td>
<td>No grade lower than C- in courses required for major. Some departments have higher requirements</td>
</tr>
<tr>
<td>Catalog year that can be used to meet requirements</td>
<td>May use any catalog in effect when enrolled as a degree-seeking student, regardless of major; five-year limit on catalog year</td>
<td>May use any catalog in effect when enrolled as a degree-seeking student, regardless of major; five-year limit on catalog year</td>
</tr>
<tr>
<td>Second degree requirements</td>
<td>Only one A.A. degree may be earned; 12 credits beyond first A.A.S. degree and all requirements for the second degree must be met</td>
<td></td>
</tr>
</tbody>
</table>

MAJORS

You may declare a major when you are admitted to UAF as a degree undergraduate student. If you haven’t chosen a major, you’ll be enrolled as a general studies student. Nondegree students are not eligible to declare a major, be assigned class standing or receive financial aid.

Students enrolled in associate degree or certificate programs who want to declare a bachelor’s degree major must apply for admission to a degree program following the standard admission process for bachelor’s degree programs. (See admission requirements in How to Earn a Bachelor’s Degree (p. 134).)

• Changing Your Major

Undergraduate students may change majors by completing a change of major form available from the Office of Admissions and the Registrar or at www.uaf.edu/reg/forms/. A change of major becomes effective the semester it is submitted. Students who wish to change majors from one level to another level (e.g., from an associate degree to a bachelor’s degree) must apply for admission to the degree program following the standard admission process.

CONCENTRATIONS

An area of emphasis, including the major core courses within a student’s degree program, is termed a concentration. Some programs at UAF require a concentration, others do not. A student may only earn one degree in a specific discipline once. Using different concentrations within a degree program to count as different degrees is not allowed.

SECOND ASSOCIATE DEGREE

To receive a second Associate of Applied Science degree, you must earn at least 12 credit hours beyond the first associate degree as well as complete all requirements for the major. As long as you have completed the additional 12-hour requirement, you may be awarded two degrees in one semester.

DEGREE REQUIREMENTS AND TIME LIMITS

You may complete degree requirements in effect and published in the UAF catalog in any one of the previous five academic years in which you are enrolled as a degree student for a certificate or associate degree. You are considered enrolled in your degree program when you complete the appropriate degree student registration procedure. If you do not enroll for a semester or more, or if you enroll through the nondegree student registration process, you aren’t considered enrolled as a degree student during that time.

EXCEPTIONS TO DEGREE REQUIREMENTS

Occasionally an undergraduate student may request an exception to an academic requirement or regulation. Requests for an academic dispensation must be approved by petition. If you submit a petition on the basis of a disability, the coordinator of Disability Services will be consulted. The undergraduate petition form is available at www.uaf.edu/reg/forms/. Forms need to be returned to the Office of Admissions and the Registrar with required approval signatures. The Office of Admissions and the Registrar will post the petition information on DegreeWorks and notify you once a decision on your petition has been received. Academic petitions fall into three categories, and each involves different processes:

• General Education Requirement Petitions

If your petition deals with baccalaureate general education requirements, your advisor and the head of the department of the academic area involved must grant approval. Submit your signed petition to the Office of Admissions and the Registrar. It will then be
forwarded to the chair of the Faculty Senate Core Curriculum Review Committee for consideration.

- **Major or Minor Degree Requirement Petitions**
  If you want to waive or substitute courses within your major or minor requirements, you need approval signatures from your advisor and the department or program head of your major or minor area. Submit your signed petition to the Office of Admissions and the Registrar.

- **Petitions for Other Requirements**
  If your petition deals with general university and/or specific requirements for your degree or other academic policies, you need approval from your advisor and the dean or director of the college or school in which your major is located. Submit your signed petition to the Office of Admissions and the Registrar. It will then be forwarded to the provost for consideration.

**RESIDENCE CREDIT**

Residence credit is course credit earned through any unit of UAF. Formal classroom instruction, correspondence study, distance-delivered courses, individual study or research at UAF are all considered residence credit. On the other hand, transfer credit, advanced placement credit, credit for prior learning, military service credit and credit granted through nationally prepared examinations are not considered residence credit, nor are credit-by-examination credits earned through locally prepared tests. None of these types of credit can be applied to UAF residency requirements.

**RESIDENCY REQUIREMENT**

Most universities have residency requirements that call for a certain number of credits toward a degree to be earned at the degree-granting school. At UAF, the residency requirement for both certificates and associate degrees is 15 resident credits.

**GRADUATION**

- **Responsibility**
  You are responsible for meeting all requirements for graduation. You are encouraged to work with your advisor and use DegreeWorks throughout your college career to ensure you are on track to graduate.

- **Application for Graduation**
  You need to formally apply for graduation. An application for graduation and nonrefundable fee must be filed with the Office of Admissions and the Registrar. We encourage you to apply the semester prior to the semester you plan to graduate. If you file your application by the published deadline, the graduation application fee is $50. If you miss that deadline, you can submit a late application for graduation by the published late graduation deadline for the semester. The fee for a late application is $80. Applications for graduation filed after the late deadline are processed for graduation the following semester. Students who apply for graduation and who do not complete degree requirements by the end of the semester must reapply for graduation and repay the fee.

- **Diplomas and Commencement**
  UAF issues diplomas to graduates three times a year: in September following summer sessions, in February at the end of fall semester and in June at the end of spring semester. Students who complete degree requirements for UA Board of Regents approved academic programs during the academic year are invited to participate in the annual commencement ceremony at the end of spring semester. Names of students receiving degrees/certificates appear in the commencement program and are released to the media unless you submit a written request not to do so to the Office of Admissions and the Registrar. Graduates are responsible for ordering caps and gowns through the UAF bookstore in early spring.

- **Graduation with Honors**
  Graduation with honors is a tribute that recognizes academic achievement. Honors graduates have earned a cumulative GPA of 3.5 or higher in all college work. If a student's overall cumulative GPA is 3.5 or higher, a student graduates with the distinction of cum laude; 3.75 or higher, magna cum laude; 3.9 or higher and no grade lower than A-, summa cum laude. Your cumulative GPA for graduation with honors is based on all college work attempted at UAF, including any repeated or omitted credits due to Fresh Start/academic bankruptcy. For transfer students to be considered for graduation with honors, they must have:
  - 3.5 cumulative GPA in all attempted UAF credits, and
  - UAF residence credit of 24 semester hours for an associate degree.

Once those requirements are met, a cumulative GPA is calculated combining all college work attempted at UAF, as well as all college work attempted at any other institutions you've attended, including repeated credits and any credits may not have been accepted for transfer to UAF. The combined cumulative GPA must also be 3.5 or higher for a transfer student to graduate with honors.

See a list of all Certificate and Associate Degree programs here.

**Summary of Certificate and Associate Degree Requirements**

**Types of Certificates and Associate Degrees**

- **Certificate Programs**
  Certificate programs are for students preparing for entry-level employment or upgrading in a specific occupation.

- **Associate of Science**
  The A.S. degree represents the completion of a broad-based course of study with an emphasis in the sciences. This degree may serve as a steppingstone to a science-related baccalaureate program. You may earn only one A.S. degree.

- **Associate of Arts**
  The A.A. is a program of study with an interdisciplinary approach useful for transferring to future degree programs or as a starting point for a career. An emphasis created in an A.A. program can fulfill general education requirements or become the basis for a minor in many bachelor’s programs. The A.A. degree is offered at all UAF campuses as well as online. Students may earn only one A.A.

- **Associate of Applied Science**
The A.A.S. is for students preparing for entry-level employment or upgrading in a specific occupation. This degree is not intended for transfer into a four-year degree program. However, some courses within the A.A.S. degree may be accepted in a four-year bachelor’s program. (Each course is considered on an individual basis.)

**General Associate Degree Requirements**

You must have completed at least 60 semester hours, including transfer credits, to earn a UAF associate degree.

At least 15 credits applicable to any associate degree must be UAF resident credits.

See a list of all Certificate and Associate Degree programs here. (p. 97)

**Certificate Requirements**

Certificate programs vary in length; however, you can usually complete them in one year. Certificates are awarded in specific occupational fields with emphasis on entering the job market. These certificates can serve as the basis for additional education and are the first step toward an Associate of Applied Science degree. For specific major requirements, refer to the degrees and programs section.

If your degree program is delivered collaboratively within the UA system, credits you earn from each UA institution will be counted toward fulfillment of the degree requirements and fulfillment of the minimum institutional residency requirements.

You may enroll in any course for which you are eligible. To earn a certificate, you must formally be admitted to a certificate program and you must earn at least 30 credits, including transfer credit. Fifteen semester hours must be residence credits. You must have a cumulative GPA of at least 2.0 in your major and overall. Students must earn a minimum grade of C- in all major courses. Some majors require higher GPAs for major course work. Programs of study for which certificates are granted must contain a recognizable body of instruction in the program-related areas of communication, computation and human relations.

Additional appropriate topics may include safety, industrial safety and environmental awareness. Instruction in the related instructional areas may be embedded within the program curriculum or taught in blocks of specialized instruction. Each approach, however, will have clearly identified content that is pertinent to the general program of study.

**Note:** Students planning to go on to a bachelor’s degree need to work closely with their advisors and are encouraged to select courses meeting general education requirements and courses designated within majors and minors. Only those courses with an X designator count toward the baccalaureate general education requirements.

### REQUIREMENTS

<table>
<thead>
<tr>
<th>Communication</th>
<th>2-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select one from the following:</td>
<td></td>
</tr>
<tr>
<td>ENGL F111X</td>
<td>Introduction to Academic Writing</td>
</tr>
<tr>
<td>ABUS F170</td>
<td>Business English</td>
</tr>
<tr>
<td>ABUS F271</td>
<td>Business Communications</td>
</tr>
<tr>
<td>ENGL F211X</td>
<td>Academic Writing about Literature</td>
</tr>
<tr>
<td>ENGL F212</td>
<td>Business, Grant and Report Writing</td>
</tr>
<tr>
<td>ENGL F213X</td>
<td>Academic Writing about the Social and Natural Sciences</td>
</tr>
<tr>
<td>COMM F121X</td>
<td>Introduction to Interpersonal Communication</td>
</tr>
<tr>
<td>COMM F131X</td>
<td>Fundamentals of Oral Communication: Group Context</td>
</tr>
<tr>
<td>COMM F141X</td>
<td>Fundamentals of Oral Communication: Public Context (or successful completion of competency test)</td>
</tr>
<tr>
<td>DEVS F104</td>
<td>University Communications</td>
</tr>
<tr>
<td>DEVS F105</td>
<td>Academic Reading for College</td>
</tr>
<tr>
<td>Other program-approved discipline-based communication course or discipline-based courses with embedded communication content.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Computation</th>
<th>2-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select one from the following:</td>
<td></td>
</tr>
<tr>
<td>Any course at the F100-level or above in mathematical sciences (computer science, math or statistics).</td>
<td></td>
</tr>
<tr>
<td>ABUS F155</td>
<td>Business Math</td>
</tr>
<tr>
<td>DEV F105</td>
<td>Intermediate Algebra</td>
</tr>
<tr>
<td>ECE F117</td>
<td>Math Skills for Early Childhood Educators</td>
</tr>
<tr>
<td>HLTH F116</td>
<td>Mathematics in Health Care</td>
</tr>
<tr>
<td>HUMS F117</td>
<td>Math Skills for Human Services</td>
</tr>
</tbody>
</table>
Summary of Certificate and Associate Degree Requirements

**TTCH F131** Mathematics for the Trades

Other program-approved discipline-based computation course or discipline-based courses with embedded computation content.

**Human Relations** 2-3

Select one of the following:

- ANTH/SOC F100X Individual, Society and Culture
- ABUS F154 Human Relations
- ANL F287 Teaching Methods for Alaska Native Languages
- ECE F104X Child Development I: Prenatal, Infants and Toddlers
- ECE F107 Child Development II: The Preschool and Primary Years
- ED/PSY F245 Child Development
- HLTH F106 Human Behavior in Health Care
- HUMS F120 Cultural Diversity in Human Services
- RHS F110 and RHS F115 Cross-Cultural Bridging Skills and Issues of Personal Development

Other program-approved discipline-based human relations or discipline-based courses with embedded human relations content.

**Major Specialty**

At least 21 hours of major specialty courses

**Electives to Total** 30

1 ENGL F212 does not fulfill the communication requirement for the bachelor’s degree.

### Associate of Arts Requirements

The Associate of Arts degree represents the completion of broad-based college study. This degree may serve as a starting point for your career or as a steppingstone to a bachelor’s program. You may earn only one A.A. degree.

Students planning to go on to a bachelor’s degree are advised to select courses meeting remaining general education requirements and courses designated within bachelor’s degree majors and minors.

The curriculum of the Associate of Arts degree consists of all courses required to meet the UAF baccalaureate core, with the following exceptions:

1. The upper-division writing and oral-intensive courses are not required.
2. In place of the upper-division ethics course a humanities or social science elective may be substituted.

All credits for the A.A. degree must be at the F100 level or above, with 20 credits at the F200 level or above, and be distributed as follows:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General education requirement credits</td>
<td>38-44</td>
</tr>
<tr>
<td>General electives</td>
<td>16-22</td>
</tr>
</tbody>
</table>

**REQUIREMENTS**

Minimum Requirements for Degree: 60 credits

**Communication** 9

Complete the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL F111X</td>
<td>Introduction to Academic Writing</td>
</tr>
<tr>
<td>ENGL F211X</td>
<td>Academic Writing about Literature</td>
</tr>
<tr>
<td>or ENGL F213X</td>
<td>Academic Writing about the Social and Natural Sciences</td>
</tr>
<tr>
<td>COMM F121X</td>
<td>Introduction to Interpersonal Communication</td>
</tr>
<tr>
<td>or COMM F131X</td>
<td>Fundamentals of Oral Communication: Group Context</td>
</tr>
<tr>
<td>or COMM F141X</td>
<td>Fundamentals of Oral Communication: Public Context</td>
</tr>
</tbody>
</table>

**Library and Information Research** 0-1

Select one from the following:

- LS F101X Library Information and Research

Successful completion of library skills competency test

**Arts** 3

Select one from the following:
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANS/FLPA F161X</td>
<td>Introduction to Alaska Native Performance</td>
</tr>
<tr>
<td>ANS F202X</td>
<td>Aesthetic Appreciation of Alaska Native Performance</td>
</tr>
<tr>
<td>ANS/MUS/NORS F223X</td>
<td>Alaska Native Music</td>
</tr>
<tr>
<td>ART F200X</td>
<td>Explorations in Art</td>
</tr>
<tr>
<td>ART F261X</td>
<td>History of World Art</td>
</tr>
<tr>
<td>ART F262X</td>
<td>History of World Art</td>
</tr>
<tr>
<td>ENGL/FLPA/JRN F217X</td>
<td>Introduction to the Study of Film</td>
</tr>
<tr>
<td>FLP A/JRN F105X</td>
<td>History of the Cinema</td>
</tr>
<tr>
<td>FLP F200X</td>
<td>Performance, Production and the Audience</td>
</tr>
<tr>
<td>FLP F215X</td>
<td>Dramatic Literature and History</td>
</tr>
<tr>
<td>HUM F201X</td>
<td>Unity in the Arts</td>
</tr>
<tr>
<td>MUS F103X</td>
<td>Music Fundamentals</td>
</tr>
<tr>
<td>MUS F125X</td>
<td>Enjoying Jazz</td>
</tr>
<tr>
<td>MUS F200X</td>
<td>Exploration in Music</td>
</tr>
</tbody>
</table>

**Humanities**

Select one from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANL F141X</td>
<td>Beginning Athabascan-Koyukon or Gwich’in</td>
</tr>
<tr>
<td>ANL F142X</td>
<td>Beginning Athabascan</td>
</tr>
<tr>
<td>ANL F251X</td>
<td>Introduction to Athabascan Linguistics</td>
</tr>
<tr>
<td>ANL F255X</td>
<td>Introduction to Alaska Native Languages</td>
</tr>
<tr>
<td>ASLG F101X</td>
<td>American Sign Language I</td>
</tr>
<tr>
<td>ASLG F202X</td>
<td>American Sign Language II</td>
</tr>
<tr>
<td>ENGL/FL F200X</td>
<td>World Literature</td>
</tr>
<tr>
<td>ENGL F270X</td>
<td>Introduction to Creative Writing</td>
</tr>
<tr>
<td>ESK F101X</td>
<td>Elementary Central Yup’ik</td>
</tr>
<tr>
<td>ESK F102X</td>
<td>Elementary Central Yup’ik</td>
</tr>
<tr>
<td>ESK F111X</td>
<td>Elementary Inupiaq</td>
</tr>
<tr>
<td>ESK F112X</td>
<td>Elementary Inupiaq</td>
</tr>
<tr>
<td>FREN F101X</td>
<td>Elementary French I</td>
</tr>
<tr>
<td>FREN F102X</td>
<td>Elementary French II</td>
</tr>
<tr>
<td>GER F101X</td>
<td>Elementary German I</td>
</tr>
<tr>
<td>GER F102X</td>
<td>Elementary German II</td>
</tr>
<tr>
<td>JPN F101X</td>
<td>Elementary Japanese I</td>
</tr>
<tr>
<td>JPN F102X</td>
<td>Elementary Japanese II</td>
</tr>
<tr>
<td>JRN F101X</td>
<td>Media and Culture</td>
</tr>
<tr>
<td>JRN F102X</td>
<td>Introduction to Broadcasting</td>
</tr>
<tr>
<td>LAT F101X</td>
<td>Beginning Latin I</td>
</tr>
<tr>
<td>LAT F101X</td>
<td>Beginning Latin I</td>
</tr>
<tr>
<td>LING F101X</td>
<td>Nature of Language</td>
</tr>
<tr>
<td>LING F216X</td>
<td>Languages of the World</td>
</tr>
<tr>
<td>PHIL F102X</td>
<td>Introduction to Philosophy</td>
</tr>
<tr>
<td>PHIL F104X</td>
<td>Logic and Reasoning</td>
</tr>
<tr>
<td>RELG F221X</td>
<td>Religions of the World</td>
</tr>
<tr>
<td>RUSS F101X</td>
<td>Elementary Russian I</td>
</tr>
<tr>
<td>RUSS F102X</td>
<td>Elementary Russian II</td>
</tr>
<tr>
<td>SPAN F101X</td>
<td>Elementary Spanish I</td>
</tr>
<tr>
<td>SPAN F102X</td>
<td>Elementary Spanish II</td>
</tr>
</tbody>
</table>

**Social Sciences**

Select two courses from the following in two different disciplines:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT F261X</td>
<td>Principles of Financial Accounting</td>
</tr>
<tr>
<td>ANS F242X</td>
<td>Native Cultures of Alaska</td>
</tr>
<tr>
<td>ANTH/SOC F100X</td>
<td>Individual, Society and Culture</td>
</tr>
</tbody>
</table>
### Summary of Certificate and Associate Degree Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH F101X</td>
<td>Introduction to Anthropology</td>
</tr>
<tr>
<td>ANTH F211X</td>
<td>Fundamentals of Archaeology</td>
</tr>
<tr>
<td>BA F151X</td>
<td>Introduction to Business</td>
</tr>
<tr>
<td>COMM F180X</td>
<td>Introduction to Human Communication</td>
</tr>
<tr>
<td>ECE F104X</td>
<td>Child Development I: Prenatal, Infants and Toddlers</td>
</tr>
<tr>
<td>ECON F100X</td>
<td>Political Economy</td>
</tr>
<tr>
<td>ECON F201X</td>
<td>Principles of Economics I: Microeconomics</td>
</tr>
<tr>
<td>ECON F202X</td>
<td>Principles of Economics II: Macroeconomics</td>
</tr>
<tr>
<td>ECON F235X</td>
<td>Introduction to Natural Resource Economics</td>
</tr>
<tr>
<td>GEOG F101X</td>
<td>Expedition Earth: Introduction to Geography</td>
</tr>
<tr>
<td>HIST F100X</td>
<td>Modern World History</td>
</tr>
<tr>
<td>HIST F102X</td>
<td>Western Civilization Since 1500</td>
</tr>
<tr>
<td>HIST F122X</td>
<td>East Asian Civilization</td>
</tr>
<tr>
<td>HIST F132X</td>
<td>History of the U.S.</td>
</tr>
<tr>
<td>JUST F110X</td>
<td>Introduction to Justice</td>
</tr>
<tr>
<td>PS F100X</td>
<td>Political Economy</td>
</tr>
<tr>
<td>PS F201X</td>
<td>Comparative Politics</td>
</tr>
<tr>
<td>PSY F101X</td>
<td>Introduction to Psychology</td>
</tr>
<tr>
<td>RD F200X</td>
<td>Rural Development in the North</td>
</tr>
<tr>
<td>SWK F103X</td>
<td>Introduction to Social Work</td>
</tr>
<tr>
<td>SOC F100X</td>
<td>Individual, Society and Culture</td>
</tr>
<tr>
<td>SOC F201X</td>
<td>Social Problems</td>
</tr>
<tr>
<td>WGS F201X</td>
<td>Introduction to Women's and Gender Studies</td>
</tr>
</tbody>
</table>

#### Ethics

Select one from the following:

- BA F323X Business Ethics
- COMM F300X Communicating Ethics
- JUST F300X Ethics and Justice
- NRM F303X Environmental Ethics and Actions
- PHIL F322X Ethics
- PS F300X Ethics and Society

Or one additional social science elective (3 credits)

#### Mathematics

Select one from the following:

- MATH F113X Concepts and Contemporary Applications of Mathematics
- MATH F122X Precalculus for Business and Economics
- MATH F151X College Algebra for Calculus
- MATH F152X Trigonometry
- MATH F156X Precalculus
- MATH F230X Calculus Essentials with Applications
- MATH F251X Calculus I
- MATH F252X Calculus II
- MATH F253X Calculus III
- STAT F200X Elementary Probability and Statistics

#### Natural Sciences

Select two from the following:

- ATM F101X Weather and Climate of Alaska
- BIOL F100X Human Biology
- BIOL F103X Biology and Society
- BIOL F104X Natural History of Alaska
- BIOL F115X Fundamentals of Biology I
- BIOL F116X Fundamentals of Biology II
BIOL F120X  Introduction to Human Nutrition
BIOL F213X  Human Anatomy and Physiology I
BIOL F214X  Human Anatomy and Physiology II
CHEM F100X  Chemistry in Complex Systems
CHEM F103X  Basic General Chemistry
CHEM F104X  Survey of Organic Chemistry and Biochemistry
CHEM F105X  General Chemistry I
CHEM F106X  General Chemistry II
CHEM F111X  Introduction to Environmental Chemistry of the Arctic
GEOG F111X  Earth and Environment: Elements of Physical Geography
GEOS F100X  Introduction to Earth Science
GEOS F101X  The Dynamic Earth
GEOS F106X  Life in the Age of Dinosaurs
GEOS F112X  The History of Earth and Life
GEOS F120X  Glaciers, Earthquakes and Volcanoes: Past, Present and Future
MSL F111X  The Oceans
PHYS F102X  Energy and Society
PHYS F103X  College Physics I
PHYS F104X  College Physics II
PHYS F115X  Physical Sciences
PHYS F175X  Introduction to Astronomy
PHYS F211X  General Physics I
PHYS F212X  General Physics II
PHYS F213X  Elementary Modern Physics

1  Note: Recommended for students who will earn a B.A. or B.S. degree. An additional social science elective may be substituted for the A.A. degree.
2  You may earn credit for MATH F122X or MATH F151X, but not both.
3  Or any math course having one of these as a prerequisite
4  You may earn credit for MATH F230X or MATH F251X, but not both.

Associate of Applied Science Requirements

Associate of applied science degrees are awarded in specific occupational fields with emphasis on entering the job market. This degree, usually seen as a terminal degree, can serve as the basis for additional education. For specific major requirements, see the Certificate and Associate Degree Programs (p. 97) section.

Students planning to go on to a bachelor’s degree need to work closely with their advisors and are encouraged to select courses meeting general education requirements and courses designated within majors and minors. Only courses with an X designator count towards the baccalaureate core.

All credits for the A.A.S. degree must be at the F100 level or above and be distributed as follows:

REQUIREMENTS

Minimum Requirements for Degree: 60 credits

Communication  

Complete the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL F111X</td>
<td>Introduction to Academic Writing</td>
</tr>
<tr>
<td>ABUS F271</td>
<td>Business Communications</td>
</tr>
<tr>
<td>or ENGL F211X</td>
<td>Academic Writing about Literature</td>
</tr>
<tr>
<td>or ENGL F212</td>
<td>Business, Grant and Report Writing</td>
</tr>
<tr>
<td>or ENGL F213X</td>
<td>Academic Writing about the Social and Natural Sciences</td>
</tr>
<tr>
<td>COMM F121X</td>
<td>Introduction to Interpersonal Communication</td>
</tr>
<tr>
<td>or COMM F131X</td>
<td>Fundamentals of Oral Communication: Group Context</td>
</tr>
<tr>
<td>or COMM F141X</td>
<td>Fundamentals of Oral Communication: Public Context</td>
</tr>
</tbody>
</table>

Computation  

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Computation</td>
</tr>
</tbody>
</table>

9  Communication  

3  Computation
Select one from the following:

- Any course at the F100 level or above in mathematical sciences (computer science, math or statistics)
- ABUS F155 Business Math
- DEVM F105 Intermediate Algebra
- ECE F117 Math Skills for Early Childhood Educators
- HLTH F116 Mathematics in Health Care
- HUMS F117 Math Skills for Human Services
- TTCH F131 Mathematics for the Trades
- Other program-approved discipline-based computation course or discipline-based course with embedded computation content

**Human Relations**

Select one from the following:

- ANTH/SOC F100X Individual, Society and Culture
- ABUS F154 Human Relations
- ANL F287 Teaching Methods for Alaska Native Languages
- ECE F104X Child Development I: Prenatal, Infants and Toddlers
- ECE F107 Child Development II: The Preschool and Primary Years
- ED/PSY F245 Child Development
- HLTH F106 Human Behavior in Health Care
- HUMS F120 Cultural Diversity in Human Services
- RHS F110 and RHS F115 Cross-Cultural Bridging Skills and Issues of Personal Development
- Other program-approved discipline-based human relations course or discipline-based course with embedded human relations content

**Major Specialty**

At least 30 hours of major specialty courses

**Electives to total**

60

---

1 ENGL F212 does not fulfill the second half of the written communication requirement for the bachelor's degree.

### Associate of Science Requirements

The Associate of Science degree represents the completion of a broad-based course of study with an emphasis in the sciences. This degree may serve as a steppingstone to a science-related baccalaureate program. You may earn only one A.S. degree.

### REQUIREMENTS

Minimum Requirements for Degree: 60 credits

#### Communication

9

Complete the following:

- ENGL F111X Introduction to Academic Writing
- ENGL F211X Academic Writing about Literature
  or ENGL F213X Academic Writing about the Social and Natural Sciences
- COMM F121X Introduction to Interpersonal Communication
  or COMM F131X Fundamentals of Oral Communication: Group Context
  or COMM F141X Fundamentals of Oral Communication: Public Context

#### Library and Information Research

0-1

Complete one of the following prior to junior standing:

- LS F101X Library Information and Research
  Or successful completion of library skills competency exam (0)

#### Arts

3

Select one of the following:

- ANS/FLPA F161X Introduction to Alaska Native Performance
- ANS F202X Aesthetic Appreciation of Alaska Native Performance
- ANS/MUS/NORS F223X Alaska Native Music
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART F200X</td>
<td>Explorations in Art</td>
</tr>
<tr>
<td>ART F261X</td>
<td>History of World Art</td>
</tr>
<tr>
<td>ART F262X</td>
<td>History of World Art</td>
</tr>
<tr>
<td>ENGL/FLPA/JRN F217X</td>
<td>Introduction to the Study of Film</td>
</tr>
<tr>
<td>FLPA/JRN F105X</td>
<td>History of the Cinema</td>
</tr>
<tr>
<td>FLPA F200X</td>
<td>Performance, Production and the Audience</td>
</tr>
<tr>
<td>FLPA F215X</td>
<td>Dramatic Literature and History</td>
</tr>
<tr>
<td>HUM F201X</td>
<td>Unity in the Arts</td>
</tr>
<tr>
<td>MUS F103X</td>
<td>Music Fundamentals</td>
</tr>
<tr>
<td>MUS F125X</td>
<td>Enjoying Jazz</td>
</tr>
<tr>
<td>MUS F200X</td>
<td>Exploration in Music</td>
</tr>
<tr>
<td><strong>Humanities</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3-5</td>
</tr>
</tbody>
</table>

Select one from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANL F141X</td>
<td>Beginning Athabascan-Koyukon or Gwich'in</td>
</tr>
<tr>
<td>ANL F142X</td>
<td>Beginning Athabascan</td>
</tr>
<tr>
<td>ANL F251X</td>
<td>Introduction to Athabascan Linguistics</td>
</tr>
<tr>
<td>ANL F255X</td>
<td>Introduction to Alaska Native Languages</td>
</tr>
<tr>
<td>ASLG F101X</td>
<td>American Sign Language I</td>
</tr>
<tr>
<td>ASLG F202X</td>
<td>American Sign Language II</td>
</tr>
<tr>
<td>ENGL/FL F200X</td>
<td>World Literature</td>
</tr>
<tr>
<td>ENGL F270X</td>
<td>Introduction to Creative Writing</td>
</tr>
<tr>
<td>ESK F101X</td>
<td>Elementary Central Yup'ik</td>
</tr>
<tr>
<td>ESK F102X</td>
<td>Elementary Central Yup'ik</td>
</tr>
<tr>
<td>ESK F111X</td>
<td>Elementary Inupiaq</td>
</tr>
<tr>
<td>ESK F112X</td>
<td>Elementary Inupiaq</td>
</tr>
<tr>
<td>FREN F101X</td>
<td>Elementary French I</td>
</tr>
<tr>
<td>FREN F102X</td>
<td>Elementary French II</td>
</tr>
<tr>
<td>GER F101X</td>
<td>Elementary German I</td>
</tr>
<tr>
<td>GER F102X</td>
<td>Elementary German II</td>
</tr>
<tr>
<td>JPN F101X</td>
<td>Elementary Japanese I</td>
</tr>
<tr>
<td>JPN F102X</td>
<td>Elementary Japanese II</td>
</tr>
<tr>
<td>JRN F101X</td>
<td>Media and Culture</td>
</tr>
<tr>
<td>JRN F102X</td>
<td>Introduction to Broadcasting</td>
</tr>
<tr>
<td>LAT F101X</td>
<td>Beginning Latin I</td>
</tr>
<tr>
<td>LAT F102X</td>
<td>Beginning Latin II</td>
</tr>
<tr>
<td>LING F101X</td>
<td>Nature of Language</td>
</tr>
<tr>
<td>LING F216X</td>
<td>Languages of the World</td>
</tr>
<tr>
<td>PHIL F102X</td>
<td>Introduction to Philosophy</td>
</tr>
<tr>
<td>PHIL F104X</td>
<td>Logic and Reasoning</td>
</tr>
<tr>
<td>RELG F221X</td>
<td>Religions of the World</td>
</tr>
<tr>
<td>RUSS F101X</td>
<td>Elementary Russian I</td>
</tr>
<tr>
<td>RUSS F102X</td>
<td>Elementary Russian II</td>
</tr>
<tr>
<td>SPAN F101X</td>
<td>Elementary Spanish I</td>
</tr>
<tr>
<td>SPAN F102X</td>
<td>Elementary Spanish II</td>
</tr>
</tbody>
</table>

| Social Sciences | 6 |

Select two courses from the following in two different disciplines:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT F261X</td>
<td>Principles of Financial Accounting</td>
</tr>
<tr>
<td>ANS F242X</td>
<td>Native Cultures of Alaska</td>
</tr>
<tr>
<td>ANTH/SOC F100X</td>
<td>Individual, Society and Culture</td>
</tr>
<tr>
<td>ANTH F101X</td>
<td>Introduction to Anthropology</td>
</tr>
<tr>
<td>ANTH F111X</td>
<td>Ancient Civilizations</td>
</tr>
<tr>
<td>ANTH F211X</td>
<td>Fundamentals of Archaeology</td>
</tr>
</tbody>
</table>
## Summary of Certificate and Associate Degree Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA F151X</td>
<td>Introduction to Business</td>
</tr>
<tr>
<td>COMM F180X</td>
<td>Introduction to Human Communication</td>
</tr>
<tr>
<td>ECE F104X</td>
<td>Child Development I: Prenatal, Infants and Toddlers</td>
</tr>
<tr>
<td>ECON F100X</td>
<td>Political Economy</td>
</tr>
<tr>
<td>or PS F100X</td>
<td>Political Economy</td>
</tr>
<tr>
<td>ECON F201X</td>
<td>Principles of Economics I: Microeconomics</td>
</tr>
<tr>
<td>ECON F202X</td>
<td>Principles of Economics II: Macroeconomics</td>
</tr>
<tr>
<td>ECON F235X</td>
<td>Introduction to Natural Resource Economics</td>
</tr>
<tr>
<td>GEOG F101X</td>
<td>Expedition Earth: Introduction to Geography</td>
</tr>
<tr>
<td>HIST F100X</td>
<td>Modern World History</td>
</tr>
<tr>
<td>HIST F102X</td>
<td>Western Civilization Since 1500</td>
</tr>
<tr>
<td>HIST F122X</td>
<td>East Asian Civilization</td>
</tr>
<tr>
<td>HIST F132X</td>
<td>History of the U.S.</td>
</tr>
<tr>
<td>JUST F110X</td>
<td>Introduction to Justice</td>
</tr>
<tr>
<td>PS F100X</td>
<td>Political Economy</td>
</tr>
<tr>
<td>PS F201X</td>
<td>Comparative Politics</td>
</tr>
<tr>
<td>PSY F101X</td>
<td>Introduction to Psychology</td>
</tr>
<tr>
<td>RD F200X</td>
<td>Rural Development in the North</td>
</tr>
<tr>
<td>SWK F103X</td>
<td>Introduction to Social Work</td>
</tr>
<tr>
<td>SOC F100X</td>
<td>Individual, Society and Culture</td>
</tr>
<tr>
<td>SOC F201X</td>
<td>Social Problems</td>
</tr>
<tr>
<td>WGS F201X</td>
<td>Introduction to Women's and Gender Studies</td>
</tr>
</tbody>
</table>

### Additional Arts/Humanities/Social Science

3-5

Select one additional course from the arts, humanities or social science courses listed above.

### Mathematics

3-4

Select one from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F113X</td>
<td>Concepts and Contemporary Applications of Mathematics</td>
</tr>
<tr>
<td>MATH F122X</td>
<td>Precalculus for Business and Economics</td>
</tr>
<tr>
<td>MATH F151X</td>
<td>College Algebra for Calculus</td>
</tr>
<tr>
<td>MATH F152X</td>
<td>Trigonometry</td>
</tr>
<tr>
<td>MATH F156X</td>
<td>Precalculus</td>
</tr>
<tr>
<td>MATH F230X</td>
<td>Calculus Essentials with Applications</td>
</tr>
<tr>
<td>MATH F251X</td>
<td>Calculus I</td>
</tr>
<tr>
<td>MATH F252X</td>
<td>Calculus II</td>
</tr>
<tr>
<td>MATH F253X</td>
<td>Calculus III</td>
</tr>
<tr>
<td>STAT F200X</td>
<td>Elementary Probability and Statistics</td>
</tr>
</tbody>
</table>

### Natural Sciences

16

Select four from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATM F101X</td>
<td>Weather and Climate of Alaska</td>
</tr>
<tr>
<td>BIOL F100X</td>
<td>Human Biology</td>
</tr>
<tr>
<td>BIOL F103X</td>
<td>Biology and Society</td>
</tr>
<tr>
<td>BIOL F104X</td>
<td>Natural History of Alaska</td>
</tr>
<tr>
<td>BIOL F115X</td>
<td>Fundamentals of Biology I</td>
</tr>
<tr>
<td>BIOL F116X</td>
<td>Fundamentals of Biology II</td>
</tr>
<tr>
<td>BIOL F120X</td>
<td>Introduction to Human Nutrition</td>
</tr>
<tr>
<td>BIOL F213X</td>
<td>Human Anatomy and Physiology I</td>
</tr>
<tr>
<td>BIOL F214X</td>
<td>Human Anatomy and Physiology II</td>
</tr>
<tr>
<td>CHEM F100X</td>
<td>Chemistry in Complex Systems</td>
</tr>
<tr>
<td>CHEM F103X</td>
<td>Basic General Chemistry</td>
</tr>
<tr>
<td>CHEM F104X</td>
<td>Survey of Organic Chemistry and Biochemistry</td>
</tr>
<tr>
<td>CHEM F105X</td>
<td>General Chemistry I</td>
</tr>
<tr>
<td>CHEM F106X</td>
<td>General Chemistry II</td>
</tr>
</tbody>
</table>
Certificate and Associate Degree Programs

Accounting Technician

College of Rural and Community Development
907-474-7143
Community and Technical College
907-455-2800

Certificate

The accounting technician program prepares students for entry-level accounting positions in payables and/or receivables, bookkeeping and payroll accounting. This program covers financial decision-making tools for the small-business operator as well.

Courses in this program address the concerns of modern businesspeople and provide training to enhance business success. The accounting technician certificate represents the first year of training toward the applied accounting A.A.S. degree. Students admitted into the accounting B.B.A. degree program may apply their earned certificate credits toward the State of Alaska’s 150-hour requirement for a certified public accountant license.

Students entering the certificate program are expected to have basic computer skills equivalent to CIOS F150. Classes are scheduled in the evening to accommodate working students. Microcomputer and office technology labs are available for hands-on training.

Certificate, Accounting Technician

Minimum Requirements for Certificate: 30 credits

General University Requirements
Complete the general university requirements. (p. 87)

Certificate Requirements

Communication
Select one from the following: 3
- ABUS F170 Business English
- ABUS F271 Business Communications
- ENGL F111X Introduction to Academic Writing
- ENGL F212 Business, Grant and Report Writing

Computation
- ABUS F155 Business Math (or MATH at the 100 level or above) 3

Human Relations
- ABUS F154 Human Relations (or other UAF certificate-approved human relations course) 3

Program Requirements
- ABUS F101 Principles of Accounting I 3
- ABUS F141 Payroll Accounting 3
- ABUS F201 Principles of Accounting II 3
- or ABUS F235 Fund Accounting for Nonprofits
- ABUS F203 Accounting Capstone 3
A.A.S. Degree, Minor

Minimum Requirements for A.A.S. Degree: 60 credits

The applied accounting program prepares students for entry- and midlevel accounting positions in payables and/or receivables, bookkeeping and payroll accounting. This program covers financial decision-making tools for the small-business operator as well.

Courses in the applied accounting program address the concerns of modern businesspeople and provide training to enhance business success. The applied accounting program prepares a student to enter the School of Management’s B.B.A. program in accounting to earn the 150 credits required to take the Uniform CPA Examination in Alaska.

Students entering the A.A.S. program are expected to have basic computer skills equivalent to CIOS F150. Classes are scheduled during the day, in the evening and online to accommodate working students. Microcomputer and office technology labs are available for hands-on training.

Degree

- A.A.S., Accounting, Applied (p. 98)

Minor

- Minor, Accounting, Applied (p. 98)

A.A.S., Accounting, Applied

Minimum Requirements for A.A.S. Degree: 60 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 87)

A.A.S. Degree Requirements
Complete the A.A.S. degree requirements. (p. 93)  

Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABUS F101</td>
<td>Principles of Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>ABUS F141</td>
<td>Payroll Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ABUS F175</td>
<td>Customer Service</td>
<td>3</td>
</tr>
<tr>
<td>or ABUS F179</td>
<td>Fundamentals of Supervision</td>
<td></td>
</tr>
<tr>
<td>ABUS F201</td>
<td>Principles of Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>ABUS F202</td>
<td>Principles of Accounting III</td>
<td>3</td>
</tr>
<tr>
<td>ABUS F203</td>
<td>Accounting Capstone</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits 45

1 As part of the A.A.S. degree requirements, it is recommended, though not required, that students complete ABUS F154 for the human relations requirement and ABUS F155 for the computation requirement.

Minor, Accounting, Applied

Minimum Requirements for Minor: 18 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABUS F101</td>
<td>Principles of Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>ABUS F201</td>
<td>Principles of Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>or ABUS F235</td>
<td>Fund Accounting for Nonprofits</td>
<td>3</td>
</tr>
<tr>
<td>ABUS F210</td>
<td>Income Tax</td>
<td>3</td>
</tr>
<tr>
<td>ABUS F220</td>
<td>Microcomputer Accounting: QuickBooks</td>
<td>3</td>
</tr>
<tr>
<td>or ABUS F221</td>
<td>Microcomputer Accounting</td>
<td></td>
</tr>
<tr>
<td>BA F151X</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>CIOS F135</td>
<td>Microcomputer Spreadsheets</td>
<td>3</td>
</tr>
<tr>
<td>or CIOS F240</td>
<td>Microcomputer Databases</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits 18

Apprenticeship Technologies

Minimum Requirements for Degree: 60 credits

The A.A.S. degree in apprenticeship technologies provides career and technical training and supporting course work to prepare students for the rapidly changing global workplace. The program also helps Alaska industries by training workers who can meet increasing certification requirements which reflect complex business and industrial standards.

The apprenticeship technologies program is a 60-credit A.A.S. degree delivered collaboratively through UAA, UAF and UAS. The practical integration of general course work and training for vocational-technical trades specifically reflects the commitment of the university to high-quality instruction and public service. Individuals earning this degree must complete a formal apprenticeship program and hold journey-level status in trades or occupations (including occupational license or
occupational certificate) recognized by the U.S. Department of Labor’s Training and Employment Administration.

Students declaring a major in apprenticeship technologies must present documentation of acceptance into an apprenticeship program meeting the requirements of the U.S. Department of Labor, Training and Employment Administration. The appropriate College of Rural and Community Development campus will review the documentation and may recommend up to 38 credits of course work following completion of all courses listed below. Students are encouraged to begin the required courses while completing the apprenticeship program to expand the quality and breadth of the program. Students who complete this program may be eligible to enroll in the B.S. technology degree program at UAA or the B.A.A.S. degree program at UAF.

**Degrees**

- A.A.S., Apprenticeship Technologies (p. 99)

**A.A.S., Apprenticeship Technologies**

Minimum Requirements for Degree: 60 credits

**General University Requirements**

Complete the general university requirements. (p. 87)

**A.A.S. Degree Requirements**

Complete the A.A.S. degree requirements. (p. 93)

- COMM F131X Fundamentals of Oral Communication: Group Context 3
- or COMM F141X Fundamentals of Oral Communication: Public Context
- ENGL F111X Introduction to Academic Writing 3
- ENGL F212 Business, Grant and Report Writing 3
- Select one from the following: 3
  - DEVM F105 Intermediate Algebra
  - STAT F200X Elementary Probability and Statistics
  - Any MATH course at the 100 level or higher
- Select one from the following: 3
  - ABUS F154 Human Relations
  - ANTH F100X Individual, Society and Culture
  - SOC F100X Individual, Society and Culture
- Safety, computer, business, technical or other advisor-approved courses linked to an identified education or career pathway 6
- Approved apprenticeship program transfer of credit maximum 38
- Electives to complete 60 credits as needed

**Total Credits** 59

**Associate of Arts**

College of Rural and Community Development
907-474-7143
www.uaf.edu/iac/ (http://www.uaf.edu/iac)

Minimum Requirements for Degree: 60 credits

The Associate of Arts degree is offered at all UAF campuses. The degree offers a rigorous program of study for the serious student who eventually intends to transfer to a bachelor’s degree program. The degree may serve as a starting point for a career or as a steppingstone to a bachelor’s program. You may earn only one A.A. degree.

Minimum Requirements for Degree: 60 credits

**General University Requirements**

Complete the general university requirements. (p. 87)

**A.A. Degree Requirements**

Complete the A.A. degree requirements. (p. 90)

**Automotive Technology**

College of Rural and Community Development
Community and Technical College
907-455-2932
www.ctc.uaf.edu/programs/Automotive/ (http://www.ctc.uaf.edu/programs/Automotive)

Minimum Requirements for Certificate: 34 credits

The automotive technology program gives students the education and training to become an entry-level automotive technician. The automotive service industry is constantly changing as cars become more complicated. Highly trained technicians are needed to understand, diagnose and repair modern automobiles.
The program emphasizes hands-on training and in-class experience as students perform preventive maintenance inspections, determine causes of equipment problems and make necessary repairs and adjustments to the complex systems that make up today’s cars. The certificate training qualifies students for entry-level positions within the automotive service and repair industry in the areas of electricity/electronics, brakes, suspension and alignment, and engine performance.

Successful graduates from the automotive technology program go on to careers in dealerships, independent shops, service/IM stations, fleet repair facilities and aviation ground support. Salaries vary depending on job placement and the student’s skill level.

**Certificate**
- Automotive Technology (p. 100)

**Certificate, Automotive Technology**
Minimum Requirements for Certificate: 34 credits

Students must earn a C grade or better in each course.

**General University Requirements**
Complete the general university requirements. (p. 87)

**Certificate Requirements**
Complete the certificate requirements. (p. 89)  

<table>
<thead>
<tr>
<th>Program Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTO F102 Introduction to Automotive Technology</td>
<td>3</td>
</tr>
<tr>
<td>AUTO F110 Basic Electrical Systems</td>
<td>3</td>
</tr>
<tr>
<td>AUTO F122 Engine Theory and Diagnosis</td>
<td>3</td>
</tr>
<tr>
<td>AUTO F131 Automotive Electrical II</td>
<td>3</td>
</tr>
<tr>
<td>AUTO F150 Brake Systems</td>
<td>4</td>
</tr>
<tr>
<td>AUTO F162 Suspension Alignment</td>
<td>4</td>
</tr>
<tr>
<td>AUTO F190 Automotive Practicum I</td>
<td>4</td>
</tr>
<tr>
<td>AUTO F202 Auto Fuel and Emissions Systems</td>
<td>4</td>
</tr>
<tr>
<td>AUTO F222 Automotive Engine Performance</td>
<td>3</td>
</tr>
<tr>
<td>AUTO F227 Automotive Electrical III</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>34</strong></td>
</tr>
</tbody>
</table>

1  See the certificate requirements (p. 89). As part of the certificate requirements, the communication, computation and human relations content are embedded in the major required courses for this program.

**Aviation Maintenance**
Community and Technical College  
907-455-2800  
www.ctc.uaf.edu/programs/amt/ (http://www.ctc.uaf.edu/programs/amt)

**Certificate; A.A.S. Degree**
Minimum Requirements for Certificate: 31-49 credits; for Degree: 64 credits

Aviation maintenance offers an A.A.S. degree and certificates in three areas: airframe, powerplant, or airframe and powerplant.

Students who receive a certificate in airframe and powerplant may elect to complete the A.A.S. degree in aviation maintenance to enhance their employability.

Students in the airframe and powerplant certificate program may complete requirements for the Federal Aviation Administration mechanic’s certificate with both airframe and powerplant ratings in as little as one year. The aviation maintenance program covers many subject areas, but it places special emphasis on those skills most sought after in the Alaska job market. Through classroom and hands-on laboratory instruction, this intensive curriculum prepares students for entry into the aviation field. Graduates who pass the FAA examinations for the airframe and powerplant ratings are qualified for entry-level positions in the maintenance, repair, overhaul and modification of aircraft.

Students interested in qualifying for an FAA airframe mechanic's certificate may choose to earn only the airframe certificate, and those who wish to qualify for an FAA powerplant mechanic's certificate may choose to earn only the powerplant certificate.

Admission to the airframe and powerplant programs is at the discretion of the program faculty and requires an interview with the faculty advisor. The program normally starts around the beginning of September of each year. Applicants may start at other times if they meet experience and educational qualifications that meet departmental approval.

**Degree**
- A.A.S., Aviation Maintenance (p. 100)

**Certificates**
- Airframe and Powerplant (p. 101)
- Airframe (p. 100)
- Powerplant (p. 101)

**A.A.S., Aviation Maintenance**
Minimum Requirements for Degree: 64 credits

Students must earn a C- grade or better in each course.

**General University Requirements**
Complete the general university requirements. (p. 87)

**A.A.S. Degree Requirements**
Complete the A.A.S. degree requirements. (p. 93)

**Airframe and Powerplant Certificate Requirements**
Complete the Airframe and Powerplant certificate requirements. (p. 101)

| Total Credits | 49 |

**Certificate, Airframe**
Minimum Requirements for Certificate: 31 credits

**General University Requirements**
Complete the general university requirements. (p. 87)

**Certificate Requirements**
Complete the certificate requirements. (p. 89)  

<table>
<thead>
<tr>
<th>General Requirements</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFPM F145 Basic Mathematics</td>
<td>1</td>
</tr>
</tbody>
</table>

1  See the certificate requirements (p. 89). As part of the certificate requirements, the communication, computation and human relations content are embedded in the major required courses for this program.
AFPM F146  Basic Electricity  2
AFPM F147  Physics for Mechanics  0.5
AFPM F148  Aircraft Drawing  1
AFPM F149  Fluid Lines and Fittings  0.5
AFPM F150  Materials and Processes  2
AFPM F151  Cleaning and Corrosion Control  1
AFPM F152  Federal Aviation Regulations  1
AFPM F153  Weight and Balance  1
AFPM F154  Ground Operations and Servicing  0.5

**Airframe Structures Requirements**
AFPM F261  NonMetallic Structures  1
AFPM F262  Aircraft Coverings  1
AFPM F263  Aircraft Finishes  0.5
AFPM F264  Sheet Metal Structures  3
AFPM F265  Aircraft Welding  1.5
AFPM F266  Assembly and Rigging  1.5
AFPM F267  Airframe Inspections  0.5
AFPM F270  Airframe Testing  0.5

**Airframe Systems and Components Requirements**
AFPM F230  Aircraft Electrical Systems  2.5
AFPM F233  Transport Category Aircraft  1
AFPM F254  Ice and Rain Control Systems  0.5
AFPM F256  Communications and Navigation Systems  0.5
AFPM F258  Cabin Atmosphere Control Systems  1
AFPM F259  Hydraulic and Pneumatic Systems  1.5
AFPM F260  Aircraft Landing Gear Systems  1.5

**Combined Systems and Components Requirements**
AFPM F251  Fuel Systems  1.5
AFPM F255  Fire Protection Systems  0.5
AFPM F257  Instrument Systems  0.5

Total Credits  31

1. As part of the certificate requirements, the communication, computation and human relations content is embedded in the major required courses for this program.

## Certificate, Airframe and Powerplant

Minimum Requirements for Certificate: 49 credits

**General University Requirements**
Complete the general university requirements. (p. 87)

**Certificate Requirements**
Complete the certificate requirements. (p. 89)

**General Requirements**
AFPM F145  Basic Mathematics  1
AFPM F146  Basic Electricity  2
AFPM F147  Physics for Mechanics  0.5
AFPM F148  Aircraft Drawing  1
AFPM F149  Fluid Lines and Fittings  0.5
AFPM F150  Materials and Processes  2
AFPM F151  Cleaning and Corrosion Control  1
AFPM F152  Federal Aviation Regulations  1

AFPM F153  Weight and Balance  1
AFPM F154  Ground Operations and Servicing  0.5

**Airframe Structures Requirements**
AFPM F261  NonMetallic Structures  1
AFPM F262  Aircraft Coverings  1
AFPM F263  Aircraft Finishes  0.5
AFPM F264  Sheet Metal Structures  3
AFPM F265  Aircraft Welding  1.5
AFPM F266  Assembly and Rigging  1.5
AFPM F267  Airframe Inspections  0.5
AFPM F270  Airframe Testing  0.5

**Airframe Systems and Components Requirements**
AFPM F230  Aircraft Electrical Systems  2.5
AFPM F233  Transport Category Aircraft  1
AFPM F254  Ice and Rain Control Systems  0.5
AFPM F256  Communications and Navigation Systems  0.5
AFPM F258  Cabin Atmosphere Control Systems  1
AFPM F259  Hydraulic and Pneumatic Systems  1.5
AFPM F260  Aircraft Landing Gear Systems  1.5

**Powerplant Systems and Components Requirements**
AFPM F231  Powerplant Electrical Systems  1.5
AFPM F244  Lubricating Systems  1.5
AFPM F245  Ignition Systems  2
AFPM F246  Fuel Metering Systems  2
AFPM F248  Induction Systems  0.5
AFPM F249  Powerplant Cooling Systems  0.5
AFPM F250  Powerplant Exhaust Systems  0.5
AFPM F252  Propellers  2

**Combined Systems and Components Requirements**
AFPM F251  Fuel Systems  1.5
AFPM F255  Fire Protection Systems  0.5
AFPM F257  Instrument Systems  0.5

Total Credits  49

1. As part of the certificate requirements, the communication, computation and human relations content is embedded in the major required courses for this program.

## Certificate, Powerplant

Minimum Requirements for Certificate: 31 credits

**General University Requirements**
Complete the general university requirements. (p. 87)

**Certificate Requirements**
Complete the certificate requirements. (p. 89)

**General Requirements**
AFPM F145  Basic Mathematics  1
AFPM F146  Basic Electricity 2
AFPM F147  Physics for Mechanics 0.5
AFPM F148  Aircraft Drawing 1
AFPM F149  Fluid Lines and Fittings 0.5
AFPM F150  Materials and Processes 2
AFPM F151  Cleaning and Corrosion Control 1
AFPM F152  Federal Aviation Regulations 1
AFPM F153  Weight and Balance 1
AFPM F154  Ground Operations and Servicing 0.5

**Powerplant Theory and Maintenance Requirements**
AFPM F235  Aircraft Reciprocating Engines 4.5
AFPM F240  Turbine Engines 2
AFPM F271  Powerplant Inspections 0.5
AFPM F272  Powerplant Testing 0.5

**Powerplant and Systems Components Requirements**
AFPM F231  Powerplant Electrical Systems 1.5
AFPM F244  Lubricating Systems 1.5
AFPM F245  Ignition Systems 2
AFPM F246  Fuel Metering Systems 2
AFPM F248  Induction Systems 0.5
AFPM F249  Powerplant Cooling Systems 0.5
AFPM F250  Powerplant Exhaust Systems 0.5
AFPM F252  Propellers 2

**Combined Systems and Components Requirements**
AFPM F251  Fuel Systems 1.5
AFPM F255  Fire Protection Systems 0.5
AFPM F257  Instrument Systems 0.5

Total Credits 31

1 As part of the certificate requirements, the communication, computation and human relations content is embedded in the major required courses for this program.

**Certificate**

- Business Management, Applied (p. 102)

With concentrations in:
- Computer Applications (p. 103)
- Finance (p. 103)
- General Business (p. 103)
- Human Resources (p. 103)
- Marketing (p. 103)
- Office Administration (p. 103)
- Public Management (p. 103)
- Recreational Guiding (p. 103)
- Retail Management (p. 103)
- Tourism (p. 104)

**Certificate, Business Management, Applied**


Minimum Requirements for Certificate: 30-36 credits

**General University Requirements**

Complete the general university requirements. (p. 87)

**Certificate Requirements**

**Communication**

Select one from the following: 3

- ABUS F170  Business English
- ABUS F271  Business Communications
- ENGL F111X  Introduction to Academic Writing
- ENGL F212  Business, Grant and Report Writing

**Computation**

- ABUS F155  Business Math (or any MATH course at the F100 level or above) 3

**A.A.S.-Approved Human Relations Course**

- ABUS F154  Human Relations (recommended) 3

**General Business**

- ABUS F101  Principles of Accounting I 3
- ABUS F161  Personal and Business Finance 3
- BA F151X  Introduction to Business 3

**Concentrations**

Planning and preparation are keys to success in business. The applied business management certificate provides students with the basic principles to run a business effectively. Graduates of the program will have the foundation of contemporary management skills to successfully lead private, public and nonprofit organizations through ever-changing social and economic conditions.

The program covers basic knowledge and skills, emerging technologies, advanced procedures, and interpersonal skills. Course work includes accounting, management, human relations, math, communications, customer service, computers, law, finance and logic. The curriculum also serves as the first year of training toward the A.A.S. degree in applied business.

Potential careers for graduates include entrepreneurship and entry-level positions in business management, tourism, human resources, public administration and office administration.

As part of the certificate requirements, the communication, computation and human relations content is embedded in the major required courses for this program.

**Note:** This is a one-year program, usually starting at the beginning of September. Entry at other times is allowed only with departmental approval. A personal background check and drug test will be required prior to acceptance into the airframe and powerplant, airframe or powerplant certificate programs.

**Business Management, Applied**

College of Rural and Community Development
907-474-7143
Community and Technical College
907-455-2800
www.ctc.uaf.edu/programs/abus/ (http://www.ctc.uaf.edu/programs/abus)

**Certificate**

Minimum Requirements for Certificate: 30-36 credits
Select one from the following concentrations: 12-18

- Computer Applications
- Finance
- General Business
- Human Resources
- Marketing
- Office Administration
- Public Management
- Recreational Guiding
- Retail Management
- Tourism

**Total Credits**: 30-36

### Concentrations

#### COMPUTER APPLICATIONS

**C IOS F130** | Microcomputer Word Processing | 3
---|---|---
**C IOS F135** | Microcomputer Spreadsheets | 3
---|---|---
**C IOS F240** | Microcomputer Databases | 3
---|---|---
**C IOS F146** | Using Internet Tools and Technologies | 3
---|---|---

or **CITS F220** | Implementing Internet Tools and Technologies | 3

**Total Credits**: 12

#### FINANCE

**ABUS F160** | Principles of Banking | 3
---|---|---
**ABUS F210** | Income Tax | 3
---|---|---
**ABUS F233** | Financial Management | 3
---|---|---
**ABUS F234** | Introduction to Investing | 3

**Total Credits**: 12

#### GENERAL BUSINESS

Select one from the following: 3

- **ABUS F201** | Principles of Accounting II | 3
- **ABUS F210** | Income Tax | 3
- **ABUS F220** | Microcomputer Accounting: QuickBooks | 3
- **ABUS F221** | Microcomputer Accounting | 3
- **ABUS F235** | Fund Accounting for Nonprofits | 3
- **ABUS F179** | Fundamentals of Supervision | 3
- or **BA F307** | Introductory Human Resources Management | 3

Select one from the following: 3

- **ABUS F232** | Contemporary Management Issues | 3
- **ECON F201X** | Principles of Economics I: Microeconomics | 3
- **ECON F202X** | Principles of Economics II: Macroeconomics | 3

Select one from the following: 3

- **ABUS F260** | Marketing Practices | 3
- **ABUS F263** | Public Relations | 3
- **BA F343** | Principles of Marketing | 3

**Total Credits**: 12

#### HUMAN RESOURCES

**ABUS F141** | Payroll Accounting | 3
---|---|---

**ABUS F179** | Fundamentals of Supervision | 3
- or **BA F307** | Introductory Human Resources Management | 3
- **ABUS F242** | Employment Law | 3
- or **BA F317** | Employment Law | 3

**Total Credits**: 12

#### MARKETING

**ABUS F175** | Customer Service | 3
---|---|---
**ABUS F178** | Professionalism | 3

Select one from the following: 3

- **ABUS F260** | Marketing Practices | 3
- **ABUS F263** | Public Relations | 3
- **BA F343** | Principles of Marketing | 3
- **C IOS F2xx**-level graphics or web design elective | 3

**Total Credits**: 12

#### OFFICE ADMINISTRATION

**ABUS F170** | Business English | 3
---|---|---
**ABUS F182** | Office Procedures | 3

Select six credits from the following: 6

- **ABUS F183** | Professional Skills for Job Hunt | 3
- **ABUS F199** | Practicum in Applied Business | 3
- **C IOS F130** | Microcomputer Word Processing | 3
- **C IOS F135** | Microcomputer Spreadsheets | 3
- **C IOS F150** | Computer Business Applications | 3

**Total Credits**: 12

#### PUBLIC MANAGEMENT

**ABUS F235** | Fund Accounting for Nonprofits | 3
---|---|---
**PS F100X** | Political Economy | 3
- **PS F101** | Introduction to American Government and Politics | 3
- or **ABUS F232** | Contemporary Management Issues | 3
- **PS F212** | Introduction to Public Administration | 3

**Total Credits**: 12

#### RECREATIONAL GUIDING

**ABUS F175** | Customer Service | 3
---|---|---
**NRM F161** | Wilderness Leadership Education | 3

Select one from the following: 3

- **EMS F152** | Emergency Trauma Training First Responder | 3
- More advanced Emergency First Responder Training | 3
- **RECR electives** | 3

**Total Credits**: 12

#### RETAIL MANAGEMENT

**ABUS F179** | Fundamentals of Supervision | 3
- or **BA A231** | Fundamentals of Supervision | 3
- **ABUS F231** | Introduction to Personnel | 3
- **ABUS F260** | Marketing Practices | 3
- or **BA A260** | Marketing Practices | 3
BA A266 Retailing Management 3
CIOS F150 Computer Business Applications 1 3
or CIOS A103 Introduction to Personal Computers
Select one from the following: 3
COMM F121X Introduction to Interpersonal Communication
COMM F131X Fundamentals of Oral Communication: Group Context
COMM F141X Fundamentals of Oral Communication: Public Context
COMM A111 Fundamentals of Oral Communication
CIOS A261A Interpersonal Skills in Organization 1
COMM A237 Interpersonal Communication 1
COMM F180X Introduction to Human Communication

Total Credits 18

1 Courses offered via distance delivery from UAA

TOURISM
ABUS F158 Introduction to Tourism 3
ABUS F175 Customer Service 3
ABUS F199 Practicum in Applied Business 3
Select from the following: 3
ABUS F256 Small Hotel, Bed and Breakfast, and Lodge Operations
ABUS F267 Transportation and Logistics Management
ABUS F269 Food and Beverage Management

Total Credits 12

Note: Other courses specific to individual education and career goals may be substituted with program approval.

Business, Applied

College of Rural and Community Development
907-474-7143
Community and Technical College
907-455-2800
www.ctc.uaf.edu/programs/abus/ (http://www.ctc.uaf.edu/programs/abus)

A.A.S. Degree

Minimum Requirements for Degree: 60 credits

Planning and preparation are the keys to success in business. The A.A.S. degree in applied business skills and training to run a business effectively. The program covers basic knowledge and skills, emerging technologies, advanced procedures and interpersonal skills. Courses teach the principles of accounting, management, human relations, math, communications, customer service, computers, law, finance and logic. Instructors provide a practical understanding of the marketplace, not just a textbook view of business.

Potential careers for graduates include entrepreneurship and midlevel positions in business management, tourism, human resources and public administration.

Degree

• A.A.S., Business, Applied (p. 104)

With concentrations in:

• Administrative Management (p. 105)
• Applied Management (p. 105)
• Computer Applications (p. 105)
• Entrepreneurship (p. 105)
• Finance (p. 105)
• Health Care Management (p. 105)
• Human Resources (p. 105)
• Management (p. 106)
• Marketing (p. 106)
• Public Management (p. 106)
• Recreation and Guiding Management (p. 106)
• Tourism (p. 106)

Minors

• Minor, General Business (p. 106)
• Minor, Recreation and Guiding Management (p. 106)

A.A.S., Business, Applied


Minimum Requirements for Degree: 60 credits

Students must earn a C- grade or better in each course.

General University Requirements

Complete the general university requirements. (p. 87)

A.A.S. Degree Requirements

Complete the A.A.S. degree requirements. (p. 93) 1

General Business Requirements

ABUS F101 Principles of Accounting I 3
ABUS F161 Personal and Business Finance 3
ABUS F175 Customer Service 3
ABUS F179 Fundamentals of Supervision 3
or BA F307 Introductory Human Resources Management

Select one from the following: 3

ABUS F232 Contemporary Management Issues
ECON F201X Principles of Economics I: Microeconomics
ECON F202X Principles of Economics II: Macroeconomics

Select one from the following: 3

ABUS F241 Applied Business Law I
ABUS F242 Employment Law
BA F317 Employment Law

Select one from the following: 3

ABUS F260 Marketing Practices
ABUS F263 Public Relations

1 General Business Requirements:

ABUS F101 Principles of Accounting I 3
ABUS F161 Personal and Business Finance 3
ABUS F175 Customer Service 3
ABUS F179 Fundamentals of Supervision 3
or BA F307 Introductory Human Resources Management

Select one from the following: 3

ABUS F232 Contemporary Management Issues
ECON F201X Principles of Economics I: Microeconomics
ECON F202X Principles of Economics II: Macroeconomics

Select one from the following: 3

ABUS F241 Applied Business Law I
ABUS F242 Employment Law
BA F317 Employment Law

Select one from the following: 3

ABUS F260 Marketing Practices
ABUS F263 Public Relations
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BA F343</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>BA F151X</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
</tbody>
</table>

**Concentrations**

Select one from the following concentrations: 21 credits

1. **Administrative Management**
   - ABUS F102C Keyboarding: Document Formatting 1
   - ABUS F116 Using 10-Key Calculators 1
   - ABUS F134 Alphabetic Filing 1
   - ABUS F170 Business English 3
   - ABUS F182 Office Procedures 3
   - ABUS F264 Filing/Records Management 3
   - ABUS, CIOS or CITS electives appropriate to skill level 3
   - Select 6 credits from the following:
     - ABUS F183 Professional Skills for Job Hunt
     - ABUS F199 Practicum in Applied Business
     - CIOS F130 Microcomputer Word Processing
     - CIOS F135 Microcomputer Spreadsheets
     - CIOS F150 Computer Business Applications

   Total Credits: 21

2. **Applied Management**
   - A university-approved certificate
   - A professional, technical or vocational license or certification issued by government or industry and 21 department-approved electives

   Total Credits: 21

3. **Computer Applications**
   - CIOS F130 Microcomputer Word Processing 3
   - CIOS F135 Microcomputer Spreadsheets 3
   - CIOS F240 Microcomputer Databases 3
   - CIOS F146 Using Internet Tools and Technologies 3
     - or CITS F220 Implementing Internet Tools and Technologies
   - CIOS F233 Desktop Publishing 3

   or CIOS F255 Digital Graphics
   - ABUS, ACCT, BA, CITS or CIOS electives 6
   - Total Credits: 21

4. **Entrepreneurship**
   - Select one from the following: 3 credits
     - ABUS F201 Principles of Accounting II
     - ABUS F210 Income Tax
     - ABUS F220 Microcomputer Accounting: QuickBooks
     - ABUS F221 Microcomputer Accounting
     - ABUS F235 Fund Accounting for Nonprofits
     - ABUS F233 Financial Management
     - or ABUS F234 Introduction to Investing
     - ABUS F265 Seminar in Applied Marketing
     - ABUS F272 Small-Business Planning
     - ABUS F273 Managing a Small Business
     - ABUS F274 Business in the Digital World
     - ABUS, ACCT, BA, CITS or CIOS electives 3

   Total Credits: 21

5. **Finance**
   - ABUS F160 Principles of Banking 3
   - ABUS F201 Principles of Accounting II 3
   - ABUS F210 Income Tax 3
   - ABUS F220 Microcomputer Accounting: QuickBooks
     - or ABUS F221 Microcomputer Accounting
   - ABUS F233 Financial Management 3
   - ABUS F234 Introduction to Investing 3
   - ABUS F272 Small-Business Planning 3

   Total Credits: 21

6. **Health Care Management**
   - HLTH F100 Medical Terminology 3
   - HLTH F110 Professional Skills for the Workplace 2
   - HLTH F132 Administrative Procedures I 2
   - HLTH F208 Human Diseases 3
   - HLTH F234 Administrative Procedures II 4
   - HLTH F235 Medical Coding 4
   - HLTH F236 Outpatient Health Care Reimbursement 3

   Total Credits: 21

7. **Human Resources**
   - ABUS F141 Payroll Accounting 3
   - ABUS F178 Professionalism 3
   - ABUS F231 Introduction to Personnel
     - or BA F307 Introductory Human Resources Management
   - ABUS F242 Employment Law
     - or BA F317 Employment Law
   - CIOS F135 Microcomputer Spreadsheets 3
     - CIOS F233 Desktop Publishing 3

   Total Credits: 21

As part of the A.A.S. degree requirements, it is recommended that students complete ABUS F154 for the human relations requirement.
ABUS, ACCT, BA or CIOS electives

Total Credits

MANAGEMENT
ABUS, ACCT, BA, ECON, MATH or STAT or other department-approved electives

Recommended courses include:
- MATH F122X Precalculus for Business and Economics
- MATH F223X Calculus Essentials with Applications
- ECON F100X Principles of Economics I: Microeconomics
- ECON F201X Principles of Economics II: Macroeconomics
- ECON F207X Introductory Statistics for Economics and Business
- BA F254 Personal Finance
- STAT F200X Elementary Probability and Statistics
- ABUS F201 Principles of Accounting II
- ABUS F202 Principles of Accounting III

Total Credits

MARKETING
ABUS F178 Professionalism
- ABUS F265 Seminar in Applied Marketing
- ABUS F274 Business in the Digital World
- CIOS F233 Desktop Publishing
- CIOS F255 Digital Graphics
- CIOS or CITS F200 level or above Internet or web design elective
- ABUS, BA or CIOS electives

Total Credits

PUBLIC MANAGEMENT
ABUS F235 Fund Accounting for Nonprofits
- PS F100X Political Economy
- PS F101 Introduction to American Government and Politics
- PS F212 Introduction to Public Administration
- Select one from the following:
  - PS F403 Public Policy
  - ABUS F242 Employment Law
  - BA F317 Employment Law
- ABUS, ACCT, CIOS or PS electives

Total Credits

RECREATION AND GUIDING MANAGEMENT
ABUS F158 Introduction to Tourism
- NRM F101 Natural Resources Conservation and Policy
- NRM F161 Wilderness Leadership Education
- Select one of the following:

Total Credits

TOURISM
ABUS F158 Introduction to Tourism
- ABUS F199 Practicum in Applied Business
- ABUS F265 Seminar in Applied Marketing
- ABUS F273 Managing a Small Business
- Select 3 credits from the following electives:
  - ABUS F256 Small Hotel, Bed and Breakfast, and Lodge Operations
  - ABUS F267 Transportation and Logistics Management
  - ABUS F269 Food and Beverage Management
- Select one from the following elective options:
  - Option 1
    - ABUS, ACCT, BA, CAH or CIOS electives
  - Option 2
    - ABUS F299 Practicum in Applied Business (Study Abroad)
- Foreign language

Total Credits

Minor, Applied Business — General Business

Minimum Requirements for Minor: 18 credits

ABUS F101 Principles of Accounting I
- ABUS F161 Personal and Business Finance
- ABUS F175 Customer Service
- Select one from the following:
  - ABUS F232 Contemporary Management Issues
  - ABUS F272 Small-Business Planning
  - ABUS F273 Managing a Small Business
  - ABUS F260 Marketing Practices
  - or ABUS F263 Public Relations
  - BA F151X Introduction to Business

Total Credits

Note: Other courses specific to individual education and career goals may be substituted with program approval.

Minor, Applied Business — Recreation and Guiding Management

Minimum Requirements for Minor: 18 credits

ABUS F158 Introduction to Tourism
Certificate; A.A.S. Degree

Minimum Requirements for Certificate: 34 credits; for Degree: 60 credits

The community health aide/practitioner (CHA/P) training program prepares students to provide primary health care services in villages, under the supervision of a referral physician. As a prerequisite, students entering the program must be employed by a regional health corporation.

The educational program consists of four basic training sessions, each four weeks long and followed by a field component in the community health aide’s village clinic. The curriculum includes the knowledge and skills necessary to provide acute care for common medical problems, emergency care, follow-up care for patients with chronic illnesses, and preventive services including prenatal and well-child care. The training also includes state-approved emergency care courses, completion of a skills checklist, a supervised clinical preceptorship, and passing the community health practitioner (CHP) statewide examination.

Upon successful completion of all certification requirements, students are awarded a CHP certificate by the training center. Students completing the training program also meet the requirements for a university certificate recognizing the credits earned. These credits may be used to satisfy requirements for the A.A.S. degree.

The CHA/P academic review committee (ARC), composed of representatives from the regional health corporations, training centers and university, ensures that the curriculum and certification process is kept uniform throughout the state. The ARC reports to the Association of CHA/P Program Directors and serves in an advisory role to the executive dean for Rural, Community and Native Education.

For more information about the CHA/P basic training program, contact one of the CHA/P training centers. For more information about the A.A.S. degree, contact the College of Rural and Community Development health programs office at 907-786-1630.

Certificate

- Community Health (p. 107)

A.A.S., Community Health

Minimum Requirements for Degree: 60 credits

Students must earn a C- grade or better in each course.

General University Requirements

Complete the general university requirements. (p. 87)

A.A.S. Degree Requirements

Complete the A.A.S. degree requirements. (p. 93)

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHP F131</td>
<td>Community Health Aide I</td>
<td>8</td>
</tr>
<tr>
<td>CHP F132</td>
<td>Community Health Aide II</td>
<td>8</td>
</tr>
<tr>
<td>CHP F133</td>
<td>Community Health Aide III</td>
<td>8</td>
</tr>
<tr>
<td>CHP F134</td>
<td>Community Health Aide IV</td>
<td>8</td>
</tr>
<tr>
<td>CHP F135</td>
<td>Community Health Aide Preceptorship</td>
<td>2</td>
</tr>
<tr>
<td>CHP F136</td>
<td>Special Topics</td>
<td>1</td>
</tr>
<tr>
<td>HLTH — any F200-level courses</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Total Credits</td>
<td>45</td>
<td></td>
</tr>
</tbody>
</table>

1 May repeat up to 3 credits toward A.A.S. degree.

Certificate, Community Health

Minimum Requirements for Certificate: 34 credits

General University Requirements

Complete the general university requirements. (p. 87)

Certificate Requirements

Complete the certificate requirements. (p. 89)  

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHP F131</td>
<td>Community Health Aide I</td>
<td>8</td>
</tr>
<tr>
<td>CHP F132</td>
<td>Community Health Aide II</td>
<td>8</td>
</tr>
<tr>
<td>CHP F133</td>
<td>Community Health Aide III</td>
<td>8</td>
</tr>
<tr>
<td>CHP F134</td>
<td>Community Health Aide IV</td>
<td>8</td>
</tr>
<tr>
<td>CHP F135</td>
<td>Community Health Aide Preceptorship</td>
<td>2</td>
</tr>
<tr>
<td>Total Credits</td>
<td>34</td>
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</tr>
</tbody>
</table>
As part of the certificate requirements, the communication, computation and human relations content is embedded in some of the major required courses for this program.

Construction Management

College of Rural and Community Development
Community and Technical College
907-455-2846
www.ctc.uaf.edu/programs/cm/ (http://www.ctc.uaf.edu/programs/cm)

A.A.S. Degree

Minimum Requirements for Degree: 62 credits

The construction management program meets growing needs in the construction industry by training entry-level construction managers and by providing continuing education for construction employees.

Construction managers plan, direct and are responsible for oversight of construction projects. They are responsible for coordinating and managing people, materials and equipment; budgets, schedules and contracts; and the safety of employees and the general public. Construction managers determine construction means and methods and the most cost-effective plans and schedules. They track construction costs and administer contract changes to the project budget to maximize profitability. Construction managers monitor work progress to ensure compliance with architectural and engineering drawings and specifications.

Construction managers work in all phases of the construction business— for public and private owners; from small, multifamily projects to large skyscrapers and industrial projects; and from rural roads to major highways. Construction managers work closely with architects, engineers, owners and the various contractors on a construction job. The construction manager’s duties are varied, challenging and rewarding.

UAF’s construction management program was developed with input from local contractors and professional industry organizations. It gives students broad knowledge of building systems and construction techniques. CM graduates understand basic principles of business and know about the technical aspects of the construction industry. Graduates are able to function both in the construction office and on the job site.

The CM A.A.S. degree requires four to five semesters to complete. While not a prerequisite, it is recommended that students applying for admission have experience in the construction industry.

Degree

• A.A.S., Construction Management (p. 108)

A.A.S., Construction Management

Minimum Requirements for Degree: 62 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 87)

A.A.S. Degree Requirements
Complete the A.A.S. degree requirements. (p. 93) 1

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABUS F101</td>
<td>Principles of Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>CM F102</td>
<td>Methods of Building Construction</td>
<td>3</td>
</tr>
<tr>
<td>CM F123</td>
<td>Codes and Standards</td>
<td>3</td>
</tr>
<tr>
<td>CM F142</td>
<td>Mechanical and Electrical Technology</td>
<td>3</td>
</tr>
<tr>
<td>CM F163</td>
<td>Building Construction Cost Estimating</td>
<td>3</td>
</tr>
<tr>
<td>CM F201</td>
<td>Construction Project Management</td>
<td>3</td>
</tr>
<tr>
<td>CM F202</td>
<td>Project Planning and Scheduling</td>
<td>3</td>
</tr>
<tr>
<td>CM F205</td>
<td>Construction Safety</td>
<td>3</td>
</tr>
<tr>
<td>CM F213</td>
<td>Civil Technology</td>
<td>3</td>
</tr>
<tr>
<td>CM F231</td>
<td>Structural Technology</td>
<td>3</td>
</tr>
<tr>
<td>CM F263</td>
<td>Civil Construction Cost Estimating</td>
<td>3</td>
</tr>
<tr>
<td>CM F299</td>
<td>Construction Management Internship</td>
<td>3</td>
</tr>
<tr>
<td>DRT F170</td>
<td>Beginning CAD</td>
<td>3</td>
</tr>
<tr>
<td>MATH F152X</td>
<td>Trigonometry</td>
<td>3</td>
</tr>
<tr>
<td>PHYS F103X</td>
<td>College Physics I</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Credits 49

1 As part of the A.A.S. degree requirement complete ENGL F111X, ENGL F212 or ENGL F213X, and COMM F131X or COMM F141X for the communications requirement, and MATH F151X for the computation requirement. The human relations content is embedded in some of the major required courses for this program.

Certificate

Minimum Requirements for Certificate: 30 credits

The construction trades technology program is designed to prepare students to work in the construction industry, including in locations with a projected shortage of skilled workers.

This program gives students fundamental knowledge of construction industry expectations in carpentry, facility maintenance and sustainable energy, as well as hands-on training. It responds to the skills targeted by Alaskan employers.

A strong desire to work in the construction industry is important. Students must be willing to work collaboratively with industry employees in their local communities to fulfill the practicum components of courses.

Certificate

• Construction Trades Technology (p. 108)

Certificate, Construction Trades Technology

Minimum Requirements for Certificate: 30 credits

Students must earn a C- or better in each course.

General University Requirements
Complete the general university requirements. (p. 87)
Certificate Requirements
Complete the certificate requirements. (p. 89)

Computation
CTT F106 Construction Mathematics 3
or TTCH F131 Mathematics for the Trades

Program Requirements
CTT F100 Construction Technology Core 3
or CTT F101 Basic Construction Safety
and CTT F102 and Introduction to Hand and Power Tools
and CTT F103 and Introduction to Blueprint Reading
HLTH F122 First Aid and CPR 1

Concentrations
Select one from the following concentrations: 17-23.5
- Carpentry
- Facility Maintenance
- Sustainable Energy

Total Credits 24-30.5

1 As part of the certificate requirement, complete 3 credits each in the communication and human relations requirements.

Concentrations
CARPENTRY

CTT F110 Residential Carpentry I 8.5
or CTT F111 Materials and Tools Used in the Trade
and CTT F112 and Floor Systems, Wall and Ceiling Framing
and CTT F113 and Roof Framing, Windows and Exterior Doors
and CTT F114 and Introduction to Concrete Materials and Forms

CTT F115 Residential Carpentry--Level II 12
or CTT F116 Reading Plans and Site Layout--Level I
and CTT F117 and Exterior Finish and Moisture Protection
and CTT F118 and Roofing, Stairs and Metal Studs Applications
and CTT F119 and Drywall and Interior Finish Applications

CTT F199 Student Practicum I 1-3

Total Credits 21.5-23.5

FACILITY MAINTENANCE

CTT F130 Introduction to Facilities Maintenance 1
CTT F131 Interior Repairs: Drywall, Woodwork
Trim, Window Replacement 1

CTT F132 Floor Installation: Vinyl, Wood and Parquet 1

CTT F133 Cabinet Installation with Countertops 1
CTT F135 Boiler Troubleshooting and Burner Repair 2

CTT F137 Appliance Troubleshooting and Repair 2
CTT F138 Residential Heating Controls 2

CTT F151 Introduction to Plumbing Tools and Drawings 1

CTT F153 Plastic and Copper Pipe and Fittings 1

Other advisor approved electives related to the concentration 3

CTT F199 Student Practicum I 1 2

Total Credits 17

1 Students must take a minimum of 2 credits in CTT F199.

SUSTAINABLE ENERGY

DEV M F105 Intermediate Algebra 3
ENVI F220 Introduction to Sustainable Energy 3

Select at least 9 credits from the following: 9

- CS S201 Cold Climate Construction 1
- CTT F100 Construction Technology Core
- CTT F160 Photovoltaic Systems I
- CTT F161 Photovoltaic Systems II
- CTT F250 Current Topics in Construction Trades
- ENVI F101 Introduction to Environmental Science
- ENVI F120 Home Energy Basics
- PHYS F102X Energy and Society

Other advisor approved courses related to the concentration

CTT F199 Student Practicum I 2 3

Total Credits 18

1 CS S201 is offered by University of Alaska Southeast.
2 Students must take a minimum of 3 credits in CTT F199.

Culinary Arts and Hospitality
Community and Technical College
907-455-2800
www.ctc.uaf.edu/programs/culinary/ (http://www.ctc.uaf.edu/programs/culinary)

Certificate; A.A.S. Degree
Minimum Requirements for Certificates: 30 credits; for Degree: 60 credits

The culinary arts and hospitality program prepares students for careers in this ever-expanding field. Graduates can seek employment in various food service operations or in management of restaurants, bakeries, hotels, hospitals, camps or any other facility that requires food service as part of its operation. Certificates in culinary arts or baking and pastry arts as well as an associate degree in culinary arts are offered.

Degree
• A.A.S., Culinary Arts (p. 109)

Certificates
• Culinary Arts (p. 110)
• Baking and Pastry Arts (p. 110)

A.A.S., Culinary Arts
Minimum Requirements for Degree: 60 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 87)

A.A.S. Degree Requirements
Complete the A.A.S. degree requirements. (p. 93) 1

Program Requirements
CAH F101 Introduction to the Culinary Field 1
### Certificate, Baking and Pastry Arts

**Minimum Requirements for Certificates: 30 credits**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAH F140</td>
<td>Culinary I: Principles and Techniques</td>
<td>4</td>
</tr>
<tr>
<td>CAH F141</td>
<td>Culinary II: Stocks, Soups and Saucers</td>
<td>4</td>
</tr>
<tr>
<td>CAH F146</td>
<td>Introduction to Baking and Pastry</td>
<td>4</td>
</tr>
<tr>
<td>CAH F150</td>
<td>Food Service Sanitation</td>
<td>2</td>
</tr>
<tr>
<td>CAH F154</td>
<td>Food and Beverage Service</td>
<td>2</td>
</tr>
<tr>
<td>CAH F160</td>
<td>Principles of Nutrition</td>
<td>2</td>
</tr>
<tr>
<td>CAH F175</td>
<td>Protein Fabrication</td>
<td>3</td>
</tr>
<tr>
<td>CAH F199</td>
<td>Culinary Arts Externship</td>
<td>2</td>
</tr>
<tr>
<td>CAH F230</td>
<td>Menu Planning</td>
<td>1</td>
</tr>
<tr>
<td>CAH F242</td>
<td>Culinary III: Vegetables and Starch</td>
<td>4</td>
</tr>
<tr>
<td>CAH F243</td>
<td>Culinary IV: A la Carte Cookery</td>
<td>4</td>
</tr>
<tr>
<td>CAH F248</td>
<td>Intermediate Baking and Pastry</td>
<td>4</td>
</tr>
<tr>
<td>CAH F250</td>
<td>Garde Manger</td>
<td>4</td>
</tr>
<tr>
<td>CAH F253</td>
<td>Storeroom Purchasing and Receiving</td>
<td>2</td>
</tr>
<tr>
<td>CAH F256</td>
<td>Restaurant and Hospitality Cost Management</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total Credits** 45

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1. As part of the degree requirement, CAH F255 is recommended to complete the human relations requirement.

### Certificate, Culinary Arts

**Minimum Requirements for Certificates: 30 credits**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAH F101</td>
<td>Introduction to the Culinary Field</td>
<td>1</td>
</tr>
<tr>
<td>CAH F140</td>
<td>Culinary I: Principles and Techniques</td>
<td>4</td>
</tr>
<tr>
<td>CAH F146</td>
<td>Introduction to Baking and Pastry</td>
<td>4</td>
</tr>
<tr>
<td>CAH F150</td>
<td>Food Service Sanitation</td>
<td>2</td>
</tr>
<tr>
<td>CAH F248</td>
<td>Intermediate Baking and Pastry</td>
<td>4</td>
</tr>
</tbody>
</table>

**Select 6-9 credits from the following:** 6-9

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAH F117</td>
<td>Art in Cake Icing</td>
</tr>
<tr>
<td>CAH F154</td>
<td>Food and Beverage Service</td>
</tr>
<tr>
<td>CAH F160</td>
<td>Principles of Nutrition</td>
</tr>
<tr>
<td>CAH F161</td>
<td>Pastry Tube Art</td>
</tr>
<tr>
<td>CAH F171</td>
<td>Gourmet Baking</td>
</tr>
<tr>
<td>CAH F176</td>
<td>Techniques of Healthy Cooking</td>
</tr>
<tr>
<td>CAH F180</td>
<td>Artisan Breads</td>
</tr>
<tr>
<td>CAH F181</td>
<td>International Breads</td>
</tr>
<tr>
<td>CAH F230</td>
<td>Menu Planning</td>
</tr>
</tbody>
</table>

**Total Credits** 21-24

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1. As part of the certificate requirements, CAH F256 is recommended to complete the human relations requirement.

### Diesel/Heavy Equipment

**Certificate**

**Minimum Requirements for Certificate: 36 credits**

This one-year certificate program emphasizes hands-on training and in-class experience as students perform preventive maintenance inspections, determine causes of equipment problems and make necessary repairs and adjustments from tune-ups to complete engine and equipment overhauls. Students work on large truck fuel, electrical and air systems, diesel engines, transmissions, differentials, crawler tractor undercarriages, steering and final drives. A student may request credit by examination for any DSLT or MECN class. See department coordinator for details.

---

### Certificate, Diesel/Heavy Equipment

**Minimum Requirements for Certificate: 36 credits**

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1. As part of the certificate requirements, CAH F256 is recommended to complete the human relations requirement.
Students must earn a C or better in each course.

General University Requirements
Complete the general university requirements. (p. 87)

Certificate Requirements
Complete the certificate requirements. (p. 89)

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSLT F101</td>
<td>Safety Including Rigging and Lifting</td>
<td>1</td>
</tr>
<tr>
<td>DSLT F103</td>
<td>Basic Equipment and Truck Operation</td>
<td>1</td>
</tr>
<tr>
<td>DSLT F105</td>
<td>Preventive Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>DSLT F107</td>
<td>Basic Electrical Systems and Electronic Fuel Injection</td>
<td>3</td>
</tr>
<tr>
<td>DSLT F110</td>
<td>Basic Industrial Fabrication</td>
<td>2</td>
</tr>
<tr>
<td>DSLT F111</td>
<td>Diesel Emissions</td>
<td>2</td>
</tr>
<tr>
<td>DSLT F123</td>
<td>Heavy Duty Braking Systems</td>
<td>3</td>
</tr>
<tr>
<td>DSLT F154</td>
<td>Diesel Fuel Injection</td>
<td>3</td>
</tr>
<tr>
<td>DSLT F201</td>
<td>Manual Transmissions and Differentials</td>
<td>3</td>
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<tr>
<td>DSLT F202</td>
<td>Heavy Duty Automatic Transmissions</td>
<td>2</td>
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<tr>
<td>DSLT F210</td>
<td>Heavy Equipment Fabrication</td>
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</tr>
<tr>
<td>DSLT F254</td>
<td>Engine</td>
<td>5</td>
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<tr>
<td>MECN F103</td>
<td>Starting and Charging Systems</td>
<td>3</td>
</tr>
<tr>
<td>MECN F210</td>
<td>Hydraulics</td>
<td>3</td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>36</td>
</tr>
</tbody>
</table>

1 As part of the certificate requirements, the communication, human relations and computation content is embedded in the major required courses for this program.

Drafting Technology

Community and Technical College
907-455-2800
www.ctc.uaf.edu/programs/drafting/ (http://www.ctc.uaf.edu/programs/drafting)

Certificate; A.A.S. Degree
Minimum Requirements for Certificate: 33-34 credits; for Degree: 60-63 credits

The drafting technology programs combine focused training in computer-aided drafting with a well-rounded exposure to the professions, trades and materials common to construction in Alaska. Courses combine technical CAD training with the vocabulary and knowledge needed to communicate with future employers in the architectural, engineering and construction fields. Students develop skills in mathematics, drawing and multifunctional CAD techniques. Students are instructed in traditional drawing techniques, CAD, and building information modeling technologies, giving them the knowledge and flexibility to work traditionally and with the most recent drafting technologies. Required courses cover many aspects of design and construction, including building materials, codes, and civil, mechanical, electrical and structural technologies. Qualified students have the opportunity to work side-by-side with professionals from the architectural and engineering community in internships, gaining valuable on-the-job experience.

Students entering the certificate program are expected to have computer skills equivalent to CIOS F150.

Degree

• A.A.S., Drafting Technology (p. 111)

Certificate

• Drafting Technology (p. 111)

A.A.S, Drafting Technology
Minimum Requirements for Degree: 60-63 credits
Students must earn a C grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 87)

A.A.S. Degree Requirements
Complete the A.A.S. degree requirements. (p. 93)

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRT F101</td>
<td>Introduction to Drafting</td>
<td>3</td>
</tr>
<tr>
<td>DRT F140</td>
<td>Architectural Drafting</td>
<td>3</td>
</tr>
<tr>
<td>DRT F150</td>
<td>Civil Drafting</td>
<td>3</td>
</tr>
<tr>
<td>DRT F170</td>
<td>Beginning CAD</td>
<td>3</td>
</tr>
<tr>
<td>DRT F210</td>
<td>Intermediate CAD</td>
<td>3</td>
</tr>
<tr>
<td>DRT F270</td>
<td>Advanced CAD</td>
<td>3</td>
</tr>
<tr>
<td>DRT F145</td>
<td>Structural Drafting</td>
<td>3</td>
</tr>
<tr>
<td>DRT F155</td>
<td>Mechanical and Electrical Drafting</td>
<td>3</td>
</tr>
<tr>
<td>CM F102</td>
<td>Methods of Building Construction</td>
<td>3</td>
</tr>
<tr>
<td>CM F123</td>
<td>Codes and Standards</td>
<td>3</td>
</tr>
<tr>
<td>CM F142</td>
<td>Mechanical and Electrical Technology</td>
<td>3</td>
</tr>
<tr>
<td>CM F213</td>
<td>Civil Technology</td>
<td>3</td>
</tr>
<tr>
<td>CM F231</td>
<td>Structural Technology</td>
<td>3</td>
</tr>
<tr>
<td>Select 3-6 credits from the following electives:</td>
<td>3-6</td>
<td></td>
</tr>
<tr>
<td>DRT F121</td>
<td>Construction Documents and Drawings</td>
<td></td>
</tr>
<tr>
<td>DRT F260</td>
<td>Drafting Internship</td>
<td></td>
</tr>
<tr>
<td>CM F201</td>
<td>Construction Project Management</td>
<td></td>
</tr>
<tr>
<td>ES F101</td>
<td>Introduction to Engineering</td>
<td></td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>42-45</td>
</tr>
</tbody>
</table>

1 This elective requires additional math prerequisites.

Certificate, Drafting Technology

Minimum Requirements for Certificate: 33-34 credits

Concentrations: Architectural Drafting, Civil Drafting, Information Technology, Mechanical and Electrical Drafting, Process Technology, and Structural Drafting.

General University Requirements
Complete the general university requirements. (p. 87)

Certificate Requirements
Complete the certificate requirements. (p. 89)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRT F101</td>
<td>Introduction to Drafting</td>
<td>3</td>
</tr>
<tr>
<td>DRT F121</td>
<td>Construction Documents and Drawings</td>
<td>3</td>
</tr>
<tr>
<td>DRT F170</td>
<td>Beginning CAD</td>
<td>3</td>
</tr>
<tr>
<td>DRT F210</td>
<td>Intermediate CAD</td>
<td>3</td>
</tr>
<tr>
<td>DRT F270</td>
<td>Advanced CAD</td>
<td>3</td>
</tr>
<tr>
<td>Concentrations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Select one from the following concentrations: 9-10

Architectural Drafting
Civil Drafting
Information Technology
Mechanical and Electrical Drafting
Process Technology
Structural Drafting

Total Credits 24-25

Concentrations

ARCHITECTURAL DRAFTING
CM F102 Methods of Building Construction 3
CM F123 Codes and Standards 3
DRT F140 Architectural Drafting 3
Total Credits 9

CIVIL DRAFTING
CM F102 Methods of Building Construction 3
CM F213 Civil Technology 3
DRT F150 Civil Drafting 3
Total Credits 9

INFORMATION TECHNOLOGY
CITS F203 Information Technology Support Fundamentals 4
CITS F204 Introduction to Network Support and Administration 3
CITS F261 Computer and Network Security 3
Total Credits 10

MECHANICAL AND ELECTRICAL DRAFTING
CM F102 Methods of Building Construction 3
CM F142 Mechanical and Electrical Technology 3
DRT F155 Mechanical and Electrical Drafting 3
Total Credits 9

Process Technology
PRT F101 Introduction to Process Technology 3
PRT F110 Introduction to Occupational Safety, Health and Environmental Awareness 3
PRT F117 Drafting for Technicians 3
Total Credits 9

STRUCTURAL DRAFTING
CM F102 Methods of Building Construction 3
CM F231 Structural Technology 3
DRT F145 Structural Drafting 3
Total Credits 9

Note: DRT F260 may be substituted for concentration-specific DRT courses with program approval.

Early Childhood Education

College of Rural and Community Development
907-474-7143
Community and Technical College
907-455-2800
www.ctc.uaf.edu/programs/e-childhood/ (http://www.ctc.uaf.edu/programs/e-childhood)

A.A.S. Degree

Minimum Requirements for Degree: 60 credits

All courses are offered in Fairbanks and through distance delivery for students outside Fairbanks. This program prepares students for employment as early childhood teachers, K-3 teachers aides and child care providers, and improves the skills of those already in the field.

Graduates pursue opportunities with child development centers, Head Start programs, child welfare service agencies, recreation and scouting services, staff training, program licensing and entrepreneurial initiatives serving children and families. This program is guided by standards specified by the National Association for the Education of Young Children.

The A.A.S. program in early childhood education is for students enrolling in college for the first time as well as for those who are educated in other subject areas but desire to retrain for employment in this field. Through course work, including fieldwork directly with children, students gain the knowledge and skills they need to meet State of Alaska requirements for employment as administrators or teachers in licensed centers and as aides in elementary schools. Course work also fulfills minor or concentration requirements for degrees in other disciplines. Students entering the A.A.S. degree should meet with an early childhood advisor to discuss a specific course of study. The courses for the A.A.S. degree lay the foundation for the B.A. in child development and family studies or can be combined with other disciplines to make a specific focus on young children in areas such as science, movement, leadership, business or creative arts.

Degree

- A.A.S., Early Childhood Education (p. 112)

A.A.S., Early Childhood Education

Minimum Requirements for Degree: 60 credits

Students must earn a C- grade or better in each course.

General University Requirements

Complete the general university requirements. (p. 87)

A.A.S. Degree Requirements

Complete the A.A.S. degree requirements. (p. 93)

Program Requirements

Complete the following:

ECE F101 Introduction to Early Childhood Profession 3
ECE F104X Child Development I: Prenatal, Infants and Toddlers 3
ECE F110 Safe, Healthy, Learning Environments 3
ECE F119 Curriculum I: Principles and Practices 3
ECE F130 Culture, Learning and the Young Child 2
Environmental Studies

College of Rural and Community Development
907-474-7143
www.uaf.edu/bbc/ (http://www.uaf.edu/bbc)

Certificate

Minimum Requirements for Certificate: 30-35 credits

This program addresses many of the environmental issues influencing Alaska communities and provides basic academic preparation for entry-level vocational environmental careers. The program serves as a steppingstone into science-related associate or baccalaureate programs. This program may be especially of interest to individuals employed by and/or interested in employment with state, federal or tribal agencies or other groups providing natural resource management services. It is recommended that students have completed a high school lab-based science, biology or chemistry course as well as algebra due to the science focus of this program.

Certificate, Environmental Studies

Minimum Requirements for Certificate: 30-35 credits

Students must earn a C- grade or better in each course.

General University Requirements

Complete the general university requirements. (p. 87)

Certificate Requirements

Complete the certificate requirements. (p. 89)

Communication

ENGL F111X Introduction to Academic Writing 3

or ABUS F170 Business English

Computation

DEVF F105 Intermediate Algebra (or MATH/CS/STAT at the 100 level or higher) 3

Human Relations

Select one from the following: 3

ANTH/SOC F100X Individual, Society and Culture

ABUS F154 Human Relations

Other program-approved discipline-based human relations course

Program Requirements

Select two from the following science foundation courses: 8

ATMF F101X Weather and Climate of Alaska

BIOL F103X Biology and Society

or BIOL F104X Natural History of Alaska

or BIOL F115X Fundamentals of Biology I

CHEMF F103X Basic General Chemistry

or CHEMF F105X General Chemistry I

GEOGF F111X Earth and Environment: Elements of Physical Geography

MSLF F111X The Oceans

ENVI F101 Introduction to Environmental Science 3

ENVI F110 Introduction to Water Quality I: Measurement 1

ENVI F130 Introduction to the National Environmental Policy Act 1

ENVI F160 Internship in Environmental Studies 1-2

ENVI F260 Field Techniques for Environmental Technicians 2

ENVI F265 Introduction to Methods in Environmental Studies Reporting 2

Select one from the following electives: 3-4

ATMF F101X Weather and Climate of Alaska

BIOL F104X Natural History of Alaska

BIOL F115X Fundamentals of Biology I

CHEMF F104X Survey of Organic Chemistry and Biochemistry

CHEMF F105X General Chemistry I

DEVS F100 Introduction to Science

FISHF F101 Introduction to Fisheries

GEOGF F111X Earth and Environment: Elements of Physical Geography

HLRM F130 Research Field Logistics

NRM F101 Natural Resources Conservation and Policy

RD F250 Grant Writing for Community Development

STAT F200X Elementary Probability and Statistics 1

Advisor-approved elective 2

Total Credits 30-32
Ethnobotany

College of Rural and Community Development
907-474-7143
www.bethel.uaf.edu (http://www.bethel.uaf.edu)

Certificate
Minimum Requirements for Certificate: 30-32 credits

The ethnobotany certificate program involves interdisciplinary study of the role of native plants in indigenous cultures. Students will learn about native plants and their uses and ecology in the context of their cultural, social and economic importance by combining scientific and anthropological concepts and methods. The program emphasizes culturally relevant, place-based courses that highlight the ways this information contributes to other fields of study, such as cultural and natural resources management, community development, adaptive resilience, and human health. It is also designed to serve as a bridge to a variety of associate and baccalaureate programs in natural science and liberal arts.

This program may be especially of interest to individuals employed by or interested in employment with state, federal or tribal agencies or other local entities in rural Alaska which provide natural resource management services.

Admission requires a high school diploma or GED and interest in science-related fields. It is highly recommended that students have completed two high school lab-based science courses, preferably in biology, chemistry or physics.

Students whose ACT/SAT scores are not sufficient for placement into college-level courses must take the ASSET or ACCUPLACER test and be placed in the appropriate developmental-level course.

Certificate
- Ethnobotany (p. 114)

Certificate, Ethnobotany
Minimum Requirements for Certificate: 30-32 credits

Students must earn a C- or better in each course.

General University Requirements
Complete the general university requirements. (p. 87)

Certificate Requirements
Complete the certificate requirements. (p. 89)

Communication
ENGL F111X Introduction to Academic Writing 3
or ABUS F170 Business English

Computation
Select one from the following: 3-4
DEV M105 Intermediate Algebra
MATH F113X Concepts and Contemporary Applications of Mathematics
MATH F151X College Algebra for Calculus

Human Relations
ANTH/SOC F100X Individual, Society and Culture 3
ABUS F154 Human Relations 3

Program Requirements
Complete the following science foundation courses: 4
BIOL F103X Biology and Society
or BIOL F104X Natural History of Alaska
or BIOL F116X Fundamentals of Biology II
CHEM F103X Basic General Chemistry
or CHEM F105X General Chemistry I

Complete the following:
EBOT F100 Introduction to Ethnobotany 3
EBOT F200 Seminar in Ethnobotany 1
EBOT F210 Ethical Wildcrafting 1
EBOT F220 Ethnobotanical Techniques 2
EBOT F230 Ethnobotanical Chemistry 3

Select 3-4 credits from the following approved electives: 3-4
ENGL F212 Business, Grant and Report Writing
ENGL F213X Academic Writing about the Social and Natural Sciences

100-200-level advisor-approved electives from the following subject areas: Alaska Native Languages, Alaska Native Studies, Applied Art, Anthropology, Economics, Education, Eskimo, Biology or Natural Resource Management

Total Credits 29-31

Fire Science

Community and Technical College
907-455-2800
www.ctc.uaf.edu/programs/emergency/ (http://www.ctc.uaf.edu/programs/emergency)

A.A.S. Degree
Minimum Requirements for Degree: 63-69 credits

The fire science program provides classroom education, hands-on training and practical vocational experience through local fire and rescue organizations.

Instructors provide a high level of technical expertise on a variety of emergency and fire science services. The primary goal of this program is to make our students the most attractive candidates for job openings and promotions within fire and other emergency services fields.

Degree
- A.A.S., Fire Science (p. 114)

Minor
- Minor (p. 116)

A.A.S., Fire Science
Students must earn a C- or better in each course.

Concentrations: Hazardous Materials Control, Municipal Fire Control, Public Safety and Wildland Fire Control
HAZARDOUS MATERIALS CONTROL
Minimum Requirements for Degree: 69 credits

**General University Requirements**
Complete the general university requirements. (p. 87)

**A.A.S. Degree Requirements**
Complete the A.A.S. degree requirements. (p. 93)

**Program Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS F170</td>
<td>EMT: Emergency Medical Technician I</td>
<td>6</td>
</tr>
<tr>
<td>FIRE F110</td>
<td>Introduction to Hazardous Waste Operations and Emergency Response</td>
<td>3</td>
</tr>
<tr>
<td>FIRE F121</td>
<td>Fire Behavior and Combustion</td>
<td>3</td>
</tr>
<tr>
<td>FIRE F131</td>
<td>Firefighter I, Series I</td>
<td>3</td>
</tr>
<tr>
<td>FIRE F133</td>
<td>Firefighter I, Series II</td>
<td>3</td>
</tr>
<tr>
<td>FIRE F135</td>
<td>Firefighter I, Series III</td>
<td>3</td>
</tr>
<tr>
<td>FIRE F137</td>
<td>Firefighter I, Series IV</td>
<td>3</td>
</tr>
<tr>
<td>FIRE F203</td>
<td>Hazardous Materials Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>FIRE F207</td>
<td>Hazardous Materials Technician</td>
<td>3</td>
</tr>
<tr>
<td>FIRE F210</td>
<td>Fire Administration I</td>
<td>3</td>
</tr>
<tr>
<td>FIRE F220</td>
<td>Emergency Services Safety, Health and Survival</td>
<td>3</td>
</tr>
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</table>

Select 9 credits from the following:  

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRE F212</td>
<td>Building and Fire Codes</td>
<td></td>
</tr>
<tr>
<td>FIRE F215</td>
<td>Advanced Hazardous Materials Technician</td>
<td></td>
</tr>
<tr>
<td>FIRE F216</td>
<td>Methods of Instruction for Emergency Services Training</td>
<td></td>
</tr>
<tr>
<td>FIRE F293</td>
<td>Special Topics</td>
<td></td>
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</tbody>
</table>

**General Electives**  

Select 9 credits from the following:  

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>EMS F261</td>
<td>EMT: Emergency Medical Technician II</td>
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</tr>
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</table>

**Total Credits:** 51

**Note:** Program electives and general electives must be approved by the student's advisor.

MUNICIPAL FIRE CONTROL
Minimum Requirements for Degree: 69 credits

**General University Requirements**
Complete the general university requirements. (p. 87)

**A.A.S. Degree Requirements**
Complete the A.A.S. degree requirements. (p. 93)

**Program Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</tr>
</thead>
<tbody>
<tr>
<td>AVTY F231/EMS F257</td>
<td>Arctic Survival</td>
<td>3</td>
</tr>
<tr>
<td>EMS F170</td>
<td>EMT: Emergency Medical Technician I</td>
<td>6</td>
</tr>
<tr>
<td>EMS F176</td>
<td>Aeromedical Evacuations in Alaska</td>
<td>1</td>
</tr>
<tr>
<td>FIRE F101</td>
<td>Principles of Emergency Services</td>
<td>3</td>
</tr>
<tr>
<td>FIRE F105</td>
<td>Fire Prevention</td>
<td>3</td>
</tr>
<tr>
<td>FIRE F117</td>
<td>Rescue Practices</td>
<td>3</td>
</tr>
<tr>
<td>FIRE F127</td>
<td>Vessel Safety: Emergency Equipment, Procedures and Drills</td>
<td>1</td>
</tr>
<tr>
<td>FIRE F131</td>
<td>Firefighter I, Series I</td>
<td>3</td>
</tr>
<tr>
<td>FIRE F133</td>
<td>Firefighter I, Series II</td>
<td>3</td>
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<td>FIRE F135</td>
<td>Firefighter I, Series III</td>
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</tr>
<tr>
<td>FIRE F137</td>
<td>Firefighter I, Series IV</td>
<td>3</td>
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<tr>
<td>FIRE F218</td>
<td>Advanced Rescue Practices</td>
<td>3</td>
</tr>
<tr>
<td>JUST F110X</td>
<td>Introduction to Justice</td>
<td>3</td>
</tr>
<tr>
<td>JUST F340</td>
<td>Rural Justice in Alaska</td>
<td>3</td>
</tr>
<tr>
<td>JUST F358</td>
<td>Juvenile Delinquency</td>
<td>3</td>
</tr>
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**Program Electives**
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<tr>
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<td>EMT: Emergency Medical Technician II</td>
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<tr>
<td>FIRE F123</td>
<td>Fire Investigations I</td>
<td></td>
</tr>
<tr>
<td>FIRE F151</td>
<td>Wildland Firefighter I</td>
<td></td>
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<tr>
<td>FIRE F212</td>
<td>Building and Fire Codes</td>
<td></td>
</tr>
<tr>
<td>FIRE F216</td>
<td>Methods of Instruction for Emergency Services Training</td>
<td></td>
</tr>
<tr>
<td>JUST F345</td>
<td>Police Problems</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credits:** 54

**Note:** Program electives must be approved by the student's advisor.

PUBLIC SAFETY
Minimum Requirements for Degree: 68 credits

**General University Requirements**
Complete the general university requirements. (p. 87)

**A.A.S. Degree Requirements**
Complete the A.A.S. degree requirements. (p. 93)

**Program Requirements**

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**Program Electives**
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</tr>
<tr>
<td>JUST F345</td>
<td>Police Problems</td>
<td></td>
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</tbody>
</table>
**Minor, Fire Science**

Minimum Requirements for Minor: 18 credits

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</thead>
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<td>Firefighter I, Series II</td>
<td>3</td>
</tr>
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<td>FIRE F135</td>
<td>Firefighter I, Series III</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits 18

**Note:** Program electives and general electives must be approved by the student’s advisor.

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**Health, Allied**

**Certificate; A.A.S. Degree**

Minimum Requirements for Certificate: 30-42 credits; for Degree: 60-61 credits

The occupational endorsement, certificates, degrees and occupational training programs in allied health provide students with the knowledge and technical skills for employment in health care. Course work in phlebotomy is available, as are occupational endorsements in medical billing, medical coding and medical office reception. Certificates include medical assistant, dental assistant, health care reimbursement and medical/dental reception. A.A.S. degrees include dental assistant and medical assistant. A.A.S. degrees in nursing and radiologic technology are offered in Fairbanks at the Community and Technical College through the University of Alaska Anchorage.

Special admission, licensing or certification requirements may apply to students in this program. Applicants should familiarize themselves with these and speak with a faculty advisor if they have any questions or concerns.

**DENTAL ASSISTANT**

The dental assistant certificate and A.A.S. degree programs prepare students to become skilled members of the dental health care team. The duties of the dental assistant are among the most comprehensive and varied in the dental office. Upon completion of the course work, students graduate with either an A.A.S. or certificate in dental assisting and are eligible to take the National Entry Level Dental Assistant (NELDA) Dental Assisting National Board (DANB) examination. Prerequisites are graduation from high school or equivalent (GED) and completion of a dental assisting application form.

**HEALTH CARE REIMBURSEMENT**

The health care reimbursement certificate program prepares students for employment as medical billers and coders in medical offices, clinics, hospitals and other medical facilities. Students in the program learn analysis of medical records and the assigning of codes for indexing diagnoses and procedures to provide information for reimbursement purposes. The successful completion of this certificate prepares the student for the national certification exam through the American Academy of Professional Coders. The occupational endorsements in medical billing and medical coding are part of the Health Care Reimbursement Certificate.

**MEDICAL ASSISTANT, MEDICAL/DENTAL RECEPTION**

The medical assistant certificate and A.A.S. degree programs prepare students for employment in ambulatory care settings. Students receive education in the theory and skills for office work and clinical care.
Prerequisites for the program include a high school diploma or GED and completion of the medical assistant application. The UAF Community and Technical College medical assistant certificate is accredited by the Commission on Accreditation of Allied Health Education Programs upon recommendation of the Medical Assisting Education Review Board (MAERB), CAAHEP, 353 East Wacker Drive, Chicago, IL 60601, 312-553-9355. The medical assistant certificate incorporates both the medical office reception occupational endorsement and the medical/dental reception certificate.

PHLEBOTOMY
Training is also available in phlebotomy. A student who completes the phlebotomy course may sit for national certification through the American Society for Clinical Pathology to become a certified phlebotomy technician.

Students wishing to enroll in phlebotomy must have documentation of antibody titer for hepatitis B, current immunizations or titers to measles, mumps, rubella, varicella, flu shot if required by site and a completed two-step PPD (Purified Protein Derivative) for tuberculosis within the past year, prior to registering for the class. Additional immunizations may be necessary as required by the externship site. Students must submit documentation of a background check administered through the Alaska State Troopers with the completed application.

NURSING QUALIFICATIONS, PRE-
The Allied Health certificate in pre-nursing qualifications is designed to guide students preparing to apply to the University of Alaska Anchorage Bachelors of Science in nursing. The certificate includes a clinical course in addition to a number of the prerequisite and co-requisite courses for the B.S. in nursing. Admission to this certificate program requires a high school diploma or GED and test scores sufficient for placement into ENGL F111X and DEV M 105.

Admission to the UAA nursing program is competitive. While this certificate prepares the student to be highly qualified, it does not guarantee admission to the UAA nursing program. Before applying to the UAA B.S. program in nursing, students must complete a pre-admission nursing exam and are strongly encouraged to work in a clinical practice. Students should work closely with an advisor while completing this certificate and preparing an application for admission to the nursing program.

Students who have not completed high school chemistry will need to complete either CHEM F103X or CHEM F105X or have instructor permission to register for BIOL F213X or BIOL F214X.

REGISTERED NURSE
The B.S. degree in nursing is offered by the University of Alaska Anchorage at the Community and Technical College in cooperation with the Allied Health department. Graduates of the nursing program are prepared to provide effective nursing services to individuals receiving care in inpatient settings and in structured outpatient settings. The academic program provides a closely related mix of theory and clinical practice; students gain experience in hospitals, nursing homes, clinics and community agencies. Graduates of this B.S. degree are eligible to take the NCLEX examination that grants professional licensure to practice nursing as a registered nurse. Additional information is available at http://nursing.uaa.alaska.edu.

RADIOLOGIC TECHNOLOGY
The A.A.S. degree in radiologic technology is offered by the University of Alaska Anchorage in cooperation with the Community and Technical College and Fairbanks Memorial Hospital. Course work for the degree is delivered through a combination of the traditional classroom setting, distance delivery and clinical experience. Upon completion of the program, students may apply to the American Registry of Radiologic Technologists (ARRT) for national certification. Additional information is available at www.uaa.alaska.edu/alliedhealth/academics/radiologictechnology/.

Information on any of the Allied Health programs is available from the Allied Health Division at Community and Technical College, PO Box 758040, Fairbanks, AK 99775; by calling 907-455-2822; by email at fyhealth@uaf.edu; or at www.ctc.uaf.edu/health/ (http://www.ctc.uaf.edu/health).

Degrees
• A.A.S., Dental Assistant (p. 117)
• A.A.S., Medical Assistant (p. 118)

Certificates
• Dental Assistant (p. 118)
• Health Care Reimbursement (p. 118)
• Medical Assistant (p. 118)
• Medical/Dental Reception (p. 119)
• Pre- (p. 119) Nursing Qualifications (p. 119)

A.A.S., Dental Assistant
Minimum Requirements for Degree: 61 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 87)

A.A.S. Degree Requirements
Complete the A.A.S. degree requirements. (p. 93)

Program Requirements

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>DA F132</td>
<td>Administrative Procedures for the Dental Assistant</td>
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<tr>
<td>DA F150</td>
<td>Dental Radiography</td>
<td>4</td>
</tr>
<tr>
<td>DA F151</td>
<td>Dental Infection Control</td>
<td>2</td>
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<tr>
<td>DA F152</td>
<td>Dental Materials and Applications</td>
<td>4</td>
</tr>
<tr>
<td>DA F153</td>
<td>Anatomy for Dental Assistants</td>
<td>3</td>
</tr>
<tr>
<td>DA F251</td>
<td>Clinical Chairside I for Dental Assistants</td>
<td>6</td>
</tr>
<tr>
<td>DA F252</td>
<td>Clinical Chairside II for Dental Assistants</td>
<td>6</td>
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<tr>
<td>DA F253</td>
<td>Clinical Chairside III for Dental Assistants</td>
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<td>DA F254</td>
<td>Dental Assistant Practicum</td>
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<tr>
<td>HLTH F110</td>
<td>Professional Skills for the Workplace</td>
<td>2</td>
</tr>
<tr>
<td>HLTH F114</td>
<td>Fundamentals of Anatomy and Physiology</td>
<td>4</td>
</tr>
<tr>
<td>HLTH F122</td>
<td>First Aid and CPR (or First Aid/CPR card)</td>
<td>1</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Name</td>
<td>Credits</td>
</tr>
<tr>
<td>------------</td>
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<tr>
<td>HLTH F203</td>
<td>Science of Nutrition</td>
<td>3</td>
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<tr>
<td>HLTH F247</td>
<td>Introduction to Pharmacology</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
<td><strong>46</strong></td>
</tr>
</tbody>
</table>

## A.A.S., Medical Assistant

Minimum Requirements for Degree: 60 credits

Students must earn a C- grade or better in each course.

### General University Requirements

Complete the general university requirements. (p. 87)

### A.A.S. Degree Requirements

Complete the A.A.S. degree requirements. (p. 93)

### Program Requirements

Select one from the following:

- CIOS F150 Computer Business Applications
- HLTH F130 Medical Office Technology
- Appropriate CIOS elective

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HLTH F100</td>
<td>Medical Terminology</td>
<td>3</td>
</tr>
<tr>
<td>HLTH F110</td>
<td>Professional Skills for the Workplace</td>
<td>2</td>
</tr>
<tr>
<td>HLTH F114</td>
<td>Fundamentals of Anatomy and Physiology</td>
<td>4</td>
</tr>
<tr>
<td>or BIOL F100X</td>
<td>Human Biology</td>
<td></td>
</tr>
<tr>
<td>HLTH F118</td>
<td>Medical Law and Ethics</td>
<td>2</td>
</tr>
<tr>
<td>HLTH F122</td>
<td>First Aid and CPR (or current First Aid/CPR card)</td>
<td>1</td>
</tr>
<tr>
<td>HLTH F132</td>
<td>Administrative Procedures I</td>
<td>2</td>
</tr>
<tr>
<td>HLTH F142</td>
<td>Clinical Procedures I</td>
<td>4</td>
</tr>
<tr>
<td>HLTH F208</td>
<td>Human Diseases</td>
<td>3</td>
</tr>
<tr>
<td>HLTH F234</td>
<td>Administrative Procedures II</td>
<td>4</td>
</tr>
<tr>
<td>HLTH F236</td>
<td>Outpatient Health Care Reimbursement</td>
<td>3</td>
</tr>
<tr>
<td>HLTH F244</td>
<td>Clinical Procedures II</td>
<td>4</td>
</tr>
<tr>
<td>HLTH F247</td>
<td>Introduction to Pharmacology</td>
<td>2</td>
</tr>
<tr>
<td>HLTH F268</td>
<td>Medical Assisting Practicum</td>
<td>4</td>
</tr>
<tr>
<td>or HLTH F261</td>
<td>and HLTH F267</td>
<td></td>
</tr>
<tr>
<td>Approved HLTH, CIOS, ABUS, HUMS, DEVS or COMM electives</td>
<td>3-7</td>
<td></td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
<td><strong>44-48</strong></td>
</tr>
</tbody>
</table>

1. As part of the certificate requirements, the communication, computation and human relations content is embedded in the major required courses for this program.

## Certificate, Health Care Reimbursement

Minimum Requirements for Certificate: 30 credits

Students must earn a C- or better in each course.

### General University Requirements

Complete the general university requirements. (p. 87)

### Certificate Requirements

Complete the certificate requirements. (p. 89)

### Program Requirements

- ENGL F111X Introduction to Academic Writing 3
- or ABUS F271 Business Communications
- HLTH F100 Medical Terminology 3
- HLTH F110 Professional Skills for the Workplace 2
- HLTH F116 Mathematics in Health Care 3
- HLTH F130 Medical Office Technology 1-3
- or CIOS F150 Computer Business Applications
- HLTH F132 Administrative Procedures I 2
- HLTH F208 Human Diseases 3
- HLTH F234 Administrative Procedures II 4
- HLTH F235 Medical Coding 4
- HLTH F236 Outpatient Health Care Reimbursement 3

**Total Credits** 28-30

## Certificate, Medical Assistant

Minimum Requirements for Certificate: 45 credits

Students must earn a C- or better in each course.

### General University Requirements

Complete the general university requirements. (p. 87)

### Certificate Requirements

Complete the certificate requirements. (p. 89)

### Communications

- ENGL F111X Introduction to Academic Writing 3

### Computation

Select 3 credits from the following:

- HLTH F116 Mathematics in Health Care 3
- DEVM F105 Intermediate Algebra

### Program Requirements

- DA F132 Administrative Procedures for the Dental Assistant 2
- DA F150 Dental Radiography 4
- DA F151 Dental Infection Control 2
- DA F152 Dental Materials and Applications 4
- DA F153 Anatomy for Dental Assistants 3
- DA F251 Clinical Chairsde I for Dental Assistants 6
- DA F252 Clinical Chairsde II for Dental Assistants 6
- DA F254 Dental Assistant Practicum 4
- HLTH F110 Professional Skills for the Workplace 2
- HLTH F122 First Aid and CPR 1

**Total Credits** 28-30
MATH at the 100 level or higher

**Human Relations**

Select 3 credits from the following:

- HLTH F106 Human Behavior in Health Care
- ABUS F154 Human Relations
- SOC F100X Individual, Society and Culture
- PSY F101X Introduction to Psychology

**Program Requirements**

- HLTH F100 Medical Terminology 3
- HLTH F110 Professional Skills for the Workplace 2
- HLTH F114 Fundamentals of Anatomy and Physiology 4

or BIOL F100X Human Biology

- HLTH F118 Medical Law and Ethics 2
- HLTH F122 First Aid and CPR (or current First Aid/CPR card) 1

- HLTH F130 Medical Office Technology 3
- HLTH F132 Administrative Procedures I 2
- HLTH F142 Clinical Procedures I 4
- HLTH F234 Administrative Procedures II 4
- HLTH F236 Outpatient Health Care Reimbursement 3
- HLTH F244 Clinical Procedures II 4
- HLTH F268 Medical Assisting Practicum 4

or HLTH F261 Medical/Dental Office Reception Practicum

and HLTH F267 Medical Assisting Practicum Completion

Total Credits 45

**Certificate, Medical/Dental Reception**

Minimum Requirements for Certificate: 30-33 credits

Students must earn a C- or better in each course.

**General University Requirements**

Complete the general university requirements. (p. 87)

**Certificate Requirements**

Complete the certificate requirements. (p. 89)

**Communications**

- ENGL F111X Introduction to Academic Writing 3

**Computation**

Select one of the following:

- DEVM F105 Intermediate Algebra
- HLTH F116 MATH at the 100 level or higher

**Human Relations**

- HLTH F106 Human Behavior in Health Care 3

**Program Requirements**

- ENGL F213X Academic Writing about the Social and Natural Sciences (preferred) 3

- BIOL F213X Human Anatomy and Physiology I 4
- BIOL F214X Human Anatomy and Physiology II 4
- BIOL F240 Beginnings in Microbiology 4

Select one from the following: 4-9

- HLTH F107 Nurse Aide Training
- HLTH F111 Personal Care Attendant Training
- HLTH F113 Personal Care Attendant to Nursing Assistant Bridge
- EMS F170 EMT: Emergency Medical Technician I

Total Credits 37-42

**High Latitude Range Management**

College of Rural and Community Development

907-474-7143
Certificate

Minimum Requirements for Certificate: 31 credits

A HLRM program certificate represents the completion of at least 31 credits in the conventional field-based techniques to inventory and monitor northern animal and plant populations combining traditional knowledge with contemporary studies necessary for entry-level natural resource jobs statewide. The certificate also emphasizes place-based domesticated ungulate husbandry and health, applicable regionally and statewide. This certificate may also serve as a bridge to a variety of natural science associate and baccalaureate programs.

Admission is open to all individuals, especially those employed by or interested in employment with state, federal or tribal agencies or other local entities in rural Alaska that provide natural resources management services.

Students should have a high school diploma or GED and an interest in science-related fields. It is strongly recommended that students seeking admission to this program have completed two high school, lab-based science courses, preferably in biology, chemistry or physics.

Students whose ACT/SAT scores are not high enough to place them into regular college-level classes must take the ASSET or COMPASS test and be placed in the appropriate developmental-level course.

Certificate

- High Latitude Range Management (p. 120)

Certificate, High Latitude Range Management

Minimum Requirements for Certificate: 31 credits

Students must earn a C- or better in each course.

General University Requirements

Complete the general university requirements. (p. 87)

Certificate Requirements

Complete the certificate requirements. (p. 89)

As part of the certificate requirements, complete:

Communication

ENGL F111X Introduction to Academic Writing 3

Computation

MATH F113X Concepts and Contemporary Applications of Mathematics 3

or ABUS F155 Business Math

Human Relations

ANTH/SOC F100X Individual, Society and Culture 3

or ABUS F154 Human Relations

Program Requirements

NRM F101 Natural Resources Conservation and Policy 3

BIOL F104X Natural History of Alaska 4

HLRM F120 History of Domesticated Alaskan Ungulates 1

HLRM F130 Research Field Logistics 2

Total Credits 31

Human Services

College of Rural and Community Development
907-474-7143
www.ctc.uaf.edu/programs/hums/ (http://www.ctc.uaf.edu/programs/hums)

A.A.S. Degree

Minimum Requirements for Degree: 63 credits

Students in the human services program receive skills-based training within a foundation of theory. After completing foundation courses, students select an area of concentration from the following: addictions counseling, behavioral health, or interdisciplinary concentration. Students learn interviewing and assessment, case management, crisis intervention, group counseling techniques and other specific skills needed within their concentration area.

The program prepares students for entry-level positions in human services agencies. Persons with a strong desire to help others, a sincere respect for mankind and a commitment to their own personal growth may find this field rewarding. They must be emotionally stable, flexible and interested in working with people of diverse social, cultural and economic backgrounds. Recovery from life traumas and addictions can be a positive attribute if the student has successfully worked through specific issues and is willing to continue personal growth.

Students who complete an addictions concentration are eligible for certification as chemical dependency counselor technicians through the Alaska Commission for Behavioral Health Certification.

Each concentration is available to B.A. degree students as a minor. The B.A. degree student must complete the concentration and three HUMS elective credits. Concentrations provide students with skills needed for employment. See minor requirements.

This degree program is delivered collaboratively within the UA system.

Degree

- A.A.S., Human Services (p. 120)

Minor

- Minor (p. 122)

Certification

- Alaska Chemical Dependency Counselor (p. 122)

A.A.S., Human Services

Concentrations: Addictions Counseling, Behavioral Health and Interdisciplinary Concentration
Minimum Requirements for Degree: 63 credits

Students must earn a C grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 87)

A.A.S. Degree Requirements
Complete the A.A.S. degree requirements. (p. 93)

Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUMS F101</td>
<td>Introduction to Human Services</td>
<td>3</td>
</tr>
<tr>
<td>HUMS F102</td>
<td>Standards of Practice</td>
<td>2</td>
</tr>
<tr>
<td>HUMS F120</td>
<td>Cultural Diversity in Human Services</td>
<td>3</td>
</tr>
<tr>
<td>HUMS F125</td>
<td>Introduction to Addictive Processes</td>
<td>3</td>
</tr>
<tr>
<td>HUMS F202</td>
<td>Standards of Practice II</td>
<td>1</td>
</tr>
<tr>
<td>HUMS F215</td>
<td>Individual Interviewing</td>
<td>3</td>
</tr>
<tr>
<td>HUMS F232</td>
<td>Human Service Practicum I</td>
<td>3</td>
</tr>
<tr>
<td>HUMS F233</td>
<td>Human Service Practicum II</td>
<td>3</td>
</tr>
<tr>
<td>HUMS F301</td>
<td>Ethics in Human Service</td>
<td>3</td>
</tr>
<tr>
<td>PSY F101X</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

Concentrations
Select one from the following concentrations: 12-21

- Addictions Counseling
- Behavioral Health
- Interdisciplinary Concentration

Total Credits 39-48

Concentrations
ADDITIONS COUNSELING

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUMS F105</td>
<td>Personal Awareness and Growth</td>
<td>3</td>
</tr>
<tr>
<td>HUMS F205</td>
<td>Basic Principles of Group Counseling</td>
<td>3</td>
</tr>
<tr>
<td>or HUMS F210</td>
<td>Crisis and Grief Counseling</td>
<td></td>
</tr>
<tr>
<td>HUMS F260</td>
<td>History of Alcohol in Alaska</td>
<td>1</td>
</tr>
<tr>
<td>HUMS F261</td>
<td>Substance Abuse Assessment: ASAM PPC II</td>
<td>1</td>
</tr>
<tr>
<td>HUMS F263</td>
<td>Fetal Alcohol Spectrum Disorder (FASD)</td>
<td>1</td>
</tr>
<tr>
<td>HUMS F266</td>
<td>Co-occurring Disorders</td>
<td>2</td>
</tr>
<tr>
<td>HUMS F305</td>
<td>Substance Abuse Counseling</td>
<td>3</td>
</tr>
<tr>
<td>HUMS F250</td>
<td>Current Issues in Human Services (or any 1 credit course approved by the Human Services Program)</td>
<td>1</td>
</tr>
</tbody>
</table>

Select one from the following family courses: 2-3

- ECE F342 Family Relationships
- HUMS F140 Family Dynamics
- RHS F120 Family Systems I
- PSY F240 Psychology of Development

Total Credits 17-18

BEHAVIORAL HEALTH

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUMS F205</td>
<td>Basic Principles of Group Counseling</td>
<td>3</td>
</tr>
<tr>
<td>HUMS F210</td>
<td>Crisis and Grief Counseling</td>
<td>3</td>
</tr>
<tr>
<td>HUMS F280</td>
<td>Prevention and Community Development</td>
<td>3</td>
</tr>
<tr>
<td>HUMS F290</td>
<td>Case Management</td>
<td>3</td>
</tr>
</tbody>
</table>

HUMS F305 Substance Abuse Counseling 3
SOC F242 The Family: A Cross-Cultural Perspective 3

Elective credits (approved by Human Services Program Coordinator) 3

If the student is a social work or justice major, then select one of the following in place of an elective:

Social Work Majors:

- SWK F103X Introduction to Social Work
- JUST F110X Introduction to Justice

Total Credits 21

INTERDISCIPLINARY CONCENTRATION

a. The interdisciplinary concentration option is made available to students based on their individual needs and goals for specific vocational preparation. The interdisciplinary concentration will include 12 credits at the F200 level or above from the disciplines of social work, psychology, sociology, justice or human services. Three credits from these disciplines can be at the F100 level.

b. The interdisciplinary concentration will be reviewed and approved by the Human Services Program Coordinator, another human services faculty member and a faculty member representing at least one other discipline. Criteria for the approval of the interdisciplinary concentration is based on the candidate’s identified vocational and curricular needs.

- Examples:
  - HUMS or other acceptable courses that meet a student’s specific need: Workforce Specialty, Family Specialty, Restorative Justice, etc.
  - Courses or a certificate from within the UA system (UAA, RHS, PWSCC, etc.) that are aligned with the human services degree program.
  - Example of possible interdisciplinary concentration of human services in restorative justice:

```
HUMS F210 Crisis and Grief Counseling 3
HUMS F290 Case Management 3
JUST F110X Introduction to Justice 3
JUST F251 Criminology 3
SOC F201X Social Problems 3
```

For Students with the Rural Human Services Certificate

Up to 27 credits accepted as a block of courses

Minimum Requirements for Degree: 63 credits

Students must earn a C grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 87)

A.A.S. Degree Requirements
Complete the A.A.S. degree requirements. (p. 93)

Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUMS F101</td>
<td>Introduction to Human Services</td>
<td>3</td>
</tr>
<tr>
<td>HUMS F301</td>
<td>Ethics in Human Service</td>
<td>3</td>
</tr>
</tbody>
</table>
**Certification, Alaska Chemical Dependency Counselor**

**ALASKA CHEMICAL DEPENDENCY COUNSELOR CERTIFICATION**

The Alaska Commission for Behavioral Health Certification has approved the following courses for up to 45 training hours each toward certification or recertification of Chemical Dependency Counselors in the state of Alaska.

- **HUMS F125** Introduction to Addictive Processes 3
- **HUMS F205** Basic Principles of Group Counseling 3
- **HUMS F210** Crisis and Grief Counseling 3
- **HUMS F215** Individual Interviewing 3
- **HUMS F260** History of Alcohol in Alaska 1
- **HUMS F301** Ethics in Human Service 3
- **HUMS F305** Substance Abuse Counseling 3

**Note:** Chemical Dependency Counselors currently certified by the Alaska Commission for Behavioral Health Certification are eligible for transfer credit toward the human services degree. Contact the human services program coordinator at 907-455-2842 for more information.

**Minor, Human Services**

Minimum Requirements for Minor: 18 credits

Students must earn a C grade or better in each course.

Select one from the following options: 18

**Option 1:**
- Complete one concentration in human services
- Complete HUMS elective credits

**Option 2:**
- Complete HUMS-approved elective credits

Total Credits 18

1 Electives for Option 2 must be approved by the human services program coordinator.

**Information Technology Specialist**

College of Rural and Community Development
907-474-7143
Community and Technical College
907-455-2800

www.ctc.uaf.edu/its/ (http://www.ctc.uaf.edu/its)

**Certificate; A.A.S. Degree**

Minimum Requirements for Certificate: 30 credits; for A.A.S. Degree: 60 credits

The information technology specialist certificate and associate programs teach students how to use, support, implement and troubleshoot the computer and information technology systems found in educational, governmental and corporate settings.

The certificate program focuses on foundation-level support skills required to effectively use and troubleshoot computer and information technology systems. Students completing the certificate program will be prepared for entry-level IT positions and to continue their education in the information technology specialist A.A.S. degree program.

The A.A.S. degree program prepares individuals to implement, support, and troubleshoot computer and information technology systems and obtain employment as an IT professional. Associate degrees in computing technology, network and cybersecurity, and network and system administration are offered.

Students entering either the certificate or A.A.S. degree program should meet with a faculty advisor to discuss program requirements and develop an education plan that matches the current skills and goals of the student.

This degree program is delivered collaboratively within the UA system.

**Degree**

- A.A.S., Information Technology Specialist (p. 122)
- Information Technology Specialist (p. 123)

**A.A.S., Information Technology Specialist**

Concentrations: Computing Technology, Network and Cybersecurity, and Network and System Administration

Minimum Requirements for A.A.S. Degree: 60 credits

Students must earn a C- grade or better in each course.

**General University Requirements**

Complete the general university requirements. (p. 87)

**A.A.S. Degree Requirements**

Complete the A.A.S. degree requirements. (p. 93)

**Program Requirements**

- **CITS F204** Introduction to Network Support and Administration 3
- **CITS F205** Introduction to Microcomputer Programming 3
- **CS F103** Introduction to Computer Programming 3
- **CS F201** Computer Science I 3
- **CITS F212** Server Operating Systems 3
- **CITS F261** Computer and Network Security 3
- **CITS F281** Professional Practices in IT 3
Concentrations

COMPUTING TECHNOLOGY

Select 21-22 credits from the following or from program coordinator-approved courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CITS F201</td>
<td>Microcomputer Operating Systems Support</td>
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<tr>
<td>CITS F203</td>
<td>Information Technology Support Fundamentals</td>
<td></td>
</tr>
<tr>
<td>CITS F219</td>
<td>Microcomputer Operating Systems: Topics</td>
<td></td>
</tr>
<tr>
<td>CITS F220</td>
<td>Implementing Internet Tools and Technologies</td>
<td></td>
</tr>
<tr>
<td>CITS F221</td>
<td>Graphics and Multimedia for the Web</td>
<td></td>
</tr>
<tr>
<td>CITS F222</td>
<td>Website Design</td>
<td></td>
</tr>
<tr>
<td>CITS F240</td>
<td>System and Network Services Administration</td>
<td></td>
</tr>
<tr>
<td>CITS F241</td>
<td>Networking and LAN Infrastructure Basics</td>
<td></td>
</tr>
<tr>
<td>CITS F242</td>
<td>Routing and Switching Essentials</td>
<td></td>
</tr>
<tr>
<td>CITS F243</td>
<td>Intermediate Networking and LAN Infrastructure</td>
<td></td>
</tr>
<tr>
<td>CITS F244</td>
<td>Advanced Network Infrastructure Services</td>
<td></td>
</tr>
<tr>
<td>CITS F265</td>
<td>Directory Services Administration</td>
<td></td>
</tr>
<tr>
<td>CITS F266</td>
<td>IT Troubleshooting Skills</td>
<td></td>
</tr>
<tr>
<td>CITS F289</td>
<td>Information Technology: Topics</td>
<td></td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>21-22</td>
</tr>
</tbody>
</table>

Note: Upon admission to the certificate or degree program, each student will be assigned a mentor/committee chairperson who will be responsible for determining the student’s current level of competency in the various skill areas; assisting the student in determining the courses/experiences necessary for gaining competency in the deficient skill areas; setting up the student’s committee to consist of the mentor and at least one individual who may be a UA faculty member, an adjunct faculty member, or an expert in the student’s community; arranging for practical experiences in the student’s community; and organizing the committee’s final assessment of the student’s work and recommending award of the certificate or degree.

Certificate, Information Technology Specialist

Minimum Requirements for Certificate: 30 credits

Students must earn a C- grade or better in each course.

General University Requirements

Complete the general university requirements. (p. 87)

Certificate Requirements

Complete the certificate requirements. (p. 89) 1

Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CITS F203</td>
<td>Information Technology Support Fundamentals</td>
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</tr>
<tr>
<td>CITS F204</td>
<td>Introduction to Network Support and Administration</td>
<td></td>
</tr>
<tr>
<td>CITS F212</td>
<td>Server Operating Systems</td>
<td></td>
</tr>
<tr>
<td>CITS F261</td>
<td>Computer and Network Security</td>
<td></td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>21-22</td>
</tr>
</tbody>
</table>
Select 8-9 credits from the following or program coordinator-approved courses:

- CIOS F128 Microcomputer Operating Systems
- CIOS F130 Microcomputer Word Processing
- CIOS F135 Microcomputer Spreadsheets
- CIOS F150 Computer Business Applications
- CIOS F189 Microcomputer Applications: Topics
- CIOS F233 Desktop Publishing
- CIOS F240 Microcomputer Databases
- CIOS F255 Digital Graphics
- CIOS F258 Digital Photography
- CITS F201 Microcomputer Operating Systems Support
- CITS F219 Microcomputer Operating Systems: Topics
- CITS F220 Implementing Internet Tools and Technologies
- CITS F221 Graphics and Multimedia for the Web
- CITS F222 Website Design
- CITS F240 System and Network Services Administration
- CITS F241 Networking and LAN Infrastructure Basics
- CITS F242 Routing and Switching Essentials
- CITS F262 Cybersecurity Defense and Countermeasures
- CITS F263 Network Security Penetration Testing
- CITS F265 Directory Services Administration
- CITS F282 IT Troubleshooting Skills
- CITS F289 Information Technology: Topics

Pass a certification review requiring students to demonstrate proficiency in the following skill areas: operating systems, hardware, and network support and troubleshooting.

Total Credits 21-22

1. As part of the certificate requirements, complete ABUS F154 or ANTH F100X/SOC F100X for the human relations requirement.
2. May be repeated for different topics.
3. Prior to graduation, all students are required to pass a certification review that includes a hands-on scenario task and the development and presentation of a portfolio of work.

Students are taught the necessary objectives and skills sets required to take the entry-level Instrumentation, Systems and Automation Society certificate examination. This is a nationally recognized certification by industry partners; individuals holding this certification are sought after by industry partners to fill instrumentation technician positions worldwide.

As the process industries expand and automate, the need for qualified technicians increases. This need is currently being addressed by the Industrial Instrumentation & Controls Technology Alliance. CTC and the process technology program are active members of this national alliance.

**Certificate**

**Certificate, Instrumentation Technology**

Minimum Requirements for Certificate: 32 credits

Students must earn a C grade or better in each course.

**General University Requirements**

Complete the general university requirements. (p. 87)

**Certificate Requirements**

Complete the certificate requirements. (p. 89)

**Program Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELT F101</td>
<td>Basic Electronics: DC Physics</td>
<td>4</td>
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<tr>
<td>ELT F102</td>
<td>Basic Electronics: AC Physics</td>
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</tr>
<tr>
<td>ELT F246</td>
<td>Electronic Industrial Instrumentation</td>
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</tr>
<tr>
<td>PRT F140</td>
<td>Industrial Process Instrumentation I</td>
<td>3</td>
</tr>
<tr>
<td>PRT F144</td>
<td>Industrial Process Instrumentation II</td>
<td>3</td>
</tr>
<tr>
<td>PRT F240</td>
<td>Industrial Process Instrumentation III</td>
<td>3</td>
</tr>
<tr>
<td>PRT F248</td>
<td>Valve Maintenance and Instrumentation</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits 23

**Interdisciplinary Studies**

Office of Interdisciplinary Programs
907-474-7716
www.uaf.edu/gradsch/classes/interdisciplinary-program/ (http://www.uaf.edu/gradsch/classes/interdisciplinary-program/)

**A.A.S. Degree**

Minimum Requirements for Degree: 60 credits

The interdisciplinary program provides flexibility to undergraduate and graduate students who have well-defined goals that do not fit into one of the established majors offered by the university. Interdisciplinary studies, both graduate and undergraduate programs, is located in the Graduate School office. Help with the application process, contact information for faculty advisors and assistance for interdisciplinary students is available at 907-474-7716 or see www.uaf.edu/gradsch/classes/interdisciplinary-program/.

Minimum Requirements for Degree: 60 credits

1. Contact the UAF Office of the Graduate School and Interdisciplinary Programs for materials and procedures.
2. Contact three faculty members to serve as the interdisciplinary studies committee.
4. Conduct committee meeting to finalize degree proposal, title of degree and assessment plan.
5. Submit proposal to appropriate dean for approval.
6. Submit to the vice provost for final approval.

Native Language Education
College of Liberal Arts
Alaska Native Languages Program
907-474-7874
www.uaf.edu/anlc/classes/ (http://www.uaf.edu/anlc/classes)

Certificate; A.A.S. Degree
Minimum Requirements for Certificate: 30 credits; for Degree: 60 credits

The Native language education program trains teachers of Native language and culture, providing course work in Athabascan, Inupiaq Eskimo or Central Yup’ik Eskimo. The certificate and degree are recognized by some Alaska school districts and serve as steps toward a four-year degree. Candidates for the Central Yup’ik option must score advanced oral proficiency on an oral proficiency exam before being admitted into the program.

Degree
- A.A.S., Native Language Education (p. 125)

Certificate
- Native Language Education (p. 126)

A.A.S., Native Language Education
Concentrations: Athabascan, Inupiaq Eskimo, Central Yup’ik Eskimo

Minimum Requirements for Degree: 60 credits
Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 87)

A.A.S. Degree Requirements
Complete the A.A.S. degree requirements. (p. 93)
Concentrations
Select one from the following concentrations: 27-30
Athabascan
   ANL F108 Beginning Athabascan Literacy 3
   ANL F208 Advanced Athabascan Literacy 3
   ANL F251X Introduction to Athabascan Linguistics 3
   ANL F256 Introduction to Alaska Native Languages: History, Status and Maintenance 3
   ANL F287 Teaching Methods for Alaska Native Languages 3
   ANL F288 Curriculum and Materials Development for Alaska Native Languages 3
   ED F299 Practicum in Education 6
Total Credits 30

INUPIAQ ESKIMO
Candidates must demonstrate proficiency or complete a two-semester sequence in the language of the degree.

Major Requirements
Complete 6 credits from the following: 6
   ANL F199 Practicum in Native Language Education 3
   ANL F256 Introduction to Alaska Native Languages: History, Status and Maintenance 3
   ANL F287 Teaching Methods for Alaska Native Languages 3
   ANL F288 Curriculum and Materials Development for Alaska Native Languages 3
   ED F299 Practicum in Education 6
   ESK F118 Inupiaq Orthography 3
   ESK F218 Inupiaq Composition 3
   Eskimo linguistics elective 3
Total Credits 30

CENTRAL YUP’IK ESKIMO
Demonstrate advanced oral/aural proficiency in Yup’ik.

Major Requirements
Complete 6 credits from the following: 6
   ESK F109 Central Yup’ik Orthography 3
   ESK F208 Yup’ik Composition 3
   ESK F250 Yup’ik Literature for Children 3
   ESK F251 Teaching Beginning Yup’ik Reading and Writing 3
   ANL F199 Practicum in Native Language Education 3
   ANL F256 Introduction to Alaska Native Languages: History, Status and Maintenance 3
   ANL F287 Teaching Methods for Alaska Native Languages 3
   ANL F288 Curriculum and Materials Development for Alaska Native Languages 3
   ED F299 Practicum in Education 6
Total Credits 27

See Alaska Native Languages (p. 149).
Certificate, Native Language Education

Concentrations: Athabascan, Inupiaq Eskimo, Central Yup’ik Eskimo

Minimum Requirements for Certificate: 30 credits

General University Requirements
Complete the general university requirements. (p. 87)

Certificate Requirements
Complete the certificate requirements. (p. 89)

Concentrations
Select one from the following concentrations:

<table>
<thead>
<tr>
<th>Athabascan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Credits</strong> 30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Central Yup’ik Eskimo</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Credits</strong> 30</td>
</tr>
</tbody>
</table>

| As part of the certificate requirements, the communication, computation, and human relations content is embedded in some of the major required courses for this program.

Concentrations

ATHABASCAN
Candidates must demonstrate proficiency or complete a two-semester sequence in the language of the degree.

Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANL F108</td>
<td>Beginning Athabascan Literacy</td>
<td>3</td>
</tr>
<tr>
<td>ANL F199</td>
<td>Practicum in Native Language Education</td>
<td>6</td>
</tr>
<tr>
<td>ANL F208</td>
<td>Advanced Athabascan Literacy</td>
<td>3</td>
</tr>
<tr>
<td>ANL F251X</td>
<td>Introduction to Athabascan Linguistics</td>
<td>3</td>
</tr>
<tr>
<td>ANL F256</td>
<td>Introduction to Alaska Native Languages: History, Status and Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>ANL F287</td>
<td>Teaching Methods for Alaska Native Languages</td>
<td>3</td>
</tr>
<tr>
<td>ANL F288</td>
<td>Curriculum and Materials Development for Alaska Native Languages</td>
<td>3</td>
</tr>
<tr>
<td>ED F299</td>
<td>Practicum in Education</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

INUPIAQ ESKIMO
Candidates must demonstrate proficiency or complete a two-semester sequence in the language of the degree.

Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANL F199</td>
<td>Practicum in Native Language Education</td>
<td>3</td>
</tr>
<tr>
<td>ANL F256</td>
<td>Introduction to Alaska Native Languages: History, Status and Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>ANL F287</td>
<td>Teaching Methods for Alaska Native Languages</td>
<td>3</td>
</tr>
<tr>
<td>ANL F288</td>
<td>Curriculum and Materials Development for Alaska Native Languages</td>
<td>3</td>
</tr>
<tr>
<td>ED F299</td>
<td>Practicum in Education</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

Paralegal Studies

College of Rural and Community Development
Community and Technical College
907-455-2835
www.ctc.uaf.edu/programs/paralegal/ (http://www.ctc.uaf.edu/programs/paralegal)

A.A.S. Degree

Minimum Requirements for Degree: 61 credits

The paralegal studies program trains students for employment as paralegals to help deliver legal services under the supervision of a practicing lawyer, and provides continuing education and upgrading of skills for paralegals already employed. The program also offers practical law-related topics for UAF students whose main focus is in other areas of study, such as political science and justice.

Paralegals and legal assistants are not authorized to provide direct legal services to the public. However, they are qualified to perform rudimentary legal research and produce drafts of letters, office memoranda, pleadings, contracts, wills and similar documents. Paralegals conduct client and witness interviews, engage in basic fact-finding and investigation, and assist in trial preparation and discovery. At all times they remain cognizant of the ethical responsibilities owed by the supervising lawyer to clients, other lawyers and the court system.
The paralegal studies program does not train lawyers or legal administrators. The associate degree is approved by the American Bar Association. The minor is not designed to prepare students to work as paralegals and is not approved by the American Bar Association.

**Degree**
- A.A.S., Paralegal Studies (p. 127)

**Minor**
- Minor, Paralegal Studies (p. 127)

**A.A.S., Paralegal Studies**

1. Complete ENGL F111X with a grade of C or better prior to admission to the program.

Minimum Requirements for Degree: 61 credits

Students must earn a C- grade or better in each course.

**General University Requirements**
Complete the general university requirements. (p. 87)

**A.A.S. Degree Requirements**
Complete the A.A.S. degree requirements. (p. 93)

**Program Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS F102</td>
<td>Introduction to Paralegal Studies</td>
<td>3</td>
</tr>
<tr>
<td>PLS F105</td>
<td>Introduction to Paralegal Ethics</td>
<td>2</td>
</tr>
<tr>
<td>PLS F201</td>
<td>Practical Paralegal Skills</td>
<td>3</td>
</tr>
<tr>
<td>PLS F210</td>
<td>Civil Procedure</td>
<td>3</td>
</tr>
<tr>
<td>PLS F260</td>
<td>Computers in the Law Office</td>
<td>3</td>
</tr>
<tr>
<td>PLS F280</td>
<td>Legal Research and Writing for Paralegals</td>
<td>3</td>
</tr>
<tr>
<td>PLS F285</td>
<td>Advanced Legal Writing</td>
<td>2</td>
</tr>
<tr>
<td>PLS F299</td>
<td>Paralegal Studies Internship</td>
<td>3</td>
</tr>
<tr>
<td>PS F101</td>
<td>Introduction to American Government and Politics</td>
<td>3</td>
</tr>
<tr>
<td>or JUST F110X</td>
<td>Introduction to Justice</td>
<td></td>
</tr>
</tbody>
</table>

Select one from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS F303</td>
<td>Politics and the Judicial Process</td>
<td>3</td>
</tr>
<tr>
<td>PS F300X</td>
<td>Ethics and Society</td>
<td></td>
</tr>
<tr>
<td>JUST F300X</td>
<td>Ethics and Justice</td>
<td></td>
</tr>
</tbody>
</table>

Select one from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PS F435</td>
<td>Constitutional Law I: Federalism</td>
<td>3</td>
</tr>
<tr>
<td>PS F436</td>
<td>Constitutional Law II: Civil Rights and Liberties</td>
<td></td>
</tr>
<tr>
<td>JRN F413</td>
<td>Mass Media Law and Regulation</td>
<td></td>
</tr>
</tbody>
</table>

Select five from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS F203</td>
<td>Torts</td>
<td></td>
</tr>
<tr>
<td>PLS F213</td>
<td>Criminal Law for Paralegals</td>
<td></td>
</tr>
<tr>
<td>PLS F215</td>
<td>Contracts/Real Property</td>
<td></td>
</tr>
<tr>
<td>PLS F240</td>
<td>Family Law</td>
<td></td>
</tr>
<tr>
<td>PLS F242</td>
<td>Employment and Administrative Law</td>
<td></td>
</tr>
<tr>
<td>PLS F250</td>
<td>Probate Law</td>
<td></td>
</tr>
<tr>
<td>PLS F275</td>
<td>Business Organizations</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits 46

**Note:** Students interested in the paralegal studies degree should consult the program coordinator before enrolling in paralegal courses. Transfer credits for paralegal courses completed at other institutions are subject to approval by the program coordinator. No more than 15 credit hours of paralegal courses completed at other institutions will be applied toward completion of the A.A.S. degree in paralegal studies at UAF.

**Minor, Paralegal Studies**

Minimum Requirements for Minor: 15 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS F102</td>
<td>Introduction to Paralegal Studies</td>
<td>3</td>
</tr>
<tr>
<td>PLS electives</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

**Paramedicine**

Community and Technical College
907-455-2800
www.ctc.uaf.edu/programs/emergency/ (http://www.ctc.uaf.edu/programs/emergency)

**A.A.S. Degree**

Minimum Requirements for Degree: 69-73 credits

The Community and Technical College paramedic program is accredited by the Commission on Accreditation of Allied Health Education Programs upon recommendation of the Committee on Accreditation of Education Programs for EMS Professions, 1361 Park St., Clearwater, FL 33756, 727-210-2350.

The emergency medical services program offers excellent instruction, clinical experience, state-of-the-art simulation labs and practical vocational experience for the student seeking to become a paramedic. Upon completion of the paramedicine program, students will be able to take the national paramedic exam. After receiving national certification, students can apply for a paramedic license through the Alaska State Medical Board.

An application must be completed for admission into the paramedicine program. Applications are reviewed by the program’s medical director and advisory board.

Applicants must have a current EMT basic certification (or have completed EMS F170), and have completed HLTH F114.

**Degree**
- A.A.S., Paramedicine (p. 127)

**A.A.S., Paramedicine**

1. Applicants must have a current EMT basic certification (or have completed EMS F170) and have completed HLTH F114.

Minimum Requirements for Degree: 69-73 credits

Students must earn a C- grade or better in each course.

**General University Requirements**
Complete the general university requirements. (p. 87)

**A.A.S. Degree Requirements**
Complete the A.A.S. degree requirements. (p. 93)

**Program Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS F170</td>
<td>EMT: Emergency Medical Technician I</td>
<td>6</td>
</tr>
</tbody>
</table>
Piloting, Professional

College of Rural and Community Development
907-474-7143
Community and Technical College
907-455-2800
www.ctc.uaf.edu/programs/pilot/ (http://www.ctc.uaf.edu/programs/pilot)

A.A.S. Degree
Minimum Requirements for Degree: 60 credits

The professional piloting program offers a series of aviation piloting courses ranging from ground school classes for private through commercial flying, Arctic survival, weather and aircraft maintenance. Rated pilots or military aviators may be eligible for credit based upon experience and FAA certificates, which may be applied towards an Associate of Applied Science degree in professional piloting or a minor in aviation technology. See department personnel for details. UAF does not offer flight instruction.

A minor in aviation technology will give students an opportunity to become familiar with the field of aviation, with particular emphasis on the use of aviation as a tool and economic process within the Alaska environment.

Degree
• A.A.S., Piloting, Professional (p. 128)

Minor
• Minor, Aviation Technology (p. 128)

A.A.S., Piloting, Professional

Minimum Requirements for Degree: 60 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 87)

A.A.S. Degree Requirements
Complete the A.A.S. degree requirements. (p. 93)

Program Requirements
<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVTY F100</td>
<td>Private Pilot Ground School</td>
<td>4</td>
</tr>
<tr>
<td>AVTY F102</td>
<td>Commercial Ground Instruction</td>
<td>3</td>
</tr>
<tr>
<td>AVTY F155</td>
<td>Preventive Maintenance (or AFPM advisor-approved course(s))</td>
<td>3</td>
</tr>
<tr>
<td>AVTY F200</td>
<td>Instrument Ground School</td>
<td>4</td>
</tr>
<tr>
<td>AVTY F231</td>
<td>Arctic Survival</td>
<td>3</td>
</tr>
<tr>
<td>AVTY F235</td>
<td>Elements of Weather</td>
<td>3</td>
</tr>
</tbody>
</table>

Program-approved major specialty electives 1

General electives 10

Total Credits 45

1 See webpage or contact department for suggested list of courses, many of which the applicant may obtain credit for based upon experience or ratings.

Minor, Aviation Technology

Minimum Requirements for Minor: 16 credits

Foundation Course
<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVTY F100</td>
<td>Private Pilot Ground School</td>
<td>4</td>
</tr>
</tbody>
</table>

Program Requirements
<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVTY F155</td>
<td>Preventive Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>AVTY F231</td>
<td>Arctic Survival</td>
<td>3</td>
</tr>
<tr>
<td>AVTY F235</td>
<td>Elements of Weather</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>AVTY elective or AFPM advisor-approved elective</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits 16

Process Technology

Community and Technical College
907-455-2800
www.ctc.uaf.edu/programs/protech/ (http://www.ctc.uaf.edu/programs/protech)

A.A.S. Degree
Minimum Requirements for Degree: 63 credits

The process technology program prepares students for employment as operations technicians in the process industry, which includes oil and gas production, mining and milling, transportation and refining, chemical manufacturing, power generation, utilities, wastewater treatment facilities maintenance, and food processing.

This A.A.S. degree program incorporates technical and academic courses covering topics such as pumps and turbines, instrumentation, safety and quality control. Summer internships give students valuable practical experience and exposure to the true nature of process technology careers.

Degree
• A.A.S., Process Technology (p. 128)

A.A.S., Process Technology

Minimum Requirements for Degree: 63 credits

Students must earn a C grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 87)

A.A.S. Degree Requirements
Complete the A.A.S. degree requirements. (p. 93)
Demonstrate competence in computer technology skills (through the process technology program assessment) or select one from the following:

- DRT F110 Computer Literacy for Technicians
- CIOS F150 Computer Business Applications
- A program advisor-approved computer applications course

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PHYS F115X</td>
<td>Physical Sciences</td>
<td>8</td>
</tr>
<tr>
<td>and CHEM F100X</td>
<td>Physical Sciences</td>
<td>(or 8 credits of program advisor-approved natural science courses)</td>
</tr>
<tr>
<td>PRT F101</td>
<td>Introduction to Process Technology</td>
<td>3</td>
</tr>
<tr>
<td>PRT F110</td>
<td>Introduction to Occupational Safety, Health and Environmental Awareness</td>
<td>3</td>
</tr>
<tr>
<td>PRT F130</td>
<td>Process Technology I: Equipment</td>
<td>4</td>
</tr>
<tr>
<td>PRT F140</td>
<td>Industrial Process Instrumentation I</td>
<td>3</td>
</tr>
<tr>
<td>PRT F144</td>
<td>Industrial Process Instrumentation II</td>
<td>3</td>
</tr>
<tr>
<td>PRT F230</td>
<td>Process Technology II: Systems</td>
<td>4</td>
</tr>
<tr>
<td>PRT F231</td>
<td>Process Technology III: Operations</td>
<td>4</td>
</tr>
<tr>
<td>PRT F250</td>
<td>Process Troubleshooting</td>
<td>3</td>
</tr>
<tr>
<td>PRT F255</td>
<td>Quality Concepts for the Process Industry</td>
<td>1</td>
</tr>
</tbody>
</table>

Major elective credits 1

Total Credits 48

1 Electives must be approved by the process technology program advisor.

Certificate

Minimum Requirements for Certificate: 32 credits

General University Requirements
Complete the general university requirements. (p. 87)

Certificate Requirements
Complete the certificate requirements. (p. 89) 1

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>RHS F120</td>
<td>Family Systems I</td>
<td>2</td>
</tr>
<tr>
<td>RHS F130</td>
<td>Processes of Community Change</td>
<td>2</td>
</tr>
<tr>
<td>RHS F140</td>
<td>Alaska Native Values and Principles</td>
<td>1</td>
</tr>
<tr>
<td>RHS F150</td>
<td>Introduction to Rural Counseling 2</td>
<td>2</td>
</tr>
<tr>
<td>RHS F220</td>
<td>Family Systems II 2</td>
<td>2</td>
</tr>
<tr>
<td>RHS F250</td>
<td>Rural Counseling II 2</td>
<td>2</td>
</tr>
<tr>
<td>RHS F260</td>
<td>Addictions: Intervention and Treatment 2</td>
<td>2</td>
</tr>
<tr>
<td>RHS F265</td>
<td>Interpersonal Violence 2</td>
<td>2</td>
</tr>
<tr>
<td>RHS F275</td>
<td>Introduction to Recovery and Mental Illness</td>
<td>2</td>
</tr>
<tr>
<td>RHS F285</td>
<td>Case Management 2</td>
<td>2</td>
</tr>
<tr>
<td>RHS F287</td>
<td>Rural Human Services Practicum</td>
<td>4</td>
</tr>
<tr>
<td>RHS F290</td>
<td>Grief and Healing 2</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Credits 25

1 As part of the certificate requirements, complete RHS F110 and RHS F115 for the human relations requirement. The communication and computation courses must be completed from the certificate requirements.

2 The Alcohol and Drug Abuse Certification review board has approved these courses toward certification or recertification of substance abuse counselors in the State of Alaska.

Note: Students spend time in intensive study at selected delivery sites.

Safety, Health and Environmental Awareness Technology

College of Rural and Community Development
Community and Technical College
907-479-2436
www.ctc.uaf.edu/osh/ (http://www.ctc.uaf.edu/osh)
Certificate
Minimum Requirements for Certificate: 37 credits

This program develops entry-level skills in industrial safety, health and environmental awareness. Courses combine the technical know-how, use of state-of-the-art equipment and hands-on experience necessary for students to obtain work in a variety of safety-related industrial fields.

Students are taught the necessary objectives and skills required to take an entry-level Occupational Health and Safety Technologist exam when coupled with other requirements as set forth by the Council on Certification of Health, Environmental and Safety Technologists.

As the process industries expand and automate, the need for qualified safety technicians increases. The Community and Technical College and the Process Technology Program are active members of the American Society of Safety Engineers.

Certificate
- Safety, Health, and Environmental Awareness Technology (p. 130)

Certificate, Safety, Health and Environmental Awareness Technology
Minimum Requirements for Certificate: 37 credits

Students must earn a C grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 87)

Certificate Requirements
Complete the certificate requirements. (p. 89)

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PRT F101</td>
<td>Introduction to Process Technology</td>
<td>3</td>
</tr>
<tr>
<td>PRT F110</td>
<td>Introduction to Occupational Safety, Health and Environmental Awareness</td>
<td>3</td>
</tr>
<tr>
<td>OSH F108</td>
<td>Injury Prevention and Risk Management</td>
<td>4</td>
</tr>
<tr>
<td>OSH F110</td>
<td>Program Assessments, Development and Implementation</td>
<td>4</td>
</tr>
<tr>
<td>OSH F120</td>
<td>Safety Program Management and Recordkeeping</td>
<td>3</td>
</tr>
<tr>
<td>OSH F180</td>
<td>Introduction to Industrial Hygiene</td>
<td>4</td>
</tr>
<tr>
<td>OSH F201</td>
<td>Workplace Injury and Incident Evaluations</td>
<td>4</td>
</tr>
<tr>
<td>OSH F250</td>
<td>Hazardous Material Operation</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits 28

Tribal Management
College of Rural and Community Development
907-474-7143
http://www.uaf.edu/iac/programs/

Certificate; A.A.S. Degree
Minimum Requirements for Certificate: 30 credits; for A.A.S. Degree: 60 credits

The tribal management program teaches the job-related skills and knowledge needed for positions within tribal and local governments and other organizations in rural Alaska. In response to the broad variety of job-related skills needed by tribal councils, administrators and staff, the tribal management certificate and A.A.S. degree programs are designed to allow students to specialize their education to target specific employment related skills. Students perform specific tasks, learn basic management rationale and explore issues in tribal government. The tribal management program provides students with fundamental knowledge of tribal governance and finance as well as hands-on education and training in subject areas important to tribal governments. Students work closely with their academic advisor to choose courses that target their employment based needs and are encouraged to specialize their education to a specific area of study, or take courses from multiple areas of study.

Students entering either the certificate or A.A.S. degree program will meet with a faculty advisor to discuss program content, requirements and planning.

Degree
- A.A.S., Tribal Management (p. 130)

Certificate
- Tribal Management (p. 132)

A.A.S., Tribal Management
Minimum Requirements for A.A.S. Degree: 60 credits

General University Requirements
Complete the general university requirements. (p. 87)

A.A.S. Degree Requirements
Complete the A.A.S. degree requirements. (p. 93)

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TM F101</td>
<td>Introduction to Tribal Government in Alaska</td>
<td>3</td>
</tr>
<tr>
<td>TM F105</td>
<td>Introduction to Managing Tribal Governments</td>
<td>3</td>
</tr>
<tr>
<td>TM F199</td>
<td>Tribal Management Practicum I</td>
<td>3</td>
</tr>
<tr>
<td>TM F201</td>
<td>Tribal Government in Alaska II</td>
<td>3</td>
</tr>
<tr>
<td>TM F205</td>
<td>Managing Tribal Governments II</td>
<td>3</td>
</tr>
<tr>
<td>TM F299</td>
<td>Tribal Management Practicum II</td>
<td>3</td>
</tr>
<tr>
<td>Select 27 credits from the following:</td>
<td>27</td>
<td></td>
</tr>
</tbody>
</table>

Environmental and Natural Resource Management

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL F104X</td>
<td>Natural History of Alaska</td>
<td></td>
</tr>
<tr>
<td>ENVI F101</td>
<td>Introduction to Environmental Science</td>
<td></td>
</tr>
<tr>
<td>FISH F101</td>
<td>Introduction to Fisheries</td>
<td></td>
</tr>
<tr>
<td>FISH F261</td>
<td>Introduction to Fisheries Utilization</td>
<td></td>
</tr>
<tr>
<td>NRM F101</td>
<td>Natural Resources Conservation and Policy</td>
<td></td>
</tr>
<tr>
<td>NRM F204</td>
<td>Public Lands Law and Policy</td>
<td></td>
</tr>
<tr>
<td>RD F245</td>
<td>Fisheries and Marine Wildlife Development in Rural Alaska</td>
<td></td>
</tr>
<tr>
<td>RD F255</td>
<td>Rural Alaska Land Issues</td>
<td></td>
</tr>
<tr>
<td>RD F265</td>
<td>Perspectives on Subsistence in Alaska</td>
<td></td>
</tr>
<tr>
<td>RD F280</td>
<td>Resource Management Research Techniques</td>
<td></td>
</tr>
</tbody>
</table>
TM F120  Introduction to Tribal Natural Resource Management
TM F140  Introduction to Geospatial Data
TM F141  Practical GIS for Rural Alaska
TM F142  Practical GIS Project Design
TM F182  Introduction to NEPA for Rural Transportation
TM F225  Cross Connections: Adapting and Integrating Principles of Management and Conservation

Community Health and Wellness
ANS F242X Native Cultures of Alaska
ANS F330 Yup’ik Parenting and Child Development
HUMS F105 Cultural Diversity in Human Services
HUMS F205 Basic Principles of Group Counseling
HUMS F260 History of Alcohol in Alaska
HUMS F265 Substance Abuse and the Family
PSY F101X Introduction to Psychology
RHS F130 Processes of Community Change
RHS F140 Alaska Native Values and Principles
RHS F150 Introduction to Rural Counseling
RHS F275 Introduction to Recovery and Mental Illness
RHS F285 Case Management
RNS F101 Rural Nutrition and Health Change
RNS F105 Nutrition Science for the Generations
RNS F120 Alaska Native Food Systems
RNS F201 Community Nutrition Interventions
RNS F210 Introduction to Rural Nutrition Counseling
SWK F103X Introduction to Social Work
SWK F220 Ethics, Values and Social Work Practice
SWK F320 Rural Social Work

Tribal Governance and Law
ANS F310 Indigenous Land Settlements
ANS F325 Native Self-Government
PS F100X Political Economy
PS/NORS F205 Leadership, Citizenship and Choice
PS F212 Introduction to Public Administration
PS F263 Alaska Native Politics
RD F110 Alaska Native Claims Settlement Act: Land Claims in the 21st Century
RD F265 Perspectives on Subsistence in Alaska
TM F110 Tribal Court Development for Alaska Tribes
TM F111 Children’s Topics in Tribal Justice
TM F112 Federal Indian Law for Alaska Tribes
TM F113 Tribal Code Development
TM F114 Tribal Justice Responses to Community and Domestic Violence
TM F115 Tribal Court Administration
TM F116 Juvenile Justice in Tribal Court
TM F117 Tribal Court Enforcement of Decisions

Tribal Planning
ABUS F101 Principles of Accounting I
ABUS F151 Village-Based Entrepreneurship
ABUS F158 Introduction to Tourism
ABUS F161 Personal and Business Finance
ABUS F179 Fundamentals of Supervision
ABUS F235 Fund Accounting for Nonprofits
ABUS F263 Public Relations
BA F151X Introduction to Business
CTT F104 Basic Communication and Employability Skills
ECON F100X Political Economy
ECON F111 Economics of Rural Alaska
RD F110 Alaska Native Claims Settlement Act: Land Claims in the 21st Century
RD F250 Grant Writing for Community Development
TM F130 Introduction to Utility Management
TM F131 Organizational Management for Utilities
TM F134 Financial Management for Utilities
TM F136 Personnel Management for Utilities

Tribal Transportation
TM F170 Fundamentals of Rural Transportation
TM F171 Introduction to the Indian Reservation Roads Program
TM F172 Conducting a Rural Transportation Inventory
TM F173 Traffic Monitoring for Rural Transportation
TM F174 Basics of a Good Gravel Road
TM F182 Introduction to NEPA for Rural Transportation
TM F271 Rural Transportation Planning
TM F272 Finance Applications for Rural Transportation
TM F273 Transportation Improvement Programs and Control Schedules
TM F274 Road Inventory Field Data System
Students can specialize in one area of study or can choose from multiple areas of study. Course substitutions relevant to tribal management may be made with the approval of the tribal management faculty advisor.

Certificate, Tribal Management

Minimum Requirements for Certificate: 30 credits

General University Requirements
Complete the general university requirements. (p. 87)

Certificate Requirements
Complete the certificate requirements. (p. 89)

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TM F276</td>
<td>Project Management for Rural Transportation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Credits</td>
<td>45</td>
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</tbody>
</table>

1 Students can specialize in one area of study or can choose from multiple areas of study. Course substitutions relevant to tribal management may be made with the approval of the tribal management faculty advisor.
Total Credits 1

1 Students can specialize in one area of study or can choose from multiple areas of study. Course substitutions relevant to Tribal Management may be made with the approval of the Tribal Management faculty advisor.

Yup’ik Language Proficiency

Alaska Native Languages Program
907-474-7874
College of Community and Rural Development
907-474-7143
www.uaf.edu/anlc/classes/ (http://www.uaf.edu/anlc/classes)

Certificate; A.A.S. Degree

Minimum Requirements for Certificate: 30 credits; for Degree: 60 credits

The Yup’ik language proficiency program is designed to provide students with the opportunity to pursue structured study of Yup’ik in order to develop intermediate-level speaking and listening skills, as well as basic reading and writing abilities in the language. The certificate may serve as a step on the way to a two-year or four-year degree.

Degree
• A.A.S., Yup’ik Language Proficiency (p. 133)

Certificate
• Yup’ik Language Proficiency (p. 133)

A.A.S., Yup’ik Language Proficiency

Minimum Requirements for Degree: 60 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 87)

A.A.S. Degree Requirements
Complete the A.A.S. degree requirements. (p. 93)

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESK F208</td>
<td>Yup’ik Composition</td>
<td>3</td>
</tr>
<tr>
<td>ESK F130</td>
<td>Beginning Yup’ik Grammar</td>
<td>3</td>
</tr>
<tr>
<td>ESK F240</td>
<td>Introduction to Reading and Writing Yup’ik</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one from the following sequences: 12

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESK F121</td>
<td>Elementary Central Yup’ik Apprenticeship I and Elementary Central Yup’ik Apprenticeship II and Elementary Central Yup’ik Apprenticeship III</td>
<td>12</td>
</tr>
<tr>
<td>ESK F122 and ESK F123</td>
<td>Intermediate Central Yup’ik Apprenticeship I and Intermediate Central Yup’ik Apprenticeship II and Intermediate Central Yup’ik Apprenticeship III</td>
<td>12</td>
</tr>
<tr>
<td>ESK F103 and ESK F104 and ESK F203 and ESK F204</td>
<td>Conversational Central Yup’ik and Conversational Central Yup’ik and Conversational Central Yup’ik and Conversational Central Yup’ik</td>
<td>12</td>
</tr>
</tbody>
</table>

Certificate, Yup’ik Language Proficiency

Minimum Requirements for Certificate: 30 credits

General University Requirements
Complete the general university requirements. (p. 87)

Certificate Requirements
Complete the certificate requirements. (p. 89) 1

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
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</table>

Select one from the following sequences: 12

<table>
<thead>
<tr>
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<th>Credits</th>
</tr>
</thead>
<tbody>
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<td>12</td>
</tr>
<tr>
<td>ESK F122 and ESK F123</td>
<td>Intermediate Central Yup’ik Apprenticeship I and Intermediate Central Yup’ik Apprenticeship II and Intermediate Central Yup’ik Apprenticeship III</td>
<td>12</td>
</tr>
<tr>
<td>ESK F103 and ESK F104 and ESK F203 and ESK F204</td>
<td>Conversational Central Yup’ik and Conversational Central Yup’ik and Conversational Central Yup’ik and Conversational Central Yup’ik</td>
<td>12</td>
</tr>
</tbody>
</table>

Total Credits 30

1 As part of the certificate requirements, the communication, computation and human relations content is embedded in some of the major required courses for this program.
### Bachelor's Degrees

To earn a UAF degree, you must satisfy the following sets of requirements: general university requirements, degree requirements and program (major) requirements. General university requirements and degree requirements are described in this section of the catalog; major requirements are found in the Bachelor's Degree Programs section; for bachelor's degree requirements in brief, see Summary of Bachelor's Degree Requirements (p. 139) chart.

If your degree program is delivered collaboratively within the UA system, credits you earn from each UA institution will be counted toward fulfillment of degree requirements and the minimum institutional residency requirements. You must contact Admissions to bring any credit from another UA system in. Credits will not transfer automatically. Institutional residency requirements are the minimum number of credits you must earn from the campus where you earn a degree.

### General University Requirements

For a UAF bachelor's degree, you must earn at least 120 semester credits, including transfer credits, at the 100-level or above. Of these, 39 credits must be upper-division (300-level or above), of which 24 must be UA residence credits and 15 must be UAF credits.

At least 30 semester credits applicable to any bachelor's degree must be earned at UAF. Transfer students need to earn at least 24 upper-division semester credits at UA, of which 15 must be UAF credits. Transfer students must earn at least 12 semester credits in the major and at least 3 semester credits in the minor. You must earn a C- grade or higher in all courses required for your degree, unless otherwise specified by your major (major, minor, general education requirements and degree requirements).

Unless otherwise specified, a course may be used more than once toward fulfilling degree, certificate, major and minor requirements. Credit hours for these courses count only once toward total credits required for the degree or certificate.

Since ENGL F211X and ENGL F213X are writing courses, either will satisfy the second half of the requirement in written communication for the bachelor’s degree. But you can’t enroll in ENGL F211X or ENGL F213X without first fulfilling the ENGL F111X requirement. (See Local Advanced Placement Credit — English (p. 30).)

### General University Requirements for Baccalaureate Degrees

| Minimum number of credits | 120 credits |
| Credit earned at UAF (residence credit) | 30 credits |
| Upper-division credit (courses with numbers between F300 and F499) | 39 credits total (some degrees require more); 24 of the 39 must be earned at UA and 15 at UAF |
| Additional UAF credit that must be earned by transfer students | 12 credits in the major; 3 credits in the minor |
| Grade point average | 2.0 cumulative and 2.0 in both the major and minor |

### Majors

You may declare a major when you are admitted to UAF as a degree-seeking undergraduate student. If you haven't chosen a major you'll be enrolled as a general studies student. Nondegree students are not eligible to declare a major, be assigned class standing or receive financial aid.

Students enrolled in associate degree or certificate programs who want to declare a bachelor’s degree major must apply for admission to a degree program following the standard admission process for bachelor's degree programs. The same is true for students enrolled in a bachelor’s degree program who want to declare an associate degree or certificate program major. (See admission requirements (p. 24).)

- Changing Your Major

Undergraduate students may change majors by completing a change of major form available from the Office of Admissions and the Registrar or online at the registrar website. A change of major becomes effective after it is processed by the Office of Admissions and the Registrar. Graduating seniors must have change of majors submitted with their graduation application to be considered in that program.

### Concentrations

A concentration is an area of emphasis including the program requirement courses within a student’s degree program. Some programs at UAF require a concentration, others do not. A student may only earn one degree in a specific discipline once. Using different concentrations within a degree program to count as different degrees is not allowed. Double concentrations are permitted with departmental approval.

### Minors

A minor is a component of a bachelor's degree. The Bachelor of Arts degrees requires a minor. You must satisfactorily complete the requirements for a minor before a B.A. degree can be awarded. A minor is optional for Bachelor of Fine Arts, Bachelor of Applied Arts and Sciences, Bachelor of Science, Bachelor of Business Administration, Bachelor of Music and Bachelor of Emergency Management degrees.

A minor from UAF consists of a minimum of 15 credits, at least 3 of which have to be earned at UAF. Students must earn a cumulative GPA of at least 2.0 (C) in the minor and follow minor requirements from the same academic catalog used for their bachelor's program. An Associate of Applied Science degree or certificate of at least 30 credits earned at any regionally accredited college or university may be used to meet requirements for a minor in B.A. degree programs.

Some minors require more than 15 credits and approval from the department. Refer to specific requirements listed in the Bachelor’s Degree Program section. Students seeking minors can use DegreeWorks to review their options. Results in DegreeWorks will be more accurate.
after submitting a declaration of minor form to the Office of Admissions and the Registrar by the beginning of the senior year.

SECOND BACHELOR’S DEGREE

UAF graduates who want to earn a second bachelor’s degree must complete at least 24 hours of credit beyond the first bachelor’s degree. Students must meet all general university requirements, degree requirements and major requirements for both degrees.

Students who earned a bachelor’s degree from another college or university must be accepted for admission as a transfer student. All general university requirements (including residency requirement), degree and major requirements must be met. Students who graduated from a regionally accredited college or university, however, will be considered to have completed the equivalent of the UAF baccalaureate general education requirements.

DOUBLE DEGREES

Students who want to earn more than one UAF bachelor’s degree must complete all general requirements as well as all major and minor requirements (if any) for all degrees. At least 24 semester credit hours beyond the total required for the first degree need to be earned before any additional degrees can be awarded. For two degrees completed at the same time, students may follow requirements from two different catalogs.

Differences Between Double Majors and Double Degrees

<table>
<thead>
<tr>
<th></th>
<th>Double Majors</th>
<th>Double Degrees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree(s) earned</td>
<td>One bachelor’s degree is earned. The Bachelor of Arts degree requires the completion of two majors rather than a major and a minor. Majors are selected from those approved for the B.A. degree. The Bachelor of Science degree requires the completion of a double major instead of a single major. Majors are selected from those approved for the B.S. degree.</td>
<td>More than one bachelor’s degree is earned. Can be the same degree (e.g., two BAs) or different degrees, (e.g., B.A. and B.S., B.B.A. and B.S., B.F.A. and B.A., etc.). Each degree is independent of the other. If requirements for one degree are not completed as scheduled, the other degree may be awarded if all requirements are met.</td>
</tr>
<tr>
<td>Graduation application</td>
<td>A single graduation application and fee is required.</td>
<td>A separate graduation application and fee is required for each degree.</td>
</tr>
<tr>
<td>Catalog year</td>
<td>A single catalog is followed for both majors to meet requirements.</td>
<td>Different catalogs may be followed to meet requirements for each degree.</td>
</tr>
<tr>
<td>General university requirements and major requirements</td>
<td>All general university requirements and all major requirements for both majors must be met.</td>
<td>All general university requirements as well as all major and minor requirements (if any) must be met for each degree.</td>
</tr>
</tbody>
</table>

Credit hours required
If one major is from a program that requires 120 total credits and the other major is from a program that requires 130 total credits, the 130 total credits must be completed.

At least 24 semester credit hours beyond the total required for the first degree must be completed before an additional degree can be awarded.

RESIDENCE CREDIT

Residence credit is course credit earned through any unit of UAF. Formal classroom instruction, correspondence study, distance-delivered courses, individual study or research at UAF are all considered residence credit. On the other hand, transfer credit, advanced placement credit, credit for prior learning, military service credit and credit granted through nationally prepared examinations are not considered resident credit, nor are credit-by-examination credits earned through locally prepared tests. None of these types of credit can be applied to UAF residency requirements. UAF residence credit takes precedence over any nonresident credits.

For example, if a student has AP credit for a course, but takes the same courses at UAF, the AP credit will be excluded and the UAF course will be applied to the degree requirements.

RESIDENCY REQUIREMENT

Most universities have residency requirements that call for a certain number of credits toward a degree to be earned at the degree-granting school. At UAF, the residency requirement for bachelor’s degrees is 30 resident credits.

DEGREE REQUIREMENTS AND TIME LIMITS

You may complete degree requirements in effect and published in the UAF catalog in any one of the previous seven academic years in which you are enrolled as a degree student for a bachelor’s degree. You’re considered enrolled in your degree program when you complete the appropriate degree student registration procedure. If you do not enroll for a semester or more, or if you enroll through the nondegree student registration process, you aren’t considered enrolled as a degree student during that time.

EXCEPTIONS TO DEGREE REQUIREMENTS

Occasionally an undergraduate student may request an exception to an academic requirement or regulation. Requests for an academic dispensation must be approved by petition. If you submit a petition on the basis of a disability, the coordinator of Disability Services will be consulted. Petition forms are available at the Office of Admissions and the Registrar or online at the registrar website. Forms need to be returned to the Office of Admissions and the Registrar with required signatures of approval. The Office of Admissions and the Registrar will notify you once the appropriate person or committee has made a decision about whether to approve your petition. Academic petitions fall into three categories and each involves different processes:

- General Education Requirements Petitions
  If your petition deals with baccalaureate general education requirements, your advisor and the head of the department of the academic area involved must grant approval. Submit your signed petition to the Office of Admissions and the Registrar. It will then be forwarded to the chair of the Faculty Senate General Education Requirements Curriculum Review Committee for consideration.

- Major or Minor Degree Requirement Petitions
If you want to waive or substitute courses within your major or minor requirements, you need approval signatures from your advisor and the department or program head of your major or minor area. Submit your signed petition to the Office of Admissions and the Registrar.

- Petitions for Other Requirements
If your petition deals with general university and/or specific requirements for your degree or other academic policies, you need approval from your advisor and the dean or director of the college or school in which your major is located. Submit your signed petition to the Office of Admissions and the Registrar. It will then be forwarded to the Provost for consideration.

RESERVING COURSES FOR GRADUATE PROGRAMS
Seniors who have only a few remaining requirements for a bachelor’s degree may take courses at the 400 or 600 graduate course level and have them reserved for an advanced degree. Courses reserved for use toward a graduate program cannot also be counted toward requirements for your bachelor’s degree. Unless otherwise notified in writing that the courses are to be used toward the undergraduate program, 600-level graduate courses will automatically be reserved for the advanced degree. To reserve one or more courses, you must be in your final year of an undergraduate program. Submit a written request to the Office of Admissions and the Registrar during the first four weeks of the semester. The request should identify which semester courses you want reserved for graduate study and not counted toward your bachelor’s degree. (Reserving courses does not, however, assure that a graduate advisory committee will accept them as part of your eventual graduate program.)

GRADUATION
- Responsibility
You are responsible for meeting all requirements for graduation. You are encouraged to use DegreeWorks throughout your college career to ensure you are on track to graduate.

- Application for Graduation
You need to formally apply for graduation. An application for graduation and non-refundable fee must be filed with the Office of Admissions and the Registrar. We encourage students to apply the semester prior to the semester you plan to graduate. If you file your application by the published deadline, the graduation application fee is $50. If you miss that deadline, you can submit a late application for graduation by the published late graduation deadline for that semester. The fee for a late application is $80. Applications for graduation filed after the late deadline are processed for graduation the following semester. Students who apply for graduation and who do not complete degree requirements by the end of the semester must reapply for graduation and repay the fee.

- Diplomas and Commencement
UAF issues diplomas to graduates three times a year: in September, January and June. Students who complete degree requirements for UA Board of Regents-approved academic programs during the academic year are invited to participate in the annual commencement ceremony at the end of spring semester. Names of students receiving degrees/certificates appear in the commencement program and are released to the media unless you submit a written request not to do so to the graduation department. (See Information Release and FERPA (p. 50.) Graduates are responsible for ordering caps and gowns through the UAF bookstore in early spring.

- Graduation with Honors
Graduation with honors is a tribute that recognizes academic achievement. Honors graduates have earned a cumulative GPA of 3.5 or higher in all college work. If a student’s overall cumulative GPA is 3.5 or higher, a student graduates with the distinction of cum laude; 3.75 or higher, magna cum laude; 3.9 or higher and no grade lower than A; summa cum laude. Your cumulative GPA for graduation with honors is based on all college work attempted at UAF, including any repeated or omitted credits due to Fresh Start. For transfer students to be considered for graduation with honors, they must have:
  • 3.5 cumulative GPA in all attempted UAF credits, and
  • UAF residence credit of 48 semester hours for a bachelor’s degree.

Once those requirements are met, a cumulative GPA is calculated combining all college work attempted at UAF, as well as all college work attempted at any other institutions you’ve attended, including repeated credits and any credits that may not have been accepted for transfer to UAF. The combined cumulative GPA must also be 3.5 or higher for a transfer student to graduate with honors.

Types of Bachelor’s Degrees
- Bachelor of Arts
The B.A. degree emphasizes written and oral communication skills, creative thinking, critical analyses of texts, understanding cultures, and a working knowledge of social, political and historical contexts. The degree is typically pursued by students whose major areas of study are directed toward humanities, arts and social science disciplines.

- Bachelor of Applied Arts and Sciences
The B.A.A.S. interdisciplinary degree designed for students with technical or vocational backgrounds who want to enhance their experiences with more advanced academic pursuits.

- Bachelor of Business Administration
The B.B.A. degree is the undergraduate equivalent of an MBA. Students explore a wide spectrum of business-related issues to develop advanced business, management and administration skills required in organizational settings at senior levels, and to accelerate high-level career development in the workplace.

- Bachelor of Emergency Management
The B.E.M. degree prepares students for professional careers responding to natural and man made disasters, forming crisis management plans and ensuring public safety. Students with backgrounds ranging from first responders and military to applied vocational skills will graduate ready to start or advance in careers in emergency management, homeland security, public safety and emergency services.

- Bachelor of Fine Arts
The B.F.A. degree has a rigorous curriculum designed to prepare talented students for professional careers in the arts.

- Bachelor of Music
The B.M. degree encourages acquisition of skills and display of talent in music, with special emphasis on aesthetic performance and understanding.

- Bachelor of Science
The B.S. degree emphasizes oral and written communication skills and analytical skills for examining and solving problems. The degree is typically pursued by students whose major areas of
study are directed toward natural sciences, mathematics, statistics, engineering, computer science and some social science fields.

**Bachelor’s Degree Requirements**

**THE GENERAL EDUCATION REQUIREMENTS**

For a summary of the general education requirements see the general education requirements (p. 137) chart. Undergraduate bachelor’s study at UAF is characterized by a common set of learning experiences known as the General Education Requirements. General education objective and learning outcomes for undergraduate students seeking baccalaureate degrees at the University of Alaska Fairbanks:

1. Build knowledge of human institutions, sociocultural processes, and the physical and natural world through the study of the natural and social sciences, technologies, mathematics, humanities, histories, languages and the arts.
   - Competence will be demonstrated for the foundational information in each subject area, its context and significance, and the methods used in advancing each.

2. Develop intellectual and practical skills across the curriculum, including inquiry and analysis, critical and creative thinking, problem solving, written and oral communication, information literacy, technological competence, and collaborative learning.
   - Proficiency will be demonstrated across the curriculum through critical analysis of proffered information, well-reasoned solutions to problems or inferences drawn from evidence, effective written and oral communication, and satisfactory outcomes of group projects.

3. Acquire tools for effective civic engagement in local through global contexts, including ethical reasoning, intercultural competence, and knowledge of Alaska and Alaska issues.
   - Facility will be demonstrated through analyses of issues including dimensions of ethics, human and cultural diversity, conflicts and interdependencies, globalization and sustainability.

4. Integrate and apply learning, including synthesis and advanced accomplishment across general and specialized studies, adapting them to new settings, questions and responsibilities, and forming a foundation for lifelong learning.
   - Preparation will be demonstrated through production of a creative or scholarly product that requires broad knowledge, appropriate technical proficiency, information collection, synthesis, interpretation, presentation and reflection.

Courses that satisfy the GER have course numbers ending with X. For example, English F111X and Communication F141X meet specific GER communication requirements. Credit may be counted toward general education requirements or a degree major requirement, but not both. If additional courses are added to GER in later catalog years, students may use them to fulfill a specific GER in this catalog year. Students must earn a C- grade or higher in each course used to meet a baccalaureate GER.

**General Education Requirements at a Glance**

Refer to tables below for specific courses.

<table>
<thead>
<tr>
<th>Category</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication (p. 137)</td>
<td>9</td>
</tr>
<tr>
<td>Library and Information Research (p. 137)</td>
<td>0-1</td>
</tr>
<tr>
<td>Arts (p. 138)</td>
<td>3</td>
</tr>
<tr>
<td>Humanities (p. 138)</td>
<td>3-5</td>
</tr>
<tr>
<td>Social Sciences (p. 138)</td>
<td>6</td>
</tr>
<tr>
<td>Additional Arts/Humanities/Social Sciences (p. 138)</td>
<td>3-5</td>
</tr>
<tr>
<td>Ethics (p. 138)</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics (p. 139)</td>
<td>3-4</td>
</tr>
<tr>
<td>Natural Sciences (p. 139)</td>
<td>8</td>
</tr>
<tr>
<td>Upper-Division W- and O-Intensive (p. 139)</td>
<td>varies</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>38-44</strong></td>
</tr>
</tbody>
</table>

**Course Requirements**

**COMMUNICATION**

Complete the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL F111X</td>
<td>Introduction to Academic Writing</td>
<td>3</td>
</tr>
<tr>
<td>ENGL F211X</td>
<td>Academic Writing about Literature</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL F213X</td>
<td>Academic Writing about the Social and Natural</td>
<td></td>
</tr>
<tr>
<td>Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COMM F121X</td>
<td>Introduction to Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>or COMM F131X</td>
<td>Fundamentals of Oral Communication: Group Context</td>
<td></td>
</tr>
<tr>
<td>or COMM F141X</td>
<td>Fundamentals of Oral Communication: Public Context</td>
<td></td>
</tr>
</tbody>
</table>

**LIBRARY AND INFORMATION RESEARCH**

Complete one of the following prior to junior standing: 0-1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>LS F101X</td>
<td>Library Information and Research</td>
</tr>
</tbody>
</table>
### General Education Requirements

#### ARTS
Select one course from the following: 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANS/FLPA F161X</td>
<td>Introduction to Alaska Native Performance</td>
</tr>
<tr>
<td>ANS F202X</td>
<td>Aesthetic Appreciation of Alaska Native Performance</td>
</tr>
<tr>
<td>ANS/MUS/NORS F223X</td>
<td>Alaska Native Music</td>
</tr>
<tr>
<td>ART F200X</td>
<td>Explorations in Art</td>
</tr>
<tr>
<td>ART F261X</td>
<td>History of World Art</td>
</tr>
<tr>
<td>ART F262X</td>
<td>History of World Art</td>
</tr>
<tr>
<td>ENGL/FLPA/JRN F217X</td>
<td>Introduction to the Study of Film</td>
</tr>
<tr>
<td>FLPA/JRN F105X</td>
<td>History of the Cinema</td>
</tr>
<tr>
<td>FLPA F200X</td>
<td>Performance, Production and the Audience</td>
</tr>
<tr>
<td>FLPA F215X</td>
<td>Dramatic Literature and History</td>
</tr>
<tr>
<td>HUM F201X</td>
<td>Unity in the Arts</td>
</tr>
<tr>
<td>MUS F103X</td>
<td>Music Fundamentals</td>
</tr>
<tr>
<td>MUS F125X</td>
<td>Enjoying Jazz</td>
</tr>
<tr>
<td>MUS F200X</td>
<td>Exploration in Music</td>
</tr>
</tbody>
</table>

#### HUMANITIES
Select one from the following: 3-5

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANL F141X</td>
<td>Beginning Athabascan-Koyukon or Gwich’in</td>
</tr>
<tr>
<td>ANL F142X</td>
<td>Beginning Athabascan</td>
</tr>
<tr>
<td>ANL F251X</td>
<td>Introduction to Athabascan Linguistics</td>
</tr>
<tr>
<td>ANL F255X</td>
<td>Introduction to Alaska Native Languages</td>
</tr>
<tr>
<td>ASLG F101X</td>
<td>American Sign Language I</td>
</tr>
<tr>
<td>ASLG F202X</td>
<td>American Sign Language II</td>
</tr>
<tr>
<td>ENGL/FL F200X</td>
<td>World Literature</td>
</tr>
<tr>
<td>ENGL F270X</td>
<td>Introduction to Creative Writing</td>
</tr>
<tr>
<td>ESK F101X</td>
<td>Elementary Central Yup’ik</td>
</tr>
<tr>
<td>ESK F102X</td>
<td>Elementary Central Yup’ik</td>
</tr>
<tr>
<td>ESK F111X</td>
<td>Elementary Inupiaq</td>
</tr>
<tr>
<td>ESK F112X</td>
<td>Elementary Inupiaq</td>
</tr>
<tr>
<td>FREN F101X</td>
<td>Elementary French I</td>
</tr>
<tr>
<td>FREN F102X</td>
<td>Elementary French II</td>
</tr>
<tr>
<td>GER F101X</td>
<td>Elementary German I</td>
</tr>
<tr>
<td>GER F102X</td>
<td>Elementary German II</td>
</tr>
<tr>
<td>JPN F101X</td>
<td>Elementary Japanese I</td>
</tr>
<tr>
<td>JPN F102X</td>
<td>Elementary Japanese II</td>
</tr>
<tr>
<td>JRN F101X</td>
<td>Media and Culture</td>
</tr>
<tr>
<td>JRN F102X</td>
<td>Introduction to Broadcasting</td>
</tr>
<tr>
<td>LAT F101X</td>
<td>Beginning Latin I</td>
</tr>
<tr>
<td>LAT F102X</td>
<td>Beginning Latin II</td>
</tr>
<tr>
<td>LING F101X</td>
<td>Nature of Language</td>
</tr>
<tr>
<td>LING F216X</td>
<td>Languages of the World</td>
</tr>
<tr>
<td>PHIL F102X</td>
<td>Introduction to Philosophy</td>
</tr>
<tr>
<td>PHIL F104X</td>
<td>Logic and Reasoning</td>
</tr>
<tr>
<td>RELG F221X</td>
<td>Religions of the World</td>
</tr>
<tr>
<td>RUSS F101X</td>
<td>Elementary Russian I</td>
</tr>
<tr>
<td>RUSS F102X</td>
<td>Elementary Russian II</td>
</tr>
<tr>
<td>SPAN F101X</td>
<td>Elementary Spanish I</td>
</tr>
<tr>
<td>SPAN F102X</td>
<td>Elementary Spanish II</td>
</tr>
</tbody>
</table>

#### SOCIAL SCIENCES
Select two from the following in two different disciplines: 6

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT F261X</td>
<td>Principles of Financial Accounting</td>
</tr>
<tr>
<td>ANS F242X</td>
<td>Native Cultures of Alaska</td>
</tr>
<tr>
<td>ANTH F100X</td>
<td>Individual, Society and Culture</td>
</tr>
<tr>
<td>ANTH F101X</td>
<td>Introduction to Anthropology</td>
</tr>
<tr>
<td>ANTH F111X</td>
<td>Ancient Civilizations</td>
</tr>
<tr>
<td>ANTH F211X</td>
<td>Fundamentals of Archaeology</td>
</tr>
<tr>
<td>BA F151X</td>
<td>Introduction to Business</td>
</tr>
<tr>
<td>COMM F180X</td>
<td>Introduction to Human Communication</td>
</tr>
<tr>
<td>ECE F104X</td>
<td>Child Development I: Prenatal, Infants and Toddlers</td>
</tr>
<tr>
<td>ECON F100X</td>
<td>Political Economy</td>
</tr>
<tr>
<td>ECON F201X</td>
<td>Principles of Economics I: Microeconomics</td>
</tr>
<tr>
<td>ECON F202X</td>
<td>Principles of Economics II: Macroeconomics</td>
</tr>
<tr>
<td>ECON F235X</td>
<td>Introduction to Natural Resource Economics</td>
</tr>
<tr>
<td>GEOG F101X</td>
<td>Expedition Earth: Introduction to Geography</td>
</tr>
<tr>
<td>HIST F100X</td>
<td>Modern World History</td>
</tr>
<tr>
<td>HIST F102X</td>
<td>Western Civilization Since 1500</td>
</tr>
<tr>
<td>HIST F122X</td>
<td>East Asian Civilization</td>
</tr>
<tr>
<td>HIST F132X</td>
<td>History of the U.S.</td>
</tr>
<tr>
<td>JUST F110X</td>
<td>Introduction to Justice</td>
</tr>
<tr>
<td>PS F100X</td>
<td>Political Economy</td>
</tr>
<tr>
<td>PS F201X</td>
<td>Comparative Politics</td>
</tr>
<tr>
<td>PSY F101X</td>
<td>Introduction to Psychology</td>
</tr>
<tr>
<td>RD F200X</td>
<td>Rural Development in the North</td>
</tr>
<tr>
<td>SWK F103X</td>
<td>Introduction to Social Work</td>
</tr>
<tr>
<td>SOC F100X</td>
<td>Individual, Society and Culture</td>
</tr>
<tr>
<td>SOC F201X</td>
<td>Social Problems</td>
</tr>
<tr>
<td>WGS F201X</td>
<td>Introduction to Women’s and Gender Studies</td>
</tr>
</tbody>
</table>

#### ADDITIONAL ARTS/HUMANITIES/SOCIAL SCIENCES
Complete one additional course from the arts, humanities or social sciences courses listed above.

#### ETHICS
Select one from the following: 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA F323X</td>
<td>Business Ethics</td>
</tr>
<tr>
<td>COMM F300X</td>
<td>Communicating Ethics</td>
</tr>
<tr>
<td>JUST F300X</td>
<td>Ethics and Justice</td>
</tr>
<tr>
<td>NRM F303X</td>
<td>Environmental Ethics and Actions</td>
</tr>
<tr>
<td>PHIL F322X</td>
<td>Ethics</td>
</tr>
<tr>
<td>PS F300X</td>
<td>Ethics and Society</td>
</tr>
</tbody>
</table>
MATHEMATICS
Select one from the following: 3-4
- MATH F113X Concepts and Contemporary Applications of Mathematics
- MATH F122X Precalculus for Business and Economics
- MATH F151X College Algebra for Calculus
- MATH F152X Trigonometry
- MATH F156X Precalculus
- MATH F230X Calculus Essentials with Applications
- MATH F251X Calculus I
- MATH F252X Calculus II
- MATH F253X Calculus III
- STAT F200X Elementary Probability and Statistics

NATURAL SCIENCES
Select two from the following: 8
- ATM F101X Weather and Climate of Alaska
- BIOL F100X Human Biology
- BIOL F103X Biology and Society
- BIOL F104X Natural History of Alaska
- BIOL F115X Fundamentals of Biology I
- BIOL F116X Fundamentals of Biology II
- BIOL F120X Introduction to Human Nutrition
- BIOL F213X Human Anatomy and Physiology I
- BIOL F214X Human Anatomy and Physiology II
- CHEM F100X Chemistry in Complex Systems
- CHEM F103X Basic General Chemistry
- CHEM F104X Survey of Organic Chemistry and Biochemistry
- CHEM F105X General Chemistry I
- CHEM F106X General Chemistry II
- CHEM F111X Introduction to Environmental Chemistry of the Arctic
- GEOG F111X Earth and Environment: Elements of Physical Geography
- GEOS F100X Introduction to Earth Science
- GEOS F101X The Dynamic Earth
- GEOS F106X Life in the Age of Dinosaurs
- GEOS F112X The History of Earth and Life
- GEOS F120X Glaciers, Earthquakes and Volcanoes: Past, Present and Future
- MSL F111X The Oceans
- PHYS F102X Energy and Society
- PHYS F103X College Physics I
- PHYS F104X College Physics II
- PHYS F115X Physical Sciences
- PHYS F175X Introduction to Astronomy
- PHYS F211X General Physics I
- PHYS F212X General Physics II
- PHYS F213X Elementary Modern Physics

UPPER-DIVISION WRITING AND ORAL COMMUNICATION
Courses meeting the upper-division writing-intensive and oral-intensive communication requirements for the baccalaureate degree are identified in the course description of the catalog with the following designators:
- W - Writing-Intensive Course
- O or O/2 - Oral-Intensive Communication Course

Complete the following at the upper-division level:
Two writing-intensive courses designated (W)
One oral-intensive communication course designated (O) or two oral-intensive communication courses designated (O/2)
(See degree and/or major requirements.)

1 Or any math course having one of these as a prerequisite.
2 You may earn credit for MATH F151X or MATH F122X but not both.
3 You may earn credit for MATH F251X or MATH F230X but not both.

Summary of Bachelor's Degree Requirements
General education requirements must be completed by all students. Additionally, each degree program (e.g., B.A., B.B.A.) may have specific required courses.

See a list of all bachelor's degree programs here. (p. 148)

BACHELOR OF ARTS AND BACHELOR OF FINE ARTS

<table>
<thead>
<tr>
<th>Requirement Type</th>
<th>General Education Requirements</th>
<th>Degree Specific Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>ENGL F111X, ENGL F211X or ENGL F213X, COMM F121X, COMM F131X or COMM F141X</td>
<td>2 courses designated upper-division writing-intensive (W) and either 1 designated upper-division oral-intensive (O) course or 2 upper-division oral-intensive courses designated 0/2</td>
</tr>
</tbody>
</table>

Library and Information Research
- LS F101X or successful completion of library skills competency test
## Summary of Bachelor's Degree Requirements

### Arts

### Humanities

### Social Sciences

### Ethics
Complete one from the following: BA F323X, COMM F300X, JUST F300X, NRM F303X, PHIL F322X, PS F300X

### Mathematics
Complete one from the following: MATH F113X, MATH F122X, MATH F151X, MATH F152X, MATH F156X, MATH F230X, MATH F251X, MATH F252X, MATH F253X, or STAT F200X or any math course having one of these as a prerequisite

### Natural Sciences

### Other
One additional Arts, Humanities or Social Sciences from the lists above.

### Notes:
You must earn a C- grade or higher in all courses required for your degree unless otherwise specified by your major (major, minor, general education requirements and degree requirements).

### Major Complex
At least 30 cr

### Minor Complex
Required: at least 15 cr

### Total Required
38-44 cr 120 cr

### B.F.A. general requirements are the same as the requirements for the B.A. degree except a minor is not required for the B.F.A.
Department requirements for majors and minors may exceed the minimums indicated.

Of the above, at least 39 credits must be taken in upper-division (300-level or higher) courses. Courses beyond 30 credits in a major complex and 15 credits in a minor complex may be used to fulfill the B.A. degree requirements in humanities, social sciences or mathematics. Courses used to fulfill requirements for a minor may be used at the same time to fill major or general distribution requirements if so designated.

Students who hold a bachelor’s degree from a regionally accredited institution are not required to complete the minor complex.

- Minors
  Minors are offered in many subject areas. Requirements for minors are listed in the following section. See the table on Degrees and Programs At a Glance (http://catalog.uaf.edu/degrees-programs-glance) page for a list of all available degrees, including minors.

  An Associate of Applied Science (A.A.S.) degree or certificate of at least 30 credits earned at any regionally accredited college or university may be used to meet requirements for a minor for the Bachelor of Arts (B.A.) degree. Students who hold a bachelor’s degree from a regionally accredited institution are not required to complete the minor complex.

- Double Majors
  If you’re a Bachelor of Arts degree candidate, you may complete two majors rather than a major and a minor. Your majors must be selected from those approved for the Bachelor of Arts degree. You’ll need to complete all general requirements plus all requirements for both majors. If you’re completing a double major, you need to officially declare both majors either when you’re admitted or through the change of major procedure. You’ll need to follow the degree requirements in a single catalog for both majors.

### BACHELOR OF EMERGENCY MANAGEMENT

<table>
<thead>
<tr>
<th>Requirement Type</th>
<th>General Education Requirements</th>
<th>Degree Specific Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>ENGL F111X, ENGL F211X or ENGL F213X, COMM F121X, COMM F131X or COMM F141X</td>
<td>2 courses designated upper-division writing-intensive (W) and either 1 designated upper-division oral-intensive (O) course or 2 upper-division oral-intensive courses designated O/2</td>
</tr>
<tr>
<td>Library and Information Research</td>
<td>LS F101X or successful completion of library skills competency test</td>
<td></td>
</tr>
<tr>
<td>Social Sciences</td>
<td>Complete two courses from the following in two different disciplines: ACCT F261X, ANS F242X, ANTH F100X, ANTH F101X, ANTH F111X, ANTH F211X, BA F151X, COMM F180X, ECE F104X, ECON F100X, ECON F201X, ECON F202X, ECON F235X, GEOG F101X, HIST F100X, HIST F102X, HIST F122X, HIST F132X, JUST F110X, PS F100X, PS F201X, PSY F101X, RD F200X, SWK F103X, SOC F100X, SOC F201X, WGS F201X</td>
<td>No additional social science unless required by major or minor</td>
</tr>
<tr>
<td>Other</td>
<td>One additional Arts, Humanities or Social Sciences from the lists above.</td>
<td></td>
</tr>
</tbody>
</table>
Summary of Bachelor's Degree Requirements

Ethics
Complete one from the following: BA F323X, COMM F300X, JUST F300X, NRM F303X, PHIL F322X, PS F300X

Mathematics
Complete one from the following: MATH F113X, MATH F122X, MATH F151X, MATH F152X, MATH F156X, MATH F230X, MATH F251X, MATH F252X, MATH F253X, or STAT F200X or any math course having one of these as a prerequisite

Natural Sciences

No additional natural science required

Major Complex
At least 78 cr

Minor Complex
Optional: at least 15 cr

Total Required
38-44 cr

120 cr

The B.E.M. degree prepares students for professional careers responding to natural and manmade disasters, forming crisis management plans and ensuring public safety. Students with backgrounds ranging from first responders and military to applied vocational skills graduate ready to start or advance in careers in emergency management, homeland security, public safety and emergency services. See Homeland Security and Emergency Management (p. 206) in Bachelor's Degree Programs, section C.

Notes:
You must earn a C- grade or higher in all courses required for your degree unless otherwise specified by your major (major, minor, general education requirements and degree requirements).

BACHELOR OF SCIENCE

Requirement Type | General Education Requirements | Degree Specific Requirements
--- | --- | ---
Communication | ENGL F111X, ENGL F211X or ENGL F213X, COMM F121X, COMM F131X or COMM F141X | 2 courses designated upper-division writing-intensive (W) and either 1 designated upper-division oral-intensive (O) course or 2 upper-division oral-intensive courses designated O/2

Library and Information Research | LS F101X or successful completion of library skills competency test | ---

### Humanities

No additional humanities unless required by major or minor

### Social Sciences

No additional social sciences unless required by major or minor

### Other
One additional Arts, Humanities or Social Sciences from the lists above.

### Ethics
Complete one from the following: BA F323X, COMM F300X, JUST F300X, NRM F303X, PHIL F322X, PS F300X

One 3-credit course at the F100 level or above from math, computer sciences or statistics (excluding DEVM courses). A 3-credit calculus course must be included in general education requirements or B.S. requirements

### Mathematics
Complete one from the following: MATH F113X, MATH F122X, MATH F151X, MATH F152X, MATH F156X, MATH F230X, MATH F251X, MATH F252X, MATH F253X, or STAT F200X or any math course having one of these as a prerequisite

### Natural Sciences

One-year sequence in one natural science beyond the general education requirements—8 cr (Total natural science courses used to meet core and B.S. requirements must represent at least two different natural sciences.)

### Major Complex
At least 30 cr

### Minor Complex
Optional: at least 15 cr

### Total Required
38-44 cr

### Notes:
You must earn a C- grade or higher in all courses required for your degree unless otherwise specified by your major (major, minor, general education requirements and degree requirements).

*Department requirements for majors and minors may exceed the minimums indicated, and most B.S. degree programs require 130 credits.

Of the above, at least 39 credits must be taken in upper-division (300-level or higher) courses. Courses beyond 30 credits in a major complex and 15 credits in a minor complex may be used to fulfill the B.S. degree requirements in mathematics or natural science. Courses used to fulfill requirements for a minor may be used at the same time to fill major or general distribution requirements if so designated.

### Double Majors
As a Bachelor of Science degree candidate, you may complete a double major instead of a single major. Your majors must be selected from those approved for the Bachelor of Science degree. You'll need to complete all general requirements plus all requirements for both majors. If you're
completing a double major, you need to officially declare both majors either when you’re admitted or through the change of major procedure. You’ll need to follow the degree requirements in a single catalog for both majors.

- **Optional Minor**
  You may elect to complete a minor with the B.S. degree under the following circumstances:
  a. You must declare your minor before the beginning of your final semester in the B.S. degree program. You need to complete a declaration of minor form and file it with the Office of Admissions and the Registrar by the end of registration.
  b. Any minor approved for the B.A. degree may serve as a minor for the B.S. degree. All general and specific requirements for minors are the same as those listed for B.A. degree minors, including that courses used to meet minor requirements may not be used to meet major or general distribution requirements unless so designated. The catalog used for the minor must be the same as the catalog used for the major and general degree requirements.
  c. You must satisfactorily complete the requirements for the minor before your B.S. degree will be awarded. The minor will be listed on your transcript along with the B.S. degree.

### BACHELOR OF BUSINESS ADMINISTRATION

<table>
<thead>
<tr>
<th>Requirement Type</th>
<th>General Education Requirements</th>
<th>Degree Specific Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>ENGL F111X, ENGL F211X or ENGL F213X, COMM F121X, COMM F131X or COMM F141X</td>
<td>2 courses designated upper-division writing-intensive (W) and either 1 designated upper-division oral-intensive (O) course or 2 upper-division oral-intensive courses designated O/2</td>
</tr>
<tr>
<td>Library and Information Research</td>
<td>LS F101X or successful completion of library skills competency test</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>One additional Arts, Humanities or Social Sciences from the lists above.</td>
<td></td>
</tr>
<tr>
<td>Ethics</td>
<td>BA F323X</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>MATH F230X</td>
<td>MATH F122X (MATH F230X must be taken to meet the general education requirements.)</td>
</tr>
</tbody>
</table>
### Natural Sciences

No additional natural science required

### Common Body of Knowledge
AI F101, ACCT F261X, ACCT F262, AIS F310 or AIS F316, BA F325, BA F330, BA F343, BA F360, BA F390, BA F462, ECON F324 or ECON F350, HSEM F445.

### Major Complex
At least 24-33 cr

### Minor Complex
Optional: at least 15 cr

### Total Required
38-44 cr

### BACHELOR OF MUSIC

<table>
<thead>
<tr>
<th>Requirement Type</th>
<th>General Education Requirements</th>
<th>Degree Specific Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>ENGL F111X, ENGL F211X or ENGL F213X, COMM F121X, COMM F131X or COMM F141X</td>
<td>2 courses designated upper-division writing-intensive (W) and either 1 designated upper-division oral-intensive (O) course or 2 upper-division oral-intensive courses designated O/2</td>
</tr>
<tr>
<td>Library and Information Research</td>
<td>LS F101X or successful completion of library skills competency test</td>
<td></td>
</tr>
</tbody>
</table>

All majors must earn a C- grade or higher in the general education requirements, common body of knowledge courses, department and major-specific requirements, minor requirements and specific math and statistics requirements.

Department requirements for majors and minors may exceed the minimums indicated.

Of the above, at least 39 credits must be taken in upper-division (300-level or higher) courses.
Summary of Bachelor's Degree Requirements

Social Sciences

No additional social sciences unless required by the major

Other
One additional Arts, Humanities or Social Sciences from the lists above.

Ethics
Complete one from the following: BA F323X, COMM F300X, JUST F300X, NRM F303X, PHIL F322X, PS F300X

Mathematics
Complete one from the following: MATH F113X, MATH F122X, MATH F151X, MATH F152X, MATH F156X, MATH F230X, MATH F251X, MATH F252X, MATH F253X, or STAT F200X or any math course having one of these as a prerequisite

Natural Sciences

No additional natural science required

Major Complex
85 or more cr

Minor Complex
Optional: at least 15 cr

Total Required
38-44 cr
120 cr

Notes:
You must earn a C- grade or higher in all courses required for your degree unless otherwise specified by your major (major, minor, general education requirements and degree requirements).

Department requirements for majors and minors may exceed the minimums indicated.

BACHELOR OF APPLIED ARTS AND SCIENCES
The B.A.A.S. degree program offers qualified applicants the opportunity to expand upon their vocational or technical education. An A.A.S. degree from an accredited institution of higher education, or equivalent, is one of the degree program requirements. See the Applied Arts in Sciences in the bachelors degree program section.

<table>
<thead>
<tr>
<th>Requirement Type</th>
<th>General Education Requirements</th>
<th>Degree Specific Requirements</th>
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</thead>
<tbody>
<tr>
<td>Communication</td>
<td>ENGL F111X, ENGL F211X or ENGL F213X, COMM F121X, COMM F131X or COMM F141X</td>
<td>2 courses designated upper-division writing-intensive (W) and either 1 designated upper-division oral-intensive (O) course or 2 upper-division oral-intensive courses designated O/2</td>
</tr>
<tr>
<td>Library and Information Research</td>
<td>LS F101X or successful completion of library skills competency test</td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>----------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Other</td>
<td>One additional Arts, Humanities or Social Sciences from the lists above.</td>
<td></td>
</tr>
<tr>
<td>Ethics</td>
<td>Complete one from the following: BA F323X, COMM F300X, JUST F300X, NRM F303X, PHIL F322X, PS F300X</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>MATH F122X</td>
<td></td>
</tr>
<tr>
<td>Major Complex</td>
<td>Minimum of 30 credits of interdisciplinary studies and an Associate of Applied Science degree</td>
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<tr>
<td>Minor Complex</td>
<td></td>
<td></td>
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<tr>
<td>Total Required</td>
<td>38-44 cr</td>
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</tr>
</tbody>
</table>

**Note:** You must earn a C- grade or higher in all courses required for your degree unless otherwise specified by your major (major, minor, general education requirements and degree requirements).
Bachelor's Degree Programs

Accounting

School of Management
Department of Accounting and Information Systems
907-474-7461
www.uaf.edu/som/degrees/undergraduate/acct/ (http://www.uaf.edu/som/degrees/undergraduate/acct)

B.B.A. Degree

Minimum Requirements for Degree: 120 credits

The accounting department offers an extensive program for those interested in the fields of general accounting, auditing, managerial accounting, taxation and government accounting. The objectives of the program are to provide a strong business background through an understanding of accounting and to train students for employment in accounting work.

The UAF accounting program is accredited by the Association to Advance Collegiate Schools of Business. The AACSB accredits 120 programs nationwide, and the UAF accounting program is the only program in Alaska with AACSB accreditation.

The accounting program prepares students for certification as Certified Public Accountants, Certified Management Accountants, Certified Financial Managers, Certified Internal Auditors and Certified Fraud Examiners. The UAF accounting program places nearly 100 percent of its graduates.

Degree

- B.B.A., Accounting (p. 148)

Minor

- Minor, Accounting (p. 148)

B.B.A., Accounting

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements

Complete the general university requirements. (p. 134)

General Education Requirements

Complete the general education requirements. (p. 137)

As part of the general education requirements, complete the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA F323X</td>
<td>3</td>
</tr>
<tr>
<td>MATH F230X</td>
<td>3</td>
</tr>
</tbody>
</table>

B.B.A. Degree Requirements

Complete the B.B.A. degree requirements. (p. 144)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIS F316</td>
<td>3</td>
</tr>
<tr>
<td>ENGL F314</td>
<td>3</td>
</tr>
<tr>
<td>or BA F456</td>
<td>3</td>
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</table>

Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
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<tbody>
<tr>
<td>ACCT F330</td>
<td>3</td>
</tr>
<tr>
<td>ACCT F342</td>
<td>3</td>
</tr>
</tbody>
</table>

ACCT F361 Intermediate Accounting 3
ACCT F362 Intermediate Accounting 3
ACCT F401 Advanced Accounting 3
ACCT F452 Auditing 3
or ACCT F472 Internal and Government Auditing 3
Select three from the following: 9

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT F404 Advanced Cost Accounting and Controllership</td>
<td>3</td>
</tr>
<tr>
<td>ACCT F414 Governmental and Nonprofit Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT F430 Advanced Taxes</td>
<td>3</td>
</tr>
<tr>
<td>ACCT F472 Internal and Government Auditing</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives

Free electives as needed to meet 120 credits

Total Credits 39

1 As part of the Common Body of Knowledge (p. 144), BA F462 fulfills the baccalaureate capstone requirement.

Note: The B.B.A. degree requires 50 percent of the accounting, business administration and economics credits to be earned in residence at UAF.

Minor, Accounting

Minimum Requirements for Minor: 15 credits

Students must earn a C- grade or better in each course.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT F261X Principles of Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT F262 Principles of Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>Upper-division accounting electives</td>
<td>9-11</td>
</tr>
</tbody>
</table>

Total Credits 15

Note: Courses completed to satisfy this minor can be used to simultaneously satisfy other major or general distribution requirements.

Aerospace Engineering

College of Engineering and Mines
907-474-6098
www.uaf.edu/cem/ (http://www.uaf.edu/cem)

Minor Only

Minor

- Minor, Aerospace Engineering (p. 148)

Minor, Aerospace Engineering

Minimum Requirements for Minor: 15 credits

Students must earn a C- grade or better in each course.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
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</thead>
<tbody>
<tr>
<td>ME F451 Aerodynamics</td>
<td>3</td>
</tr>
<tr>
<td>ME F452 Introduction to Astrodynamics</td>
<td>3</td>
</tr>
<tr>
<td>Select three from the following: 9-11</td>
<td></td>
</tr>
<tr>
<td>EE F434 Instrumentation Systems</td>
<td></td>
</tr>
<tr>
<td>EE F444 Embedded Systems Design</td>
<td></td>
</tr>
<tr>
<td>EE F471 Fundamentals of Automatic Control</td>
<td></td>
</tr>
</tbody>
</table>
Minor

• Minor, Alaska Native Languages (p. 149)

Minor, Alaska Native Languages

Minimum Requirements for Minor: 15 credits

Any ANL or ESK courses 15

Total Credits 15

Alaska Native Studies

College of Rural and Community Development
Department of Alaska Native Studies and Rural Development
907-474-5405

www.uaf.edu/danrd/ (http://www.uaf.edu/danrd)

B.A. Degree

Minimum Requirements for Degree: 120 credits

Alaska Native studies provides students with an awareness of the scope, richness and variety of Alaska Native cultures. It offers a series of critical perspectives on the contemporary Native experience in North American society. The B.A. degree can be earned on the Fairbanks campus or through distance delivery.

Students complete a concentration in one of four areas:

• Alaska Native Forms of Cultural Expression
• Alaska Native Education
• Alaska Native Language
• Alaska Native Law, Government and Politics

The Alaska Native studies B.A. prepares students to appreciate historical and contemporary cultural dynamics. The department also welcomes students pursuing a second major or a minor. It encourages students who expect to be involved professionally in Alaska Native communities or other multicultural settings to pursue this degree.

Students applying for acceptance into the Alaska Native Studies program need to complete two department-specific requirements in addition to general university admission: an oral interview with faculty and a written questionnaire. Findings from this process will be used to support the department advising process and assist students in connecting with faculty and mentors. The questionnaire and instructions for the oral interview are on the DANSRD website under “How to Apply.”

Special application requirements and deadlines apply for distance B.A. programs. For more information contact the department toll-free at 800-770-9531 or visit www.uaf.edu/danrd/ (http://www.uaf.edu/danrd).

Degree

• B.A., Alaska Native Studies (p. 151)

Minor

• Minor, Alaska Native Studies (p. 149)

B.A., Alaska Native Studies

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements

Complete the general university requirements. (p. 134)

General Education Requirements

Complete the general education requirements. (p. 137)

B.A. Degree Requirements

Complete the B.A. degree requirements. (p. 139)

Upper Division Credits 1 39

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANS F101</td>
<td>Introduction to Alaska Native Studies</td>
<td>3</td>
</tr>
<tr>
<td>ANS F242X</td>
<td>Native Cultures of Alaska</td>
<td>3</td>
</tr>
<tr>
<td>or ANTH F242</td>
<td>Native Cultures of Alaska</td>
<td></td>
</tr>
<tr>
<td>ANS F310</td>
<td>Indigenous Land Settlements</td>
<td>3</td>
</tr>
</tbody>
</table>
ANS F350  Cross-Cultural Communication: Alaska Perspectives  3
ANS F375  Native American Religion and Philosophy  3
ANS F401  Cultural Knowledge of Native Elders  3
RD F350  Community Research in Indigenous Contexts  3
ANS F478  Alaska Native Studies Senior Thesis  3

Select 9 ANS/RD/TM elective credits  9

Concentrations
Select 21 credits in one from the following concentrations  21

Alaska Native Education
Alaska Native Forms of Cultural Expression
Alaska Native Language (not available at all campus locations)
Alaska Native Law, Government and Politics

Total Credits  93

1 Non-Fairbanks campus students choosing a minor other than Rural Development must verify that the required courses can be accessed via distance before declaring that minor. Courses used in the general education requirements and concentration area may be double counted for the minor.

2 Fulfills the baccalaureate capstone requirement.

Concentrations
These are recommended courses. Course substitutions may be made with approval of the faculty advisor.

ALASKA NATIVE EDUCATION

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANL F315</td>
<td>Alaska Native Languages: Eskimo-Aleut</td>
<td>3</td>
</tr>
<tr>
<td>ANL F316</td>
<td>Alaska Native Languages: Indian Languages</td>
<td>3</td>
</tr>
<tr>
<td>ANS F102P</td>
<td>Orientation to Alaska Native Education</td>
<td>2</td>
</tr>
<tr>
<td>ANS F111</td>
<td>History of Alaska Natives</td>
<td>3</td>
</tr>
<tr>
<td>ANS F202X</td>
<td>Aesthetic Appreciation of Alaska Native Performance</td>
<td>3</td>
</tr>
<tr>
<td>ANS F250</td>
<td>Current Alaska Native Leadership Perspectives</td>
<td>3</td>
</tr>
<tr>
<td>ANS F251</td>
<td>Practicum in Native Cultural Expression</td>
<td>3</td>
</tr>
<tr>
<td>ANS F300</td>
<td>Alaska Native Writers Workshop</td>
<td>3</td>
</tr>
<tr>
<td>ANS/ANTH F320</td>
<td>Language and Culture in Alaska</td>
<td>3</td>
</tr>
<tr>
<td>ANS/ENGL F340</td>
<td>Contemporary Native American Literature</td>
<td>3</td>
</tr>
<tr>
<td>ANS F347</td>
<td>Voices of Native American Peoples</td>
<td>3</td>
</tr>
<tr>
<td>ANS F348</td>
<td>Native North American Women</td>
<td>3</td>
</tr>
<tr>
<td>ANS/ENGL F349</td>
<td>Narrative Art of Alaska Native Peoples (in English Translation)</td>
<td>3</td>
</tr>
<tr>
<td>RD F265</td>
<td>Perspectives on Subsistence in Alaska</td>
<td>3</td>
</tr>
<tr>
<td>RD F470/F670</td>
<td>The Alaska Native Claims Settlement Act: Pre-1971 to Present</td>
<td>3</td>
</tr>
</tbody>
</table>

ALASKA NATIVE FORMS OF CULTURAL EXPRESSION

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANL F315</td>
<td>Alaska Native Languages: Eskimo-Aleut</td>
<td>3</td>
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<tr>
<td>ANL F316</td>
<td>Alaska Native Languages: Indian Languages</td>
<td>3</td>
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<tr>
<td>ANS F111</td>
<td>History of Alaska Natives</td>
<td>3</td>
</tr>
<tr>
<td>ANS F160</td>
<td>Alaska Native Dance</td>
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<tr>
<td>ANS/FLPA F161X</td>
<td>Introduction to Alaska Native Performance</td>
<td>3</td>
</tr>
<tr>
<td>ANS F202X</td>
<td>Aesthetic Appreciation of Alaska Native Performance</td>
<td>3</td>
</tr>
<tr>
<td>ANS F250</td>
<td>Current Alaska Native Leadership Perspectives</td>
<td>3</td>
</tr>
<tr>
<td>ANS F251</td>
<td>Practicum in Native Cultural Expression</td>
<td>3</td>
</tr>
<tr>
<td>ANS F300</td>
<td>Alaska Native Writers Workshop</td>
<td>3</td>
</tr>
<tr>
<td>ANS/ANTH F320</td>
<td>Language and Culture in Alaska</td>
<td>3</td>
</tr>
<tr>
<td>ANS/ENGL F340</td>
<td>Contemporary Native American Literature</td>
<td>3</td>
</tr>
<tr>
<td>ANS F347</td>
<td>Voices of Native American Peoples</td>
<td>3</td>
</tr>
<tr>
<td>ANS F348</td>
<td>Native North American Women</td>
<td>3</td>
</tr>
<tr>
<td>ANS/ENGL F349</td>
<td>Narrative Art of Alaska Native Peoples (in English Translation)</td>
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<td>ANS F351</td>
<td>Practicum in Native Cultural Expression</td>
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<tr>
<td>ANS F360</td>
<td>Advanced Native Dance</td>
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<tr>
<td>ANS F361</td>
<td>Advanced Alaska Native Performance</td>
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<tr>
<td>ANS/ART F365</td>
<td>Native Art of Alaska</td>
<td>3</td>
</tr>
<tr>
<td>ANS F381</td>
<td>Alaska Natives in Film</td>
<td>3</td>
</tr>
<tr>
<td>ANS F461</td>
<td>Native Ways of Knowing</td>
<td>3</td>
</tr>
<tr>
<td>RD F265</td>
<td>Perspectives on Subsistence in Alaska</td>
<td>3</td>
</tr>
<tr>
<td>RD F470/F670</td>
<td>The Alaska Native Claims Settlement Act: Pre-1971 to Present</td>
<td>3</td>
</tr>
</tbody>
</table>

ALASKA NATIVE LANGUAGE

(Note not available at all campus locations)

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
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<td>ANL F255X</td>
<td>Introduction to Alaska Native Languages</td>
<td>3</td>
</tr>
<tr>
<td>ANL F256</td>
<td>Introduction to Alaska Native Languages: History, Status and Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>ANL F287</td>
<td>Teaching Methods for Alaska Native Languages</td>
<td></td>
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<tr>
<td>ANL F288</td>
<td>Curriculum and Materials Development for Alaska Native Languages</td>
<td>3</td>
</tr>
<tr>
<td>ANL F315</td>
<td>Alaska Native Languages: Eskimo-Aleut</td>
<td></td>
</tr>
<tr>
<td>ANL F316</td>
<td>Alaska Native Languages: Indian Languages</td>
<td></td>
</tr>
<tr>
<td>ANS F202X</td>
<td>Aesthetic Appreciation of Alaska Native Performance</td>
<td>2</td>
</tr>
</tbody>
</table>

Two years’ study of an Alaska Native language  16
Select 6 credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
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<td>Introduction to Alaska Native Languages</td>
<td>3</td>
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<tr>
<td>ANL F256</td>
<td>Introduction to Alaska Native Languages: History, Status and Maintenance</td>
<td>3</td>
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<tr>
<td>ANL F287</td>
<td>Teaching Methods for Alaska Native Languages</td>
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</tr>
<tr>
<td>ANL F288</td>
<td>Curriculum and Materials Development for Alaska Native Languages</td>
<td>3</td>
</tr>
<tr>
<td>ANL F315</td>
<td>Alaska Native Languages: Eskimo-Aleut</td>
<td></td>
</tr>
<tr>
<td>ANL F316</td>
<td>Alaska Native Languages: Indian Languages</td>
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</tr>
<tr>
<td>ANS F202X</td>
<td>Aesthetic Appreciation of Alaska Native Performance</td>
<td>2</td>
</tr>
</tbody>
</table>


**ALASKA NATIVE LAW, GOVERNMENT AND POLITICS**

**Program Requirements**

<table>
<thead>
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<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ANS F111</td>
<td>History of Alaska Natives</td>
<td>3</td>
</tr>
<tr>
<td>ANS F250</td>
<td>Current Alaska Native Leadership Perspectives</td>
<td>3</td>
</tr>
<tr>
<td>ANS/RD F315</td>
<td>Tribal People and Development</td>
<td>3</td>
</tr>
<tr>
<td>ANS/ANTH F320</td>
<td>Language and Culture in Alaska</td>
<td>3</td>
</tr>
<tr>
<td>ANS/PS F325</td>
<td>Native Self-Government</td>
<td>3</td>
</tr>
<tr>
<td>ANS F348</td>
<td>Native North American Women</td>
<td>3</td>
</tr>
<tr>
<td>ANS/PS F425</td>
<td>Federal Indian Law and Alaska Natives</td>
<td>3</td>
</tr>
<tr>
<td>ANS/PS F450</td>
<td>Comparative Indigenous Rights and Policies</td>
<td>3</td>
</tr>
<tr>
<td>ANS F475</td>
<td>Alaska Native Social Change</td>
<td>3</td>
</tr>
<tr>
<td>ANS F461</td>
<td>Native Ways of Knowing</td>
<td>3</td>
</tr>
<tr>
<td>ENGL F414</td>
<td>Research Writing</td>
<td>3</td>
</tr>
<tr>
<td>PLS F280</td>
<td>Legal Research and Writing for Paralegals</td>
<td>3</td>
</tr>
<tr>
<td>PS F263</td>
<td>Alaska Native Politics</td>
<td>3</td>
</tr>
<tr>
<td>RD F110</td>
<td>Alaska Native Claims Settlement Act: Land Claims in the 21st Century</td>
<td>1</td>
</tr>
<tr>
<td>RD F265</td>
<td>Perspectives on Subsistence in Alaska</td>
<td>3</td>
</tr>
<tr>
<td>RD F300</td>
<td>Rural Development in a Global Perspective</td>
<td>3</td>
</tr>
<tr>
<td>RD F470/F670</td>
<td>The Alaska Native Claims Settlement Act: Pre-1971 to Present</td>
<td>3</td>
</tr>
<tr>
<td>TM F201</td>
<td>Tribal Government in Alaska II</td>
<td>3</td>
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</tbody>
</table>

Note: Courses designated as humanities that are taken for the minor may also be used to fulfill humanities distribution requirements for the B.A. degree.

**Minor, Alaska Native Studies**

All minor programs must be approved by the Alaska Native Studies and Rural Development department head.

Minimum Requirements for Minor: 15 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANS course at the F300 or F400 level</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>ANS F401</td>
<td>Cultural Knowledge of Native Elders</td>
<td>3</td>
</tr>
<tr>
<td>Alaska Native Studies electives</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

**American Sign Language**

The minor in American sign language provides students with an opportunity to acquire signing skills and experience American deaf culture and history. Students of ASLG will have a greater understanding of diversity and empathy for people with differing abilities. ASLG students will develop critical thinking skills and be able to sign clearly, be understood and comprehend native signers. ASLG minor students will be required to participate in community events and develop an ethical responsibility to the community in which they live. ASL is a visual language that uses physical stamina and coordination, as well as agile visual/mental processing and prolonged visual attention. There is no use of voice during the ASLG classes, therefore students must be able to sustain physically demanding activity in order to participate and learn.

**Minor, American Sign Language**

Minimum Requirements for Minor: 15 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASLG F203</td>
<td>American Sign Language III</td>
<td>3</td>
</tr>
<tr>
<td>ASLG F204</td>
<td>American Sign Language IV</td>
<td>3</td>
</tr>
<tr>
<td>ASLG F205</td>
<td>American Sign Language V</td>
<td>3</td>
</tr>
<tr>
<td>ASLG electives</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

Note: Courses designated as humanities that are taken for the minor may also be used to fulfill humanities distribution requirements for the B.A. degree.

**Anthropology**

The Department of Anthropology offers a balanced and flexible program of academic courses and research in cultural anthropology, linguistic anthropology, archaeology and biological anthropology. Anthropology contributes to an understanding of the complex problems of human behavior, biology, language, cultural and social organization, and the relationship of humans to their environments. Research carried out in the field, laboratory and library emphasizes past and present modes of living and the origins and distribution of peoples and cultures throughout the world. Although special attention is given to the circumpolar North, faculty also maintain active research programs elsewhere, such as Africa and North America.

**B.A., B.S. Degrees**

Minimum Requirements for Degrees: B.A.: 120 credits; B.S.: 120 credits

Minor Only

The minor in American sign language provides students with an opportunity to acquire signing skills and experience American deaf culture and history.
Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)
As part of the general education requirements, complete:
ANTH F100X Individual, Society and Culture 3

B.A. Degree Requirements
Complete the B.A. degree requirements. (p. 139)

Program Requirements
ANTH F211X Fundamentals of Archaeology 3
or ANTH F221 Fundamentals of Biological Anthropology
ANTH F215 Fundamentals of Social/Cultural Anthropology 3
ANTH/LING F223 Sociolinguistics: Language and Social Inequality 3
ANTH F384 History of Anthropology 3
ANTH F411 Senior Seminar in Anthropology 3
Select six anthropology electives, at least four (12 credits) of which are at the F400 level 18
Total Credits 36

Note: LING F101X satisfies part of the B.A. humanities requirements.

B.S., Anthropology

Minimum Requirements for Degree: 130 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)
As part of the general education requirements, complete:
ANTH F100X Individual, Society and Culture 3

B.S. Degree Requirements
Complete the B.S. degree requirements. (p. 142)

Program Requirements
ANTH F211X Fundamentals of Archaeology 3
ANTH F221 Fundamentals of Biological Anthropology 3
ANTH F215 Fundamentals of Social/Cultural Anthropology 3
ANTH F384 History of Anthropology 3
ANTH F411 Senior Seminar in Anthropology 3
Select one from the following: 3
ANTH F215 Fundamentals of Social/Cultural Anthropology
ANTH F320 Language and Culture in Alaska
ANTH/LING F223 Sociolinguistics: Language and Social Inequality
ANTH F411 Senior Seminar in Anthropology 3
ANTH F214 World Prehistory 3
ANTH F405 Archaeological Method and Theory 3
ANTH F423 Human Origins 3
ANTH F424 Analytical Techniques 3
ANTH F309 Circumpolar Archaeology 3
or ANTH F315 Human Variation
ANTH F415 Zooarchaeology and Taphonomy 3-4
or ANTH F422 Human Osteology
Select at least two from the following electives: 6
ANTH F426 Bioarchaeology
ANTH F428 Ecological Anthropology and Regional Sustainability
ANTH F492 Seminar (Physical Anthropology)
ANTH F492 Seminar (Archaeology)
Total Credits 39-40

1 Courses not selected between ANTH F309 or ANTH F315 and ANTH F415 or ANTH F422 may be used to meet this area.

Minor, Anthropology

Minimum Requirements for Minor: 18 credits

ANTH F211X Fundamentals of Archaeology 3
ANTH F221 Fundamentals of Biological Anthropology 3
ANTH F215 Fundamentals of Social/Cultural Anthropology 3
ANTH/LING F223 Sociolinguistics: Language and Social Inequality 3
ANTH electives 6
Total Credits 18

Applied Arts and Sciences

Office of Interdisciplinary Programs
907-474-7716

B.A.A.S. Degree

Minimum Requirements for Degree: 120 credits

The Bachelor of Applied Arts and Sciences is an interdisciplinary degree program designed for students who have completed an Associate of Applied Science degree and who desire to enhance their knowledge, analytical abilities and critical thinking skills for upward mobility in the field.

The interdisciplinary studies B.A.A.S. degree allows exceptional students to tailor a bachelor’s degree program to their unique needs. Information and advising for this degree is through the Office of the Graduate School and Interdisciplinary Programs.

Degree

- B.A.A.S., Applied Arts and Sciences (p. 152)

B.A.A.S., Applied Arts and Sciences

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)
General Education Requirements
Complete the general education requirements. (p. 137)

B.A.A.S. Degree and Program Requirements
Complete the B.A.A.S. degree requirements. (p. 146)
MATH/CS/STAT elective at the F100 level or above

ENGL F314 Technical Writing

Interdisciplinary studies 1 30

Complete an Associate of Applied Science degree from an accredited institution of higher education.

Capstone Requirement
Complete baccalaureate capstone requirement as determined by the program.

Total Credits 30

1 Approved by an advisory committee of at least three faculty members.

Note: At least 39 credits must be F300 level or above.

See Interdisciplinary Studies (p. 208).

Arctic Skills
College of Rural and Community Development
Department of Emergency Services and Public Safety
907-455-2895
www.uaf.edu/rural/ (http://www.uaf.edu/rural)

Minor Only
The minor in Arctic skills is designed for anyone who lives and works in a northern climate and wishes to learn to cope with the outdoor Arctic environment.

Students who complete this minor also earn a State of Alaska EMTI certificate and may prepare to take the FAA written exam for partial fulfillment of the private pilot certificate requirements.

Minor
• Minor, Arctic Skills (p. 153)

Minor, Arctic Skills
Minimum Requirements for Minor: 15 credits

AVTY F100 Private Pilot Ground School 3
or AVTY F111 Fundamentals of Aviation
AVTY F231 Arctic Survival 3
or EMS F257 Arctic Survival
EMS F170 EMT: Emergency Medical Technician I 6

Approved electives 1 3-4

Total Credits 15-17

1 Approved by program manager.

Art
College of Liberal Arts
Department of Art
907-474-7530

www.uaf.edu/art/ (http://www.uaf.edu/art)

B.A., B.F.A. Degrees
Minimum Requirements for Degrees: B.A.: 120 credits; B.F.A.: 120 credits

The art program encourages independent, original and creative thinking while recognizing the role and responsibility of the fine arts within the humanities.

The B.F.A. degree is professionally oriented and designed to prepare students for careers in art. It is the usual prerequisite for graduate studies in art. Admission requires a portfolio review by the art faculty, generally done in the student’s junior year. Enrollment in the B.F.A. program is recommended only for students who are willing to make the considerable commitment of time and energy necessary to achieve professional competence in their major areas. Career opportunities for B.F.A. graduates include artist, designer, arts administrator, art teacher, gallery and museum administrator, and computer-related fields.

Degrees
• B.A., Art (p. 153)
• B.F.A., Art (p. 154)

Minor
• Minor, Art (p. 154)
• Minor, Art History (p. 155)

B.A., Art
Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)

B.A. Degree Requirements
Complete the B.A. degree requirements. (p. 139)

Program Requirements
ART F105 Beginning Drawing 3
ART F261X and ART F262X History of World Art and History of World Art 6

Select two from the following: 6
ART F161 Two-Dimensional Digital Design
ART F162 Color and Design
ART F163 Three-Dimensional Design

Electives
Select three from the following electives (at least one must be a two-dimensional area, and one must be a three-dimensional area): 9

Two-dimensional Areas
ART F205 Intermediate Drawing
ART F207 Beginning Printmaking
ART F213 Beginning Painting (Acrylic or Oil)
ART F271 Beginning Computer Art
ART F283 Basic Darkroom Photography
Select two from the following:  
ART F161 Two-Dimensional Digital Design  
ART F162 Color and Design  
ART F163 Three-Dimensional Design  
Select three from the following electives (at least one must be a two-dimensional area, and one must be a three-dimensional area):  

Two-dimensional Areas  
ART F205 Intermediate Drawing  
ART F207 Beginning Printmaking  
ART F213 Beginning Painting (Acrylic or Oil)  
ART F271 Beginning Computer Art  
ART F283 Basic Darkroom Photography  
or ART F284 Basic Digital Photography  

Three-dimensional Areas  
ART F201 Beginning Ceramics  
ART F209 Beginning Metalsmithing and Jewelry  
ART F211 Beginning Sculpture  
ART F268 Beginning Native Art Studio  

Major program approved by B.F.A. thesis committee  

Select three from the following upper division art history courses:  
ART F363 History of Modern Art  
ART F364 Italian Renaissance Art  
ART F365 Native Art of Alaska  
ART F425 Visual Images of the North  
ART F463 Seminar in Art History  
ART F490 Current Problems  

Upper-division art electives  

Complete the baccalaureate capstone requirement as determined by the program.  

Total Credits  

Note: Transfer students who are candidates for the B.A. degree in art must complete a minimum of 12 credits in art while in residence.  

Note: All studio areas in the department are eligible for fulfillment of specialization requirements: ceramics, computer art, metalsmithing, Native art, painting, drawing, photography, printmaking and sculpture.

Minor, Art  

Minimum Requirements for Minor: 18 credits  

Complete the B.F.A. degree requirements. (p. 139)  

Program Requirements  
ART F105 Beginning Drawing  
ART F261X History of World Art  
and ART F262X and History of World Art  

Note: A minor is not required for this degree.  

Note: All studio areas in the department are eligible for fulfillment of specialization requirements: ceramics, computer art, metalsmithing, Native art, painting, drawing, photography, printmaking and sculpture.
Select one from the following:  
ART F161 Two-Dimensional Digital Design  
ART F162 Color and Design  
ART F163 Three-Dimensional Design  
Art Electives: 9 credits  
Total Credits: 18

**Note:** A minor in art is only available to nonart majors.

**Minor, Art History**

Minimum Requirements for Minor: 15 credits

Students must earn a C- grade or better in each course.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART F261X</td>
<td>History of World Art</td>
<td>3</td>
</tr>
<tr>
<td>ART F262X</td>
<td>History of World Art</td>
<td>3</td>
</tr>
</tbody>
</table>

Select two from the following: 6 credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART F363</td>
<td>History of Modern Art</td>
<td></td>
</tr>
<tr>
<td>ART F364</td>
<td>Italian Renaissance Art</td>
<td></td>
</tr>
<tr>
<td>ART F365</td>
<td>Native Art of Alaska</td>
<td></td>
</tr>
<tr>
<td>ART F463</td>
<td>Seminar in Art History</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits: 15

**Note:** Art majors are not eligible to minor in art history.

**Asian Studies**

College of Liberal Arts  
907-474-6507  
www.uaf.edu/language/ (http://www.uaf.edu/language)

**Minor Only**

A minor in Asian studies provides interdisciplinary instruction in the varieties of Asian languages and cultures. It enables students to consolidate various course offerings into a meaningful and cohesive program relevant to several major fields of specialization. (Combining a Japanese studies major with an Asian studies minor requires approval from both programs.)

**Minor**

- Minor, Asian Studies (p. 155)

**Minor, Asian Studies**

Minimum Requirements for Minor: 15 credits

**Approved Asian Studies Courses**

Select 15 credits from the following: 1

<table>
<thead>
<tr>
<th>Department</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology</td>
<td>ANTH F302</td>
<td>Siberia: Past, Present, Future</td>
<td></td>
</tr>
<tr>
<td>Foreign Languages</td>
<td>CHNS F101</td>
<td>Elementary Chinese I</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CHNS F102</td>
<td>Elementary Chinese II</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CHNS F201</td>
<td>Intermediate Chinese I</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CHNS F202</td>
<td>Intermediate Chinese II</td>
<td></td>
</tr>
<tr>
<td></td>
<td>JPN F101X</td>
<td>Elementary Japanese I</td>
<td></td>
</tr>
<tr>
<td></td>
<td>JPN F102X</td>
<td>Elementary Japanese II</td>
<td></td>
</tr>
<tr>
<td></td>
<td>JPN F201</td>
<td>Intermediate Japanese I</td>
<td></td>
</tr>
<tr>
<td></td>
<td>JPN F202</td>
<td>Intermediate Japanese II</td>
<td></td>
</tr>
<tr>
<td>Geography</td>
<td>GEOG F311</td>
<td>Geography of Asia</td>
<td></td>
</tr>
<tr>
<td>History</td>
<td>HIST F121</td>
<td>East Asian Civilization</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HIST F122X</td>
<td>East Asian Civilization</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HIST F330</td>
<td>Modern China</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HIST F331</td>
<td>Modern Japan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HIST F333</td>
<td>Foundations of Japanese History</td>
<td></td>
</tr>
<tr>
<td>Philosophy</td>
<td>PHIL F202</td>
<td>Introduction to Eastern Philosophy</td>
<td></td>
</tr>
<tr>
<td>Political Science</td>
<td>PS F203</td>
<td>Peace, War and Security</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PS F464</td>
<td>East Asian Governments and Politics</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits: 15

1 Courses must be distributed among at least three departments and include material on at least two Asian countries. Students are strongly encouraged to include a semester or more of Asian language.

**Biological Sciences**

College of Natural Science and Mathematics  
Department of Biology and Wildlife  
907-474-7671  
www.bw.uaf.edu (http://www.bw.uaf.edu)

**B.A., B.S. Degrees**

Minimum Requirements for Degrees: 120 credits

Biological sciences is an appropriate major for students interested in the science of life. Programs in these fields provide a broad education and a foundation in the principles of biology. Graduates are employed in environmental science, health services, biology education, and as field and laboratory technicians. Graduates also pursue advanced M.S., pharmacology, nursing, MD or Ph.D. degrees. Biology faculty advisors can help students choose courses that will best fit their goals.

Biological sciences majors may pursue either a B.A. or B.S. degree. Because biology is an interdisciplinary science, both programs include course work in the physical sciences and mathematics. The B.A. requires fewer credits in natural science and more credits in the social sciences and humanities than the B.S. degree, which focuses more intensively on biological science. The B.S. degree without a concentration provides the most comprehensive education in biology. The B.S. degree with a concentration permits some degree of specialization in one of three sub-disciplines: cell and molecular biology, physiology, or ecology and evolutionary biology.

Incoming students who do not meet the prerequisites for BIOL F115X and those who did not complete a biology course in high school are encouraged to take a biology course for non-majors such as BIOL F103X or BIOL F104X and CHEM F105X and CHEM F106X during their first year, and to begin the BIOL F115X and BIOL F116X series in their sophomore year. Students unprepared for CHEM F105X are encouraged to take CHEM F103X beforehand.
Students majoring in the biological sciences must complete a capstone project during their junior or senior year. The goal of the capstone experience is to integrate skills and information students have learned in previous courses by conducting a mentored research project and communicating the results. Students will signal their intent to complete the capstone requirement by registering for BIOL F400. The capstone research project itself may be completed within one of the designated courses listed below, or by working individually with a faculty mentor. If the capstone project is conducted within a designated course, a passing grade on the project itself is required to satisfy the capstone requirement regardless of the course grade. Biology course credit for mentored research is available as BIOL F490, BIOL F397, or BIOL F497. More information about the capstone requirement is posted on the Biology and Wildlife website (http://www.bw.uaf.edu). Students are strongly encouraged to speak to a biology advisor well before their senior year about how they plan to satisfy the capstone requirement.

Degrees
- B.A., Biological Sciences (p. 156)
- B.S., Biological Sciences (without concentration) (p. 159)
- B.S., Biological Sciences (with concentration) (p. 157)

Minor
- Minor, Biological Sciences (p. 160)

B.A., Biological Sciences
Minimum Requirements for Degree: 120 credits
Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)
As part of the general education requirements, complete:
- CHEM F105X General Chemistry I 8
- and CHEM F106X and General Chemistry II

B.A. Degree Requirements
Complete the B.A. Degree Requirements. (p. 139)
As part of the B.A. degree requirements, complete: 1
- STAT F200X Elementary Probability and Statistics 3

Program Requirements
- BIOL F115X Fundamentals of Biology I 4
- BIOL F116X Fundamentals of Biology II 4
- BIOL F260 Principles of Genetics 4
- BIOL F481 Principles of Evolution 4
- CHEM F321 Organic Chemistry I 4
- PHYS F103X College Physics I 4

Biology Breadth Requirements
Select two from the following: 2
- BIOL F360 Cell and Molecular Biology
- BIOL F371 Principles of Ecology
- BIOL F310 Animal Physiology
  or BIOL F342 Microbiology
  or BIOL F434 Structure and Function of Vascular Plants

Electives
Select three courses, at least one of which is designated a W course, from the following: 3,4

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL F400</td>
<td>Capstone Project</td>
</tr>
<tr>
<td>BIOL F397 or BIOL F497 or BIOL F490, URSA F388 or URSA F488</td>
<td>Structure and Function of Vascular Plants</td>
</tr>
</tbody>
</table>

Capstone 5
- BIOL F403 Metabolism and Biochemistry
- BIOL F434 Structure and Function of Vascular Plants
- BIOL F441 Animal Behavior
- BIOL F472 Community Ecology
- BIOL F473 Limnology

Total Credits 51-63

Note: A foreign language is encouraged by the department in meeting requirements of the core curriculum.

Biology Elective Course Lists
Courses that satisfy upper-division elective credit may require prerequisites in addition to the required biology course.

LIST A - CELL AND MOLECULAR BIOLOGY
- BIOL F342 Microbiology 4
- BIOL F360 Cell and Molecular Biology 3
- BIOL F403 Metabolism and Biochemistry 4
- BIOL F417 Neurobiology 3
- BIOL F435 Introduction to Biology of Cancer 3
- BIOL F460 Principles of Virology 3
- BIOL F462 Concepts of Infectious Disease 3
- BIOL F465 Immunology 3
- BIOL F466 Advanced Cell and Molecular Laboratory 3
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM F325</td>
<td>Organic Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>CHEM F351</td>
<td>General Biochemistry: Metabolism</td>
<td>3</td>
</tr>
<tr>
<td>CHEM F450</td>
<td>General Biochemistry: Macromolecules</td>
<td>3</td>
</tr>
<tr>
<td>CHEM F470</td>
<td>Cellular and Molecular Neuroscience</td>
<td>3</td>
</tr>
<tr>
<td>CHEM F474</td>
<td>Neurochemistry</td>
<td>3</td>
</tr>
</tbody>
</table>

**LIST B - PHYSIOLOGY**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL F310</td>
<td>Animal Physiology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F335</td>
<td>Principles of Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F342</td>
<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F417</td>
<td>Neurobiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F434</td>
<td>Structure and Function of Vascular Plants</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F441</td>
<td>Animal Behavior</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F455</td>
<td>Environmental Toxicology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F457</td>
<td>Environmental Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F458</td>
<td>Vertebrate Endocrinology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F459</td>
<td>Wildlife Nutrition</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F462</td>
<td>Concepts of Infectious Disease</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F465</td>
<td>Immunology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F412</td>
<td>Exercise Physiology</td>
<td>3</td>
</tr>
</tbody>
</table>

**LIST C - ECOLOGY AND EVOLUTIONARY BIOLOGY**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL F371</td>
<td>Principles of Ecology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F418</td>
<td>Biogeography</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F433</td>
<td>Conservation Genetics</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F441</td>
<td>Animal Behavior</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F457</td>
<td>Environmental Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F469</td>
<td>Landscape Ecology and Wildlife Habitat</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F471</td>
<td>Population Ecology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F472</td>
<td>Community Ecology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F473</td>
<td>Limnology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F474</td>
<td>Plant Ecology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F476</td>
<td>Ecosystem Ecology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F483</td>
<td>Stream Ecology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F485</td>
<td>Global Change Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F486</td>
<td>Vertebrate Paleontology</td>
<td>3</td>
</tr>
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<td>BIOL F487</td>
<td>Conceptual Issues in Evolutionary Biology</td>
<td>3</td>
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<tr>
<td>BIOL F488</td>
<td>Arctic Vegetation Ecology: Geobotany</td>
<td>3</td>
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<tr>
<td>BIOL F489</td>
<td>Vegetation Description and Analysis</td>
<td>3</td>
</tr>
<tr>
<td>WLF F301</td>
<td>Design of Wildlife Studies</td>
<td>3</td>
</tr>
<tr>
<td>WLF F410</td>
<td>Wildlife Populations and Their Management</td>
<td>3</td>
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</table>

**LIST D - ORGANISMAL BIOLOGY**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL F301</td>
<td>Biology of Fishes</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F331</td>
<td>Systematic Botany</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F406</td>
<td>Entomology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F418</td>
<td>Biogeography</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F425</td>
<td>Mammalogy</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F426</td>
<td>Ornithology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F427</td>
<td>Ichthyology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F486</td>
<td>Vertebrate Paleontology</td>
<td>3</td>
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<tr>
<td>BIOL F489</td>
<td>Vegetation Description and Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>

**B.S., Biological Sciences with Concentration**

**Concentrations:** Cell and Molecular Biology, Physiology, Ecology and Evolutionary Biology

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

**General University Requirements**

Complete the general university requirements. (p. 134)

**General Education Requirements**

Complete the general education requirements. (p. 137)

As part of the general education requirements, complete:

- MATH F230X Calculus Essentials with Applications 3
- or MATH F251X Calculus I 3
- CHEM F105X General Chemistry I 4
- and CHEM F106X and General Chemistry II 4

**B.S. Degree Requirements**

Complete the B.S. degree requirements. (p. 142)

As part of the B.S. degree requirements, complete:

**STAT F200X Elementary Probability and Statistics**
- STAT F300 Statistics 3

Select one PHYS sequence:
- PHYS F103X College Physics I 8
- and PHYS F104X College Physics II 8
- PHYS F211X General Physics I 8
- and PHYS F212X General Physics II 8

**Program Requirements**

- BIOL F115X Fundamentals of Biology I 4
- BIOL F116X Fundamentals of Biology II 4
- BIOL F260 Principles of Genetics 4

Select one from the following:

<table>
<thead>
<tr>
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<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>BIOL F310</td>
<td>Animal Physiology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F434</td>
<td>Structure and Function of Vascular Plants</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F342</td>
<td>Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F325</td>
<td>Organic Chemistry II</td>
<td>3-4</td>
</tr>
<tr>
<td>BIOL F481</td>
<td>Principles of Evolution</td>
<td>4</td>
</tr>
<tr>
<td>CHEM F321</td>
<td>Organic Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHEM F351</td>
<td>General Biochemistry: Metabolism</td>
<td>3-4</td>
</tr>
</tbody>
</table>

**Concentration**

Select one from the following concentrations:

- 21-28
  - Cell and Molecular Biology
  - Physiology
  - Ecology and Evolutionary Biology

**Capstone**

- BIOL F400 Capstone Project 0
Satisfactory completion of a capstone research project which can be done either working individually with a faculty member or within one of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL F403</td>
<td>Metabolism and Biochemistry</td>
<td></td>
</tr>
<tr>
<td>BIOL F434</td>
<td>Structure and Function of Vascular Plants</td>
<td></td>
</tr>
<tr>
<td>BIOL F441</td>
<td>Animal Behavior</td>
<td></td>
</tr>
<tr>
<td>BIOL F472</td>
<td>Community Behavior</td>
<td></td>
</tr>
<tr>
<td>BIOL F473</td>
<td>Limnology</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits: 70-82

1. When choosing courses to fulfill concentration requirements, students should consider the university requirement for two W courses and one O course, and the departmental requirement for a capstone project.

2. BIOL F397 or BIOL F497 or BIOL F490, URSA F388 or URSA F488 courses may be substituted by petition for a maximum of two required elective courses in biology (3-4 credits of independent study or research per substituted course). The subject area of the independent study or research will determine which biological subject areas the credits satisfy.

3. Fulfills the baccalaureate capstone requirement.

4. Students working individually with a faculty member may, for example, take BIOL F490, BIOL F497 or do so without course credits.

Note: A foreign language is encouraged by the department to meet the general education requirements.

**Concentrations**

**CELL AND MOLECULAR BIOLOGY**

As part of the program requirements above, complete:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM F325</td>
<td>Organic Chemistry II</td>
<td></td>
</tr>
</tbody>
</table>

Complete the following (at least one of which must satisfy the W requirement):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL F360</td>
<td>Cell and Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>CHEM F450</td>
<td>General Biochemistry: Macromolecules</td>
<td>3</td>
</tr>
<tr>
<td>CHEM F351</td>
<td>General Biochemistry: Metabolism</td>
<td>3</td>
</tr>
</tbody>
</table>

**Cell and Molecular and Physiology Electives**

Select three additional courses from lists A or B, at least one of which must be from list A: 9-12

**Biology Breadth Elective**

Select one additional course from lists C or D: 3-4

Total Credits: 21-25

**PHYSIOLOGY**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL F360</td>
<td>Cell and Molecular Biology</td>
<td>3</td>
</tr>
</tbody>
</table>

**Physiology or Cell and Molecular Biology Electives**

Select four courses from list A or B, two of which must be from list B: 12-16

**Biology Breadth Elective**

Select one additional course from lists C or D: 3-4

**Biology Elective**

Select one additional course from lists A, B, C, or D: 3-4

Total Credits: 21-27

At least one of the courses above must satisfy the W requirement.

**ECOLOGY OR EVOLUTIONARY BIOLOGY**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL F371</td>
<td>Principles of Ecology</td>
<td>4</td>
</tr>
</tbody>
</table>

**Ecology and Evolutionary Biology Electives**

Select two additional courses from list C: 6-8

**Organismal Elective**

Select one additional course from list D: 3-4

**Biology Breadth Elective**

Select one additional course from lists A or B: 3-4

**Biology Elective**

Select one additional course from lists A, B, C, or D: 3-4

STAT F401 Regression and Analysis of Variance 3-4

or STAT F402 Scientific Sampling 3-4

Total Credits: 22-28

At least one of the courses above must satisfy the W requirement.

**Biology Elective Course Lists**

Courses that satisfy upper-division elective credit may require prerequisites in addition to the required biology course.

**LIST A - CELL AND MOLECULAR BIOLOGY**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOL F342</td>
<td>Microbiology</td>
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</tr>
<tr>
<td>BIOL F360</td>
<td>Cell and Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F403</td>
<td>Metabolism and Biochemistry</td>
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<td>BIOL F417</td>
<td>Neurobiology</td>
<td>3</td>
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<td>BIOL F435</td>
<td>Introduction to Biology of Cancer</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F460</td>
<td>Principles of Virology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F462</td>
<td>Concepts of Infectious Disease</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F465</td>
<td>Immunology</td>
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<tr>
<td>BIOL F466</td>
<td>Advanced Cell and Molecular Laboratory</td>
<td>3</td>
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<tr>
<td>CHEM F325</td>
<td>Organic Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>CHEM F450</td>
<td>General Biochemistry: Macromolecules</td>
<td>3</td>
</tr>
<tr>
<td>CHEM F351</td>
<td>General Biochemistry: Metabolism</td>
<td>3</td>
</tr>
</tbody>
</table>

**Cell and Molecular and Physiology Electives**

Select two additional courses from list C: 6-8

**Organismal Elective**

Select one additional course from list D: 3-4

**Biology Elective**

Select one additional course from lists A, B, C, or D: 3-4

STAT F401 Regression and Analysis of Variance 3-4

or STAT F402 Scientific Sampling 3-4

Total Credits: 22-28

At least one of the courses above must satisfy the W requirement.

**LIST B - PHYSIOLOGY**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL F310</td>
<td>Animal Physiology</td>
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</tr>
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<td>BIOL F335</td>
<td>Principles of Epidemiology</td>
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<tr>
<td>BIOL F342</td>
<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F417</td>
<td>Neurobiology</td>
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<tr>
<td>BIOL F435</td>
<td>Structure and Function of Vascular Plants</td>
<td>4</td>
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<td>BIOL F441</td>
<td>Animal Behavior</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F455</td>
<td>Environmental Toxicology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F457</td>
<td>Environmental Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F458</td>
<td>Vertebrate Endocrinology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F459</td>
<td>Wildlife Nutrition</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F462</td>
<td>Concepts of Infectious Disease</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F465</td>
<td>Immunology</td>
<td>3</td>
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</table>
LIST C - ECOLOGY AND EVOLUTIONARY BIOLOGY

- BIOL F371 Principles of Ecology 4
- BIOL F418 Biogeography 3
- BIOL F433 Conservation Genetics 3
- BIOL F441 Animal Behavior 3
- BIOL F457 Environmental Microbiology 3
- BIOL F469 Landscape Ecology and Wildlife Habitat 3
- BIOL F471 Population Ecology 3
- BIOL F472 Community Ecology 3
- BIOL F473 Limnology 3
- BIOL F474 Plant Ecology 4
- BIOL F476 Ecosystem Ecology 3
- BIOL F483 Stream Ecology 3
- BIOL F485 Global Change Biology 3
- BIOL F486 Vertebrate Paleontology 3
- BIOL F487 Conceptual Issues in Evolutionary Biology 3
- BIOL F488 Arctic Vegetation Ecology: Geobotany 3
- BIOL F489 Vegetation Description and Analysis 3
- WLF F301 Design of Wildlife Studies 3
- WLF F410 Wildlife Populations and Their Management 3

LIST D - ORGANISMAL BIOLOGY

- BIOL F301 Biology of Fishes 4
- BIOL F331 Systematic Botany 4
- BIOL F406 Entomology 4
- BIOL F418 Biogeography 3
- BIOL F425 Mammalogy 3
- BIOL F426 Ornithology 3
- BIOL F427 Ichthyology 4
- BIOL F486 Vertebrate Paleontology 3
- BIOL F489 Vegetation Description and Analysis 3

B.S., Biological Sciences without Concentration

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)

As part of the general education requirements, complete:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F230X</td>
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</tr>
<tr>
<td>or MATH F251X</td>
<td>3</td>
</tr>
<tr>
<td>CHEM F105X</td>
<td>8</td>
</tr>
<tr>
<td>and CHEM F106X</td>
<td>8</td>
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</tbody>
</table>

B.S. Degree Requirements
Complete the B.S. degree requirements. (p. 142)

As part of the B.S. degree requirements, complete:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT F200X</td>
<td>3</td>
</tr>
<tr>
<td>or STAT F300</td>
<td></td>
</tr>
<tr>
<td>PHYS F103X</td>
<td>8</td>
</tr>
<tr>
<td>and PHYS F104X</td>
<td></td>
</tr>
<tr>
<td>PHYS F211X</td>
<td>4</td>
</tr>
<tr>
<td>and PHYS F212X</td>
<td></td>
</tr>
</tbody>
</table>

Program Requirements

- BIOL F115X Fundamentals of Biology I 4
- BIOL F116X Fundamentals of Biology II 4
- BIOL F260 Principles of Genetics 4
- BIOL F360 Cell and Molecular Biology 3
- BIOL F371 Principles of Ecology 4

Electives

- Organismal elective
  Select one additional course from the following: 3-4
  - List D

Biology electives

Select four additional courses at the 200 level or above, at least three of which must be from the following:

- Lists A, B, C, or D

Capstone

- BIOL F400 Capstone Project 0

Satisfactory completion of a capstone research project which can be done either working individually with a faculty member or within one of the following courses: 4

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOL F403</td>
<td>Metabolism and Biochemistry</td>
</tr>
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</tr>
<tr>
<td>BIOL F441</td>
<td>Animal Behavior</td>
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<td>BIOL F472</td>
<td>Community Ecology</td>
</tr>
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</table>

B.S. Degree Requirements
Complete the B.S. degree requirements. (p. 142)

As part of the B.S. degree requirements, complete:

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<td>and PHYS F212X</td>
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</table>

Program Requirements

- BIOL F115X Fundamentals of Biology I 4
- BIOL F116X Fundamentals of Biology II 4
- BIOL F260 Principles of Genetics 4
- BIOL F360 Cell and Molecular Biology 3
- BIOL F371 Principles of Ecology 4

Electives

- Organismal elective
  Select one additional course from the following: 3-4
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Biology electives

Select four additional courses at the 200 level or above, at least three of which must be from the following:

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<td>Community Ecology</td>
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</tbody>
</table>

B.S. Degree Requirements
Complete the B.S. degree requirements. (p. 142)

As part of the B.S. degree requirements, complete:

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<tbody>
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<tr>
<td>and PHYS F104X</td>
<td></td>
</tr>
<tr>
<td>PHYS F211X</td>
<td>4</td>
</tr>
<tr>
<td>and PHYS F212X</td>
<td></td>
</tr>
</tbody>
</table>

Program Requirements

- BIOL F115X Fundamentals of Biology I 4
- BIOL F116X Fundamentals of Biology II 4
- BIOL F260 Principles of Genetics 4
- BIOL F360 Cell and Molecular Biology 3
- BIOL F371 Principles of Ecology 4

Electives

- Organismal elective
  Select one additional course from the following: 3-4
  - List D

Biology electives

Select four additional courses at the 200 level or above, at least three of which must be from the following:

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- BIOL F400 Capstone Project 0

Satisfactory completion of a capstone research project which can be done either working individually with a faculty member or within one of the following courses: 4

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<td>Community Ecology</td>
</tr>
</tbody>
</table>

B.S. Degree Requirements
Complete the B.S. degree requirements. (p. 142)
Students working individually with a faculty member may, for example, take BIOL F490, BIOL F497 or do so without course credits.

Note: A foreign language is encouraged by the department in meeting requirements of the general education requirements.

Biology Elective Course Lists

Courses that satisfy upper-division elective credit may require prerequisites in addition to the required biology course.

LIST A - CELL AND MOLECULAR BIOLOGY

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL F342</td>
<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F360</td>
<td>Cell and Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F403</td>
<td>Metabolism and Biochemistry</td>
<td>4</td>
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<td>Introduction to Biology of Cancer</td>
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<td>BIOL F460</td>
<td>Principles of Virology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F462</td>
<td>Concepts of Infectious Disease</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F465</td>
<td>Immunology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F466</td>
<td>Advanced Cell and Molecular Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>CHEM F325</td>
<td>Organic Chemistry II</td>
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</tr>
<tr>
<td>CHEM F450</td>
<td>General Biochemistry: Macromolecules</td>
<td>3</td>
</tr>
<tr>
<td>CHEM F351</td>
<td>General Biochemistry: Metabolism</td>
<td>3</td>
</tr>
<tr>
<td>CHEM F470</td>
<td>Cellular and Molecular Neuroscience</td>
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</tr>
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<td>CHEM F474</td>
<td>Neurochemistry</td>
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LIST B - PHYSIOLOGY

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Animal Physiology</td>
<td>4</td>
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<td>Structure and Function of Vascular Plants</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F441</td>
<td>Animal Behavior</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F455</td>
<td>Environmental Toxicology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F457</td>
<td>Environmental Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F458</td>
<td>Vertebrate Endocrinology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F459</td>
<td>Wildlife Nutrition</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F462</td>
<td>Concepts of Infectious Disease</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F465</td>
<td>Immunology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F466</td>
<td>Exercise Physiology</td>
<td>3</td>
</tr>
</tbody>
</table>

LIST C - ECOLOGY AND EVOLUTIONARY BIOLOGY

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL F371</td>
<td>Principles of Ecology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F418</td>
<td>Biogeography</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F433</td>
<td>Conservation Genetics</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F441</td>
<td>Animal Behavior</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F457</td>
<td>Environmental Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F469</td>
<td>Landscape Ecology and Wildlife Habitat</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F471</td>
<td>Population Ecology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F472</td>
<td>Community Ecology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F473</td>
<td>Limnology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F474</td>
<td>Plant Ecology</td>
<td>4</td>
</tr>
</tbody>
</table>

LIST D - ORGANISMAL BIOLOGY

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL F301</td>
<td>Biology of Fishes</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F331</td>
<td>Systematic Botany</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F406</td>
<td>Entomology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F418</td>
<td>Biogeography</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F425</td>
<td>Mammalogy</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F426</td>
<td>Ornithology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F427</td>
<td>Ichthyology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F481</td>
<td>Principles of Evolution</td>
<td>3</td>
</tr>
</tbody>
</table>

Minor, Biological Sciences

Minimum Requirements for Minor: 18 credits

Students must earn a C- grade or better in each course.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL F115X</td>
<td>Fundamentals of Biology I</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F116X</td>
<td>Fundamentals of Biology II</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F260</td>
<td>Principles of Genetics</td>
<td>4</td>
</tr>
</tbody>
</table>

Select one from the following options: 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL F213X</td>
<td>Human Anatomy and Physiology I</td>
<td>8</td>
</tr>
<tr>
<td>BIOL F214X</td>
<td>Human Anatomy and Physiology II</td>
<td>8</td>
</tr>
</tbody>
</table>

Total Credits: 18-23

1 Courses that satisfy upper-division elective credit may require prerequisites in addition to the required biology course.

Business Administration

School of Management
Department of Business Administration
907-474-7461
www.uaf.edu/som/degrees/undergraduate/ba/ (http://www.uaf.edu/som/degrees/undergraduate/ba)
B.B.A. Degree

Minimum Requirements for Degree: 120 credits

The Business Administration Department offers professional education to students interested in management, finance, human resource management, international business, marketing and travel industry management.

Competent management practices require an education that is both broad and deep. The business administration program prepares graduates to meet complex technical, economic and social problems and enables them to apply imaginative and responsible leadership to the needs of industry and government.

The undergraduate and graduate programs are accredited by the Association to Advance Collegiate Schools of Business.

Degree

- B.B.A., Business Administration (p. 161)

Minors

- Minor, Finance (p. 161)
- Minor, General Business (p. 162)
- Minor, Management and Organizations (p. 162)
- Minor, Marketing (p. 162)
- Minor, Sports Management (p. 162)

B.B.A., Business Administration

Concentrations: Finance, General Business, Marketing

Minimum Requirements for Degree: 120 credits

Students must earn a C grade or better in each course.

General University Requirements

Complete the general university requirements. (p. 134)

General Education Requirements

Complete the general education requirements. (p. 137)
As part of the general education requirements, complete:

BA F323X Business Ethics 3
MATH F230X Calculus Essentials with Applications 3

Select one from the following:

One oral-intensive course designated (O) and one oral-intensive designated (O/2)
Complete two oral-intensive courses designated (O)
Complete three oral-intensive courses designated (O/2)

B.B.A. Degree Requirements

Complete the B.B.A. degree requirements. (p. 144)

Common Body of Knowledge 1

As part of the Common Body of Knowledge, complete:

AIS F310 Management of Information Systems 3
BA F151X Introduction to Business 3
ENGL F314 Technical Writing 3

Program Requirements

BA F307 Introductory Human Resources Management 3
ECON F321 Intermediate Microeconomics 3

or ECON F351 Public Finance

Select one from the following: 3
BA F460 International Business
BA F461 International Finance
ECON F463 International Economics

Additional 6 credits from ACCT, BA or ECON 6

Concentrations

Select one from the following concentrations: 12
- Finance
- General Business
- Marketing

Total Credits 85-88

1 As part of the Common Body of Knowledge BA F462 fulfills the baccalaureate capstone requirement.

Concentrations

FINANCE

Select four from the following: 12

BA F423 Investment Analysis
BA F424 Real Estate and Alternative Investments
BA F454 Student Investment Fund
BA F455 Portfolio Management
BA F461 International Finance

Total Credits 12

GENERAL BUSINESS

Select four School of Management courses approved by the undergraduate director 12

At least three must be BA courses
At least six hours must be upper-division

Total Credits 12

Note: At least one course must be designated writing-intensive (W).

MARKETING

Select four from the following: 12

BA F241 Advertising, Sales and Promotion
BA F436 Consumer Behavior
BA F445 Marketing Research
BA F490 Services Marketing
BA F491 Current Topics in Marketing

Total Credits 12

Business students may earn a minor as long as their business degree requirements are met first.

Note: The B.B.A. degree requires 50 percent of the accounting, business administration and economics credits to be earned in residence at UAF.

Note: Only one B.B.A. degree may be earned with a concentration in finance, general business or marketing.

Minor, Finance
Minimum Requirements for Minor: 15 credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT F261X</td>
<td>Principles of Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BA F151X</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BA F325</td>
<td>Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>ECON F201X</td>
<td>Principles of Economics I: Microeconomics</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one from the following with instructor permission: 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA F423</td>
<td>Investment Analysis</td>
</tr>
<tr>
<td>BA F424</td>
<td>Real Estate and Alternative Investments</td>
</tr>
<tr>
<td>BA F461</td>
<td>International Finance</td>
</tr>
</tbody>
</table>

Total Credits 15

**Minor, General Business**

Minimum Requirements for Minor: 15 credits

Select five School of Management courses approved by the undergraduate director 15

At least three must be BA courses

At least six hours must be upper-division

**Minor, Management and Organizations**

Minimum Requirements for Minor: 15 credits

Select five from the following: 15

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA F151X</td>
<td>Introduction to Business</td>
</tr>
<tr>
<td>BA F307</td>
<td>Introductory Human Resources Management</td>
</tr>
<tr>
<td>BA F317</td>
<td>Employment Law</td>
</tr>
<tr>
<td>BA F325</td>
<td>Financial Management</td>
</tr>
<tr>
<td>BA F330</td>
<td>The Legal Environment of Business</td>
</tr>
<tr>
<td>BA F343</td>
<td>Principles of Marketing</td>
</tr>
<tr>
<td>BA F360</td>
<td>Operations Management</td>
</tr>
<tr>
<td>BA F390</td>
<td>Organizational Theory and Behavior</td>
</tr>
<tr>
<td>ECON F201X</td>
<td>Principles of Economics I: Microeconomics</td>
</tr>
</tbody>
</table>

Total Credits 15

**Minor, Marketing**

Minimum Requirements for Minor: 15 credits

Select five from the following: 15

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA F151X</td>
<td>Introduction to Business</td>
</tr>
<tr>
<td>BA F241</td>
<td>Advertising, Sales and Promotion</td>
</tr>
<tr>
<td>BA F343</td>
<td>Principles of Marketing</td>
</tr>
<tr>
<td>BA F436</td>
<td>Consumer Behavior</td>
</tr>
<tr>
<td>BA F490</td>
<td>Services Marketing</td>
</tr>
<tr>
<td>BA F491</td>
<td>Current Topics in Marketing</td>
</tr>
</tbody>
</table>

**Chemistry**

College of Natural Science and Mathematics
Department of Chemistry and Biochemistry
907-474-5510
www.uaf.edu/chem/ (http://www.uaf.edu/chem)

**B.A., B.S. Degrees**

Minimum Requirements for Degrees: 120 credits

Our programs prepare students for employment as research chemists in federal, state, municipal, academic or industrial laboratories, and in premedicine as laboratory technicians, industry supervisors and technical sales personnel. Our programs also provide a technical base for chemistry teachers. Graduates also find positions in the environmental sciences, oceanography and related interdisciplinary fields. Many chemistry graduates elect to pursue advanced M.S., Ph.D., pharmacology or MD degrees.

The chemistry curriculum meets the American Chemical Society standards covering the basics of general, organic, inorganic, physical and analytical chemistry, and biochemistry. Undergraduate research leading to publications is strongly encouraged, and many of the laboratory-based courses have a research component built into them. The B.S. and B.A. programs may be completed without an optional concentration, or students can opt for an additional focus in biochemistry, environmental chemistry or forensic chemistry. The B.S. programs generally prepare students for a career in chemistry or biochemistry, or for professional school. The B.S. in chemistry is an ACS-approved degree program. The environmental chemistry concentration provides courses that help students study the chemistry of the natural environment by adding geology, biology or atmospheric courses, and it prepares students for graduate studies and/or careers in the environmental industry. The biochemistry concentration provides an enhanced curriculum in biological chemistry for students seeking advanced careers in biochemistry, medicine or health sciences. The B.A. degree provides
breadth in the curriculum for study of a minor subject and requires more humanities courses. The B.A. best prepares students for careers in chemistry-related fields like environmental law, forensic science, science education, anthropology, etc. Limited teaching assistantships are often available for upper-division students, which strengthen leadership and communication skills.

The bachelor’s degrees in chemistry and concentrations in biochemistry and environmental chemistry provide excellent research opportunities and background for undergraduate students through connection to corresponding graduate programs. See graduate programs in chemistry (p. 254), biochemistry and molecular biology (p. 251), and environmental chemistry (p. 280).

The Chemistry and Biochemistry Department is housed in the Reichardt Building, where laboratories are equipped with research-grade instrumentation, providing hands-on experience to students for entry into graduate school or industry. See the departmental website for more information, www.uaf.edu/chem/ (http://www.uaf.edu/chem).

Degrees

- B.A., Chemistry (p. 163)
- B.S., Chemistry (p. 164)

Minor

- Minor, Chemistry (p. 165)
- Minor, Biochemistry (p. 165)

B.A., Chemistry

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements

Complete the general university requirements. (p. 134)

General Education Requirements

Complete the general education requirements. (p. 137)

As part of the general education requirements, complete:

- MATH F251X Calculus I 4
- PHYS F103X and PHYS F104X College Physics I and College Physics II 8
- or PHYS F211X and PHYS F212X General Physics I and General Physics II

B.A. Degree Requirements

Complete the B.A. degree requirements. (p. 139)

As part of the B.A. degree requirements, complete:

- MATH F252X Calculus II 4

Program Requirements

Complete the program (major) requirements as listed under chemistry B.A. degree, including:

- CHEM F314 Analytical Instrumental Laboratory 3
- CHEM F332 Physical Chemistry II 4

Minor in Justice

JUST F110X Introduction to Justice 3
JUST F222 Research Methods 3
JUST F251 Criminology 3
JUST F300X Ethics and Justice 3
JUST F354 Procedural Law 3
JUST F454 Advanced Problems in Procedural Law 3

Total Credits 41

1. JUST F300X may not be used to fulfill core ethics requirement.

Note: This degree does not encompass the depth required to be an American Chemistry Society-approved chemistry degree. Students taking this degree will not receive a certificate from ACS. Students intending to continue in chemistry or biochemistry careers or graduate studies should select a B.S. degree program.

OPTIONAL CONCENTRATION: FORENSIC CHEMISTRY

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements

Complete the general university requirements. (p. 134)

General Education Requirements

Complete the general education requirements. (p. 137)

As part of the general education requirements, complete:

- MATH F251X Calculus I 4
- PHYS F103X and PHYS F104X College Physics I and College Physics II 8
- or PHYS F211X and PHYS F212X General Physics I and General Physics II

B.A. Degree Requirements

Complete the B.A. degree requirements. (p. 139)

As part of the B.A. degree requirements, complete:

- MATH F252X Calculus II 4

Program Requirements

Complete the program (major) requirements as listed under chemistry B.A. degree, including:

- CHEM F314 Analytical Instrumental Laboratory 3
- CHEM F332 Physical Chemistry II 4

Minor in Justice

JUST F110X Introduction to Justice 3
JUST F222 Research Methods 3
JUST F251 Criminology 3
JUST F300X Ethics and Justice 3
JUST F354 Procedural Law 3
JUST F454 Advanced Problems in Procedural Law 3

Total Credits 41

1. JUST F300X may not be used to fulfill core ethics requirement.

Note: This degree does not encompass the depth required to be an American Chemistry Society-approved chemistry degree. Students taking
this track will not receive a certificate from ACS. Students intending to continue in chemistry or biochemistry careers or graduate studies should select a B.S. degree program.

B.S., Chemistry
American Chemistry Society-approved

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)

As part of the general education requirements, complete:
- MATH F251X Calculus I 4
- PHYS F103X College Physics I 4
- PHYS F104X College Physics II 4
- or PHYS F211X General Physics I 4
- and PHYS F212X General Physics II 4

B.S. Degree Requirements
Complete the B.S. degree requirements. (p. 142)

As part of the B.S. requirements, complete:
- MATH F252X Calculus II 4

Program Requirements
- CHEM F105X General Chemistry I 4
- CHEM F106X General Chemistry II 4
- CHEM F202 Basic Inorganic Chemistry 3
- CHEM F212 Chemical Equilibrium and Analysis 4
- CHEM F215 Organic Chemistry I 4
- CHEM F225 Organic Chemistry II 4
- CHEM F331 Physical Chemistry I 4
- CHEM F332 Physical Chemistry II 4
- CHEM F351 General Biochemistry: Metabolism 3
- CHEM F434 Chemistry Capstone Laboratory 1 3
- CHEM F481 Seminar 1 1
- CHEM F482 Seminar 2 2
- CHEM F488 Undergraduate Chemistry and Biochemistry Research (3 credits) 1 3-4
- CHEM F488 Introduction to Chemical Research and Undergraduate Chemistry and Biochemistry Research (2 credits each)
- Select one from the following:
  - MATH F253X Calculus III 4
  - Select two from the following:
    - CHEM F402 Inorganic Chemistry
    - CHEM F450 General Biochemistry: Macromolecules
    - CHEM F314 Analytical Instrumental Laboratory

Total Credits 69-70

Note: Upon completing the required curriculum and fulfilling all general university requirements, students will receive a certificate from the American Chemical Society indicating approval of their degree program.

Optional Concentrations: Biochemistry, Environmental Chemistry

BIOCHEMISTRY

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)

As part of the general education requirements, complete:
- MATH F251X Calculus I 4
- PHYS F103X College Physics I 4
- PHYS F104X College Physics II 4
- or PHYS F211X General Physics I 4
- and PHYS F212X General Physics II 4

B.S. Degree Requirements
Complete the B.S. degree requirements. (p. 142)

As part of the B.S. degree requirements, complete:
- MATH F252X Calculus II 4

Program Requirements
- CHEM F105X General Chemistry I 4
- CHEM F106X General Chemistry II 4
- BIOL F115X Fundamentals of Biology I 4
- BIOL F116X Fundamentals of Biology II 4
- CHEM F202 Basic Inorganic Chemistry 3
- CHEM F212 Chemical Equilibrium and Analysis 4
- CHEM F215 Organic Chemistry I 4
- CHEM F235 Organic Chemistry II 4
- CHEM F331 Physical Chemistry I 4
- CHEM F332 Physical Chemistry II 4
- CHEM F351 General Biochemistry: Metabolism 3
- CHEM F434 Chemistry Capstone Laboratory 1 3
- CHEM F481 Seminar 1 1
- CHEM F482 Seminar 2 2
- CHEM F488 Undergraduate Chemistry and Biochemistry Research 6
- Select four from the following: 1 12-14
  - CHEM F322 Physical Chemistry II
  - CHEM F434 Chemistry Capstone Laboratory
  - CHEM F314 Analytical Instrumental Laboratory
  - CHEM F420 Applications of NMR Spectroscopy
  - MATH F253X Calculus III
- Select 10 credits from the following: 1 10
  - CHEM F360 Cell and Molecular Biology
  - CHEM F455 Environmental Toxicology
  - CHEM F470 Cellular and Molecular Neuroscience
  - CHEM F474 Neurochemistry
  - BIOL F240 Beginnings in Microbiology

1. Fulfills the baccalaureate capstone requirement.
BIOL F260  Principles of Genetics
BIOL F310  Animal Physiology
BIOL F342  Microbiology
BIOL F402  Biomedical and Research Ethics
BIOL F417  Neurobiology
BIOL F462  Concepts of Infectious Disease
BIOL F465  Immunology

Total Credits  88-90

1 Courses selected under these areas must meet baccalaureate degree requirements for 39 upper-division credits and two writing-intensive courses.

Note: This degree is intended for students interested in careers in biochemistry or pre-professional students, providing extra depth in biological sciences. The selection of optional courses will determine if the curriculum conforms to the American Chemistry Society-approved chemistry degree. Students desiring an ACS-approved chemistry degree should consult with their advisor about optional courses that will meet ACS requirements.

ENVIRONMENTAL CHEMISTRY
Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)
As part of the general education requirements, complete:
MATH F251X  Calculus I  4
PHYS F103X  College Physics I  4
and PHYS F104X  and College Physics II  4
or PHYS F211X  General Physics I  4
and PHYS F212X  and General Physics II  4

B.S. Degree Requirements
Complete the B.S. degree requirements. (p. 142)
As part of the B.S. degree, complete:
MATH F252X  Calculus II  4

Program Requirements
CHEM F105X  General Chemistry I  4
CHEM F106X  General Chemistry II  4
CHEM F202  Basic Inorganic Chemistry  3
CHEM F212  Chemical Equilibrium and Analysis  4
CHEM F314  Analytical Instrumental Laboratory  3
CHEM F321  Organic Chemistry I  4
CHEM F325  Organic Chemistry II  4
CHEM F331  Physical Chemistry I  4
CHEM F332  Physical Chemistry II  4
CHEM F434  Chemistry Capstone Laboratory  3
CHEM F481  Seminar  1
CHEM F482  Seminar  2
CHEM F488  Undergraduate Chemistry and Biochemistry Research  3-4

or CHEM F288  Introduction to Chemical Research
and CHEM F488  Undergraduate Chemistry and Biochemistry Research

MATH F253X  Calculus III  4
Select two from the following:  7-8
ATM F101X  Weather and Climate of Alaska
BIOL F115X  Fundamentals of Biology I
BIOL F116X  Fundamentals of Biology II
GEOS F101X  The Dynamic Earth
GEOS F262  Rocks and Minerals

Select two from the following:  6-7
ATM F401  Introduction to Atmospheric Sciences
BIOL F342  Microbiology
CHEM F406  Atmospheric Chemistry
CHEM F455  Environmental Toxicology
GEOS F417  Introduction to Geochemistry
NRM F380  Soils and the Environment

Total Credits  76-79

Note: A course in statistics (e.g. STAT F200X, STAT F300, or GEOS F430) is suggested. The selection of optional courses will determine if the curriculum conforms to the American Chemistry Society-approved chemistry degree. Students desiring an ACS-approved chemistry degree should consult with their advisor about optional courses that will meet ACS requirements.

REQUIREMENTS FOR CHEMISTRY TEACHERS (GRADES 7-12)
Complete all the requirements of the chemistry B.A. or B.S. degree.

All prospective science teachers must complete the following:
PHIL F481  Philosophy of Science  3

Total Credits  3

Note: We strongly recommend that prospective secondary science teachers seek advising from the UAF School of Education early in your undergraduate degree program so that you can be appropriately advised of the State of Alaska requirements for teacher licensure.

Minor, Biochemistry
Minimum Requirements for Minor: 26 credits

CHEM F105X  General Chemistry I  4
CHEM F106X  General Chemistry II  4
CHEM F202  Basic Inorganic Chemistry  3
CHEM F212  Chemical Equilibrium and Analysis  4
CHEM F314  Analytical Instrumental Laboratory  3
CHEM F321  Organic Chemistry I  4
CHEM F325  Organic Chemistry II  4
CHEM F331  Physical Chemistry I  4
CHEM F351  General Biochemistry: Metabolism  3
CHEM F352  Organic Chemistry II  4
CHEM F331  Physical Chemistry I  4
CHEM F351  General Biochemistry: Metabolism  3
CHEM F202  Basic Inorganic Chemistry  3-4
CHEM F212  Chemical Equilibrium and Analysis  4

Total Credits  26-27

Minor, Chemistry
Minimum Requirements for Minor: 27 credits

CHEM F105X  General Chemistry I  4
CHEM F106X  General Chemistry II  4
CHEM F321  Organic Chemistry I  4
CHEM F325  Organic Chemistry II  4
CHEM F331  Physical Chemistry I  4
CHEM F351  General Biochemistry: Metabolism  3
CHEM F202  Basic Inorganic Chemistry  3-4
CHEM F212  Chemical Equilibrium and Analysis  4

Total Credits  27-28
Child Development and Family Studies

B.A. Degree

Minimum Requirements for Degree: 120 credits

This program provides the necessary preparation for early childhood educators who wish to advance their professional knowledge and career opportunities with specialized study in administration, curriculum and teaching, family support, or infants and toddlers.

The child development and family studies program meets professional preparation standards developed by the National Association for the Education of Young Children. These six core standards and field experience expectations guide the CDFS B.A. program content and outline a set of common expectations for professional knowledge, skills and dispositions within the field of early care and education in conjunction with family studies.

The program supports students who desire a strong foundation in the field of early childhood by integrating the early childhood education A.A.S. content requirements with that of the child development and family studies B.A.. Students are required to complete the program major and one of the specialized concentration areas: administration within the early childhood field, curriculum and teaching, family support, or infant and toddler. Students entering the child development and family studies B.A. program with an A.A. or A.A.S. degree in early childhood education from a regionally accredited college or university will receive 23 transfer credits toward the program major. Any additional courses will need to be evaluated on an individual basis.

Flexible course delivery fosters successful completion for early childhood professionals living in both rural and urban areas of Alaska. All program and concentration area courses must be completed with a C grade or better, with the exclusion of all clinical practice course work which must completed with a B grade or better. Completion of the CDFS B.A. will meet requirements for both a major and minor.

Degree

- B.A., Child Development and Family Studies (p. 166)

B.A., Child Development and Family Studies

Concentrations: Administration Within the Early Childhood Field, Curriculum and Teaching, Family Support, and Infant and Toddler

Minimum Requirements for Degree: 120 credits

Students must earn a C grade or better in each course.

General University Requirements

Complete the general university requirements. (p. 134)

General Education Requirements

Complete the general education requirements. (p. 137)

B.A. Degree Requirements

Complete the B.A. degree requirements. (p. 139)

As part of the B.A. social science degree requirements, complete:

| PSY F101X | Introduction to Psychology | 3 |
| ANS F242X | Native Cultures of Alaska |
| ANS F320 | Language and Culture in Alaska |
| ANS F330 | Yup’ik Parenting and Child Development |
| ANS F461 | Native Ways of Knowing |
| ANTH F407 | Kinship and Social Organization |
| LING F303 | Language Acquisition |

Mathematics

Select one from the following: 3-4

| CS F101 | Computers and Society |
| CS F102 | Introduction to Computer Science |
| MATH F113X | Concepts and Contemporary Applications of Mathematics |
| MATH F122X | Precalculus for Business and Economics |
| MATH F151X | College Algebra for Calculus |

Program Requirements

| ECE F101 | Introduction to Early Childhood Profession | 3 |
| ECE F104X | Child Development I: Prenatal, Infants and Toddlers | 3 |
| ECE F107 | Child Development II: The Preschool and Primary Years | 3 |
| ECE F110 | Safe, Healthy, Learning Environments | 3 |
| ECE F140 | Positive Social and Emotional Development | 3 |
| ECE F210 | Child Guidance | 3 |
| ECE F229 | Foundations in Nutrition and Physical Wellness | 3 |
| ECE F235 or ECE F130 | Screening, Assessment and Recording Culture, Learning and the Young Child | 2 |
| ECE F305 | Social Emotional Development: Reflection and Practice | 3 |
| ECE F342 | Family Relationships | 3 |
| ECE F350 | Play: Foundation for Development | 3 |
| ECE F445 | Adolescence Through the Lifespan | 3 |
| ECE F480 | Child Development and Family Studies Portfolio | 1 |
Concentrations
Select one from the following concentrations: 24
- Administration within the Early Childhood Field
- Curriculum and Teaching
- Family Support
- Infant and Toddler

Total Credits: 75-76

As part of the core curriculum requirements, the following courses are recommended: ENGL F213X, MATH F113X, MATH F122X, or MATH F151X; BIOL F104X, GEOG F111X or GEOS F120X.

<table>
<thead>
<tr>
<th>Concentrations</th>
<th>ADMINISTRATION WITHIN THE EARLY CHILDHOOD FIELD</th>
<th>Family Support</th>
<th>Infant and Toddler</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE F340</td>
<td>Financial Management of Early Childhood Programs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECE F341</td>
<td>Personnel Management of Early Childhood Programs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECE F471</td>
<td>Clinical Practice: Organizational Action Research</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIOS F150</td>
<td>Computer Business Applications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGL F212</td>
<td>Business, Grant and Report Writing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BA S301</td>
<td>Principles of Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BA S343</td>
<td>Principles of Marketing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BA S490</td>
<td>Political and Social Environment of Business</td>
<td></td>
<td></td>
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<tr>
<td><strong>Total Credits</strong></td>
<td><strong>15</strong></td>
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</tbody>
</table>

**Note:** ECON F201X or ECON F202X is a prerequisite for BA S490.

**Note:** This specialization is offered in collaboration with the University of Alaska Southeast. For course descriptions of UAS courses see current University of Alaska Southeast catalog. These courses are available by distance delivery.

<table>
<thead>
<tr>
<th>Concentrations</th>
<th>CURRICULUM AND TEACHING</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE F240</td>
<td>Inclusion of Children with Special Needs</td>
<td>3</td>
</tr>
<tr>
<td>ECE F310</td>
<td>Constructivist Curriculum</td>
<td>3</td>
</tr>
<tr>
<td>ECE F360</td>
<td>Assessment in Early Childhood</td>
<td>3</td>
</tr>
<tr>
<td>ECE F420</td>
<td>Developing Literacy in the Early Years</td>
<td>3</td>
</tr>
<tr>
<td>ECE F430</td>
<td>Fine Arts for the Early Years</td>
<td>3</td>
</tr>
<tr>
<td>ECE F440</td>
<td>Exploring Math and Science</td>
<td>3</td>
</tr>
<tr>
<td>ECE F472</td>
<td>Clinical Practice: Classroom Research</td>
<td>3</td>
</tr>
<tr>
<td>ECE F473</td>
<td>Clinical Practice: Classroom Management</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>24</strong></td>
<td></td>
</tr>
</tbody>
</table>

1 Student must earn a B grade or higher in each course.

**Note:** ECE F270 as approved by CDFS program.

<table>
<thead>
<tr>
<th>Concentrations</th>
<th>FAMILY SUPPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE F242</td>
<td>Child and Family Ecology</td>
</tr>
<tr>
<td>ECE F301</td>
<td>Parents as Partners in Education</td>
</tr>
<tr>
<td>or ECE F302</td>
<td>Building Home Program Relationships: Prenatal to 3 Years</td>
</tr>
<tr>
<td>ECE F306</td>
<td>Building Bridges to Support Family Mental Health</td>
</tr>
<tr>
<td>ECE F405</td>
<td>Seminar in Culture and Child Rearing Practices</td>
</tr>
<tr>
<td>ECE F410</td>
<td>Supporting Family Relationships through Mentoring</td>
</tr>
<tr>
<td>ECE F442</td>
<td>Family Resource Management</td>
</tr>
<tr>
<td>ECE F471</td>
<td>Clinical Practice: Organizational Action Research</td>
</tr>
<tr>
<td>SWK F360</td>
<td>Child Abuse and Neglect</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>24</strong></td>
</tr>
</tbody>
</table>

**Note:** Students completing the family support concentration need to complete SWK F103X as a prerequisite to SWK F360.

<table>
<thead>
<tr>
<th>Concentrations</th>
<th>INFANT AND TODDLER</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE F214</td>
<td>Infants and Toddlers</td>
<td>3</td>
</tr>
<tr>
<td>ECE F302</td>
<td>Building Home Program Relationships: Prenatal to 3 Years</td>
<td>3</td>
</tr>
<tr>
<td>ECE F304</td>
<td>Attachment and Social Development</td>
<td>3</td>
</tr>
<tr>
<td>ECE F320</td>
<td>Environment and Curriculum for Infants and Toddlers</td>
<td>3</td>
</tr>
<tr>
<td>ECE F405</td>
<td>Seminar in Culture and Child Rearing Practices</td>
<td>3</td>
</tr>
<tr>
<td>ECE F421</td>
<td>From Babbling to Talking to Early Literacy</td>
<td>3</td>
</tr>
<tr>
<td>ECE F472</td>
<td>Clinical Practice: Classroom Research</td>
<td>3</td>
</tr>
<tr>
<td>or ECE F473</td>
<td>Clinical Practice: Classroom Management</td>
<td>3</td>
</tr>
<tr>
<td>or ECE F270</td>
<td>Practicum II</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>24</strong></td>
<td></td>
</tr>
</tbody>
</table>

2 Student must earn a B grade or higher in each course.
For students entering the program with an A.A. or A.A.S. degree in early childhood education from a regionally accredited college or university (23 credits accepted as a block of courses).

Minimum Requirements for Degree: 120 credits

Students must earn a C grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)

B.A. Degree Requirements
Complete the B.A. degree requirements. (p. 139)

As part of the B.A. social science degree requirements, complete:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY F101X</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
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</table>

Humanities/Social Science
Select three from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ANS F242X</td>
<td>Native Cultures of Alaska</td>
<td></td>
</tr>
<tr>
<td>ANS F320</td>
<td>Language and Culture in Alaska</td>
<td></td>
</tr>
<tr>
<td>ANS F330</td>
<td>Yup'ik Parenting and Child Development</td>
<td></td>
</tr>
<tr>
<td>ANS F461</td>
<td>Native Ways of Knowing</td>
<td></td>
</tr>
<tr>
<td>ANTH F407</td>
<td>Kinship and Social Organization</td>
<td></td>
</tr>
<tr>
<td>LING F303</td>
<td>Language Acquisition</td>
<td></td>
</tr>
</tbody>
</table>

Mathematics
Select one from the following: 3-4

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS F101</td>
<td>Computers and Society</td>
<td></td>
</tr>
<tr>
<td>CS F102</td>
<td>Introduction to Computer Science</td>
<td></td>
</tr>
<tr>
<td>MATH F113X</td>
<td>Concepts and Contemporary Applications of Mathematics</td>
<td></td>
</tr>
<tr>
<td>MATH F122X</td>
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<td></td>
</tr>
<tr>
<td>MATH F151X</td>
<td>College Algebra for Calculus</td>
<td></td>
</tr>
</tbody>
</table>

ECE F305 Social Emotional Development: Reflection and Practice 3
ECE F342 Family Relationships 3
ECE F350 Play: Foundation for Development 3
ECE F445 Adolescence Through the Lifespan 3
ECE F480 Child Development and Family Studies Portfolio 1

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE F240</td>
<td>Inclusion of Children with Special Needs</td>
<td>3</td>
</tr>
<tr>
<td>ECE F310</td>
<td>Constructivist Curriculum</td>
<td>3</td>
</tr>
<tr>
<td>ECE F360</td>
<td>Assessment in Early Childhood</td>
<td>3</td>
</tr>
<tr>
<td>ECE F420</td>
<td>Developing Literacy in the Early Years</td>
<td>3</td>
</tr>
<tr>
<td>ECE F430</td>
<td>Fine Arts for the Early Years</td>
<td>3</td>
</tr>
<tr>
<td>ECE F440</td>
<td>Exploring Math and Science</td>
<td>3</td>
</tr>
<tr>
<td>ECE F472</td>
<td>Clinical Practice: Classroom Research 1</td>
<td>3</td>
</tr>
<tr>
<td>ECE F473</td>
<td>Clinical Practice: Classroom Management 1</td>
<td>3</td>
</tr>
<tr>
<td>or ECE F270</td>
<td>Practicum II</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits 24

1 Student must earn a B grade or higher in each course.

Note: ECE F270 as approved by CDFS program.
FAMILY SUPPORT
Students completing any CFDS concentration will need an additional 6 upper-division (300-400) credits within the Humanities/Social Science B.A. general degree requirements.

Note: Students completing the family support concentration need to complete SWK F103X as a prerequisite to SWK F360.

ECE F242 Child and Family Ecology 3
ECE F301 Parents as Partners in Education 3
or ECE F302 Building Home Program Relationships: Prenatal to 3 Years 3
ECE F306 Building Bridges to Support Family Mental Health 3
ECE F405 Seminar in Culture and Child Rearing Practices 3
ECE F410 Supporting Family Relationships through Mentoring 3
ECE F442 Family Resource Management 3
ECE F471 Clinical Practice: Organizational Action Research 3
SWK F360 Child Abuse and Neglect 3
Total Credits 24

INFANT AND TODDLER
Students completing any CFDS concentration will need an additional 6 upper-division (300-400) credits within the Humanities/Social Science B.A. general degree requirements.

ECE F214 Infants and Toddlers 3
ECE F302 Building Home Program Relationships: Prenatal to 3 Years 3
ECE F304 Attachment and Social Development 3
ECE F320 Environment and Curriculum for Infants and Toddlers 3
ECE F405 Seminar in Culture and Child Rearing Practices 3
ECE F421 From Babbling to Talking to Early Literacy 3
ECE F472 Clinical Practice: Classroom Research 3
ECE F473 Clinical Practice: Classroom Management 3
or ECE F270 Practicum II 3
Total Credits 24

2 Student must earn a B grade or higher in each course.

Civil and Environmental Engineering

Civil engineers plan, design and supervise the construction of public and private structures such as space-launch facilities, offshore structures, bridges, buildings, tunnels, highways, transit systems, dams, airports, irrigation projects, and water treatment and distribution facilities.

Civil engineers use sophisticated technology and employ computer-aided engineering during design, construction, project scheduling and cost control project phases. They are creative problem solvers involved in community development and the challenges of pollution, deteriorating infrastructure, traffic congestion, energy needs, floods, earthquakes and urban planning.

The civil engineering program at UAF has been accredited since 1940 and is currently accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology. All engineering programs in the department give special attention to problems of northern regions.

The civil engineering program educational objectives are:
1. Graduates will have a strong fundamental scientific and technical knowledge base as well as strong critical thinking skills.
2. Graduates will apply their engineering skills to critically analyze and interpret data and be proficient in engineering design accommodating the total project environment.
3. Graduates will be able to communicate with the technical, professional and broader communities in written, verbal and visual formats, including interacting in interdisciplinary contexts.
4. Graduates will demonstrate high standards in ethical, legal and professional obligations to protect human health, welfare and the environment.
5. Graduates will be active in the professional civil engineering community, actively contribute to the profession and pursue lifelong learning.

In addition to general civil engineering courses, the department offers specialties in transportation, geotechnical, structures, water resources, hydrology and environmental studies. These courses emphasize principles of analysis, planning and engineering design in northern regions.

For more information about the civil engineering program mission, goals and educational objectives, visit http://cem.uaf.edu/cee/abet/.

Degree
- B.S., Civil and Environmental Engineering (p. 169)

B.S., Civil and Environmental Engineering

Minimum Requirements for Degree: 134 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)

As part of the general education requirements, complete:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM F105X</td>
<td>General Chemistry I</td>
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<tr>
<td>CHEM F106X</td>
<td>General Chemistry II</td>
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B.S. Degree Requirements

Complete the B.S. degree requirements. (p. 142)

As part of the B.S. degree requirements, complete:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
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<tr>
<td>MATH F251X</td>
<td>Calculus I</td>
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<tr>
<td>MATH F252X</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS F211X</td>
<td>General Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS F212X</td>
<td>General Physics II</td>
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</table>

Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CE F112</td>
<td>Elementary Surveying</td>
<td>3</td>
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<tr>
<td>CE F302</td>
<td>Introduction to Transportation</td>
<td>3</td>
</tr>
<tr>
<td>CE F326</td>
<td>Introduction to Geotechnical</td>
<td>4</td>
</tr>
<tr>
<td>CE F331</td>
<td>Structural Analysis</td>
<td>3</td>
</tr>
<tr>
<td>CE F334</td>
<td>Properties of Materials</td>
<td>3</td>
</tr>
<tr>
<td>CE F341</td>
<td>Environmental Engineering</td>
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<tr>
<td>CE F344</td>
<td>Water Resources Engineering</td>
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</tr>
<tr>
<td>CE F432</td>
<td>Steel Design</td>
<td>3</td>
</tr>
<tr>
<td>CE F437</td>
<td>Design of Engineered Systems I</td>
<td>3</td>
</tr>
<tr>
<td>CE F438</td>
<td>Design of Engineered Systems II</td>
<td>3</td>
</tr>
<tr>
<td>CE F470</td>
<td>Civil Engineering Internship</td>
<td>1</td>
</tr>
<tr>
<td>or CE F471</td>
<td>Field Practicum</td>
<td>1</td>
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<tr>
<td>ES F101</td>
<td>Introduction to Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ES F201</td>
<td>Computer Techniques</td>
<td>3</td>
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<tr>
<td>ES F209</td>
<td>Statics</td>
<td>3</td>
</tr>
<tr>
<td>ES F210</td>
<td>Dynamics</td>
<td>3</td>
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<td>ES F301</td>
<td>Engineering Analysis</td>
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</tr>
<tr>
<td>ES F331</td>
<td>Mechanics of Materials</td>
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<td>ES F341</td>
<td>Fluid Mechanics</td>
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<td>ESM F422</td>
<td>Engineering Decisions</td>
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<td>ESM F450</td>
<td>Economic Analysis and Operations</td>
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<td>GE F261</td>
<td>General Geology for Engineers</td>
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<td>MATH F253X</td>
<td>Calculus III</td>
<td>4</td>
</tr>
<tr>
<td>MATH F302</td>
<td>Differential Equations</td>
<td>3</td>
</tr>
</tbody>
</table>

Technical Electives

Field of environmental engineering, construction, or transportation
CE, ENVE, ESM courses or approved technical courses, 6
ES F307

Fundamentals of Engineering (FE) Examination

Complete the Fundamentals of Engineering (FE) examination administered by the State of Alaska.

Total Credits 107

Note: The ability to use computers for normal class work is expected in all engineering classes above the F100 level.

B.A. Degree

Minimum Requirements for Degree: 120 credits

The communication program teaches students to communicate effectively and ethically in a rapidly changing world characterized by diversity in gender, culture and belief. It offers a comprehensive background in the discipline in preparation for employment or further education. Students majoring in other disciplines find communication electives valuable additions to their programs.

The program is both theoretical and pragmatic, designed to prepare students for the professional workplace or for advanced study.

Communication courses are available online and in the classroom.

The minor in dispute resolution gives students a theoretical background for and practice of alternative dispute resolution. The curriculum supports the developing restorative justice emphasis of the B.A. of justice, and is applicable to business administration, social work, psychology and counseling contexts.

Degree

• B.A., Communication (p. 170)

Minors

• Minor, Communication (p. 171)
• Minor, Alternative Dispute Resolution (p. 171)

B.A., Communication

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements

Complete the general university requirements. (p. 134)

General Education Requirements

Complete the general education requirements. (p. 137)

B.A. Degree Requirements

Complete the B.A. degree requirements. (p. 139)

Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM F180X</td>
<td>Introduction to Human Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM F330</td>
<td>Intercultural Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM F351</td>
<td>Gender and Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM F401</td>
<td>Communication Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>COMM F425</td>
<td>Communication Theory</td>
<td>3</td>
</tr>
<tr>
<td>COMM F482</td>
<td>Capstone Seminar in Communication</td>
<td>3</td>
</tr>
<tr>
<td>or ES F307</td>
<td>Basic Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>or ES F346</td>
<td>Elements of Electrical Engineering</td>
<td>3</td>
</tr>
<tr>
<td>or ES F346</td>
<td>Elements of Electrical Engineering</td>
<td>3</td>
</tr>
</tbody>
</table>

Select four from the following: 1

COMM F300X
COMM F300X
COMM F320
COMM F321
COMM F321

Note: The ability to use computers for normal class work is expected in all engineering classes above the F100 level.
COMM F322  Communication in Interpersonal Relationships
COMM F331  Advanced Group Communication
COMM F335  Organizational Communication
COMM F352  Family Communication
COMM F353  Conflict, Mediation and Communication
COMM F380  Communication and Diversity
COMM F432  Professional Public Speaking
COMM F441  Persuasion
COMM F462  Communication in Health Contexts
COMM F475  Applied Communication in Training and Development

Total Credits 30

1. With approval of advisor, an appropriate level special topics or independent studies course in communication may be used to meet this requirement.
2. If taken to meet the general education requirement for Ethics, then the student must take an additional F300- or F400-level communication course to complete the major.
3. Fulfills the baccalaureate capstone requirement.

Minor, Alternative Dispute Resolution

Minimum Requirements for Minor: 15 credits

Students must earn a C- grade or better in each course.

COMM F201  Dispute Resolution and Restorative Practices 3

Select four from the following: 12
COMM F302  Dispute Systems Design
COMM F353  Conflict, Mediation and Communication
COMM F451  Cross-Cultural Conflict Analysis and Intervention
COMM F452  Law and Science of Arbitration
COMM F453  Clinic in Mediation, Conferencing and Circle Practices

Total Credits 15

Note: F400-level courses require junior standing or instructor permission

Minor, Communication

Minimum Requirements for Minor: 15 credits

COMM F180X  Introduction to Human Communication 3
COMM F330  Intercultural Communication 3
or COMM F351  Gender and Communication

Communication electives at the F300 level or above 9

Total Credits 15

Computer Engineering

College of Engineering and Mines
Department of Electrical and Computer Engineering
907-474-7137

http://cem.uaf.edu/ece/

B.S. Degree

Minimum Requirements for Degree: 134 credits

The mission of the Electrical and Computer Engineering Department is to offer the highest quality, contemporary education in electrical and computer engineering at the undergraduate and graduate levels and to perform research appropriate to the technical needs of the state of Alaska, the nation and the world.

Computer engineering is a relatively new discipline. It lies somewhere in the middle between computer science, which covers theory, algorithms, software, networking, graphics and computer architecture — and electrical engineering, which covers microelectronics, electrical circuits and devices, networks, communications systems, computer architecture, hardware design and systems analysis. Computer engineers design, analyze, produce, operate, program and maintain computer and digital systems. They apply theories and principles of science and mathematics to the design of hardware, software, networks and processes to solve technical problems.

Over the past decade, computers have evolved into complex systems that may consist of single machines or many interconnected computers linked by a data network. In one form or another, computers now control most telephone and communications systems, process control and manufacturing automation systems, management information systems, household appliances, automobiles, transportation systems and medical instrumentation. Computers also form the core of the Internet. To work in the constantly evolving discipline of computer systems engineering, the computer engineer must acquire competence in both digital computer hardware and the fundamentals of software engineering.

Careers in computer engineering are as wide and varied as computer systems themselves. Systems range from embedded computer systems found in consumer products or medical devices; control systems for automobiles, aircraft and trains; to more wide-ranging applications in telecommunications, financial transactions and information systems.

The faculty of the Electrical and Computer Engineering Department provide a positive learning environment that enables students to pursue their goals in an innovative program that is rigorous and challenging, open and supportive. The B.S. program develops practical skills by emphasizing hands-on experience in the design, implementation, and validation of electrical systems in an environment that fosters and encourages innovation and creativity. This approach builds the foundation for the program’s educational objectives:

1. Breadth: Graduates will utilize their broad education emphasizing computer engineering to serve as the foundation for productive careers in the public or private sectors, graduate education, and lifelong learning.
2. Depth: Graduates will apply their understanding of the fundamental knowledge prerequisite for the practice of and/or advanced study in computer engineering, including its scientific principles, rigorous analysis, and creative design.
3. Professional skills: Graduates will apply skills for clear communication, responsible teamwork, professional attitudes and ethics needed to succeed in the complex modern work environment.

These objectives serve the department, college and university missions by insuring that all graduates of the program have received a high quality,
contemporary education that prepares them for a rewarding career in computer engineering.

Candidates for the B.S. degree are required to take the state of Alaska Fundamentals of Engineering Examination in their general field.

For more information about the computer engineering program mission, goals and educational objectives, visit http://cem.uaf.edu/ece/abet/.

**Degree**

- B.S., Computer Engineering (p. 172)

**B.S., Computer Engineering**

Minimum Requirements for Degree: 134 credits

Students must earn a C- grade or better in each course.

**General University Requirements**

Complete the general university requirements. (p. 134)

**General Education Requirements**

Complete the general education requirements. (p. 137)

As part of the general education requirements, complete:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM F105X</td>
<td>General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>and CHEM F106X</td>
<td>and General Chemistry II</td>
<td>8</td>
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<tr>
<td>or PHYS F213X</td>
<td>Elementary Modern Physics</td>
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<table>
<thead>
<tr>
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<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F251X</td>
<td>Calculus I</td>
<td>4</td>
</tr>
</tbody>
</table>

**B.S. Degree Requirements**

Complete the B.S. degree requirements. (p. 142)

As part of the B.S. degree requirements, complete:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F252X</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS F211X</td>
<td>General Physics I</td>
<td>8</td>
</tr>
<tr>
<td>and PHYS F212X</td>
<td>and General Physics II</td>
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**Program Requirements**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>CS F201</td>
<td>Computer Science I</td>
<td>3</td>
</tr>
<tr>
<td>CS F202</td>
<td>Computer Science II</td>
<td>3</td>
</tr>
<tr>
<td>CS F301</td>
<td>Assembly Language Programming</td>
<td>3</td>
</tr>
<tr>
<td>CS F311</td>
<td>Data Structures and Algorithms</td>
<td>3</td>
</tr>
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<td>CS F321</td>
<td>Operating Systems</td>
<td>3</td>
</tr>
<tr>
<td>CS F331</td>
<td>Programming Languages</td>
<td>3</td>
</tr>
<tr>
<td>EE F102</td>
<td>Introduction to Electrical and Computer Engineering</td>
<td>3</td>
</tr>
<tr>
<td>EE F203</td>
<td>Electrical Engineering Fundamentals I</td>
<td>4</td>
</tr>
<tr>
<td>EE F204</td>
<td>Electrical Engineering Fundamentals II</td>
<td>4</td>
</tr>
<tr>
<td>EE F333</td>
<td>Physical Electronics</td>
<td>4</td>
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<tr>
<td>EE F311</td>
<td>Applied Engineering Electromagnetics</td>
<td>3</td>
</tr>
<tr>
<td>EE F331</td>
<td>High-Frequency Lab</td>
<td>1</td>
</tr>
<tr>
<td>EE F343</td>
<td>Digital Systems Analysis and Design</td>
<td>4</td>
</tr>
<tr>
<td>EE F353</td>
<td>Circuit Theory</td>
<td>3</td>
</tr>
<tr>
<td>EE F354</td>
<td>Engineering Signal Analysis</td>
<td>3</td>
</tr>
<tr>
<td>EE F443</td>
<td>Computer Engineering Analysis and Design</td>
<td>4</td>
</tr>
<tr>
<td>EE F444</td>
<td>Embedded Systems Design</td>
<td>4</td>
</tr>
<tr>
<td>EE F463</td>
<td>Communication Networks</td>
<td>3</td>
</tr>
<tr>
<td>ES F101</td>
<td>Introduction to Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ESM F450</td>
<td>Economic Analysis and Operations</td>
<td>3</td>
</tr>
<tr>
<td>MATH F253X</td>
<td>Calculus III</td>
<td>4</td>
</tr>
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</table>

**Electives**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MATH F302</td>
<td>Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>MATH F307</td>
<td>Discrete Mathematics</td>
<td>3</td>
</tr>
</tbody>
</table>

**Approved Electives**

Recommended Electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS F361</td>
<td>Systems Security and Administration</td>
<td></td>
</tr>
<tr>
<td>CS F381</td>
<td>Computer Graphics</td>
<td></td>
</tr>
<tr>
<td>CS F411</td>
<td>Analysis of Algorithms</td>
<td></td>
</tr>
<tr>
<td>CS F421</td>
<td>Distributed Operating Systems</td>
<td></td>
</tr>
<tr>
<td>CS F431</td>
<td>Programming Language Implementation</td>
<td></td>
</tr>
<tr>
<td>CS F471</td>
<td>Senior Capstone I</td>
<td></td>
</tr>
<tr>
<td>CS F472</td>
<td>Senior Capstone II</td>
<td></td>
</tr>
<tr>
<td>CS F481</td>
<td>Graphics Rendering</td>
<td></td>
</tr>
<tr>
<td>EE F334</td>
<td>Electronic Circuit Design</td>
<td></td>
</tr>
<tr>
<td>EE F434</td>
<td>Instrumentation Systems</td>
<td></td>
</tr>
<tr>
<td>EE F451</td>
<td>Digital Signal Processing</td>
<td></td>
</tr>
<tr>
<td>EE F461</td>
<td>Communication Systems</td>
<td></td>
</tr>
<tr>
<td>EE F464</td>
<td>Communication Networks Design</td>
<td></td>
</tr>
<tr>
<td>EE F471</td>
<td>Fundamentals of Automatic Control</td>
<td></td>
</tr>
</tbody>
</table>

**Approved Engineering Science Elective**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES F208</td>
<td>Mechanics</td>
<td></td>
</tr>
<tr>
<td>ES F331</td>
<td>Mechanics of Materials</td>
<td></td>
</tr>
<tr>
<td>ES F341</td>
<td>Fluid Mechanics</td>
<td></td>
</tr>
<tr>
<td>ES F346</td>
<td>Basic Thermodynamics</td>
<td></td>
</tr>
<tr>
<td>ME F334</td>
<td>Elements of Material Science/ Engineering</td>
<td></td>
</tr>
</tbody>
</table>

**Fundamentals of Engineering (FE) Examination**

Complete the Fundamentals of Engineering (FE) examination administered by the State of Alaska.

Total Credits: 107

1. Fulfills the baccalaureate capstone requirement.

**Computer Information Technology Specialist**

College of Rural and Community Development
Community and Technical College
907-455-2800
www.ctc.uaf.edu/its/ ([http://www.ctc.uaf.edu/its](http://www.ctc.uaf.edu/its))

**Minor Only**

**Minor**

- Minor, Computer Information Technology Specialist (p. 172)

**Minor, Computer Information Technology**

Minimum Requirements for Minor: 15 credits

Students must earn a C- grade or better in each course.
Computer Science

College of Engineering and Mines
Department of Computer Science
907-474-2777
www.cs.uaf.edu (http://www.cs.uaf.edu)

B.S., B.S./M.S. Degrees

Minimum Requirements for Degrees: B.S.: 120 credits; B.S./M.S.: 141 credits

Computer science is the study of information handling and its application to the problems of the world. Computing is widely used in support of science, engineering, business, law, medicine, education and the social sciences, and offers abundant employment opportunities.

The B.S. and M.S. degrees follow the recommendations of the Association for Computing Machinery and the Institute for Electrical and Electronic Engineers. The B.S. degree is accredited by the Computing Accreditation Commission of the Accreditation Board for Engineering and Technology.

The computer science undergraduate program introduces the fundamentals of computer programming, hardware and theory. It emphasizes the application of general principles to real-world problems. Mathematics and engineering play critical roles in the core. A solid background in fundamentals enables graduates to understand the uses of today’s computers and to participate in future developments.

Degree

- B.S., Computer Science (p. 173)
- B.S./M.S., Computer Science (p. 173)

Minor

- Minor, Computer Science (p. 174)

B.S., Computer Science

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements

Complete the general university requirements. (p. 134)

General Education Requirements

Complete the general education requirements. (p. 137)

As part of the general education requirements, complete:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F251X</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>Any approved ethics course</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B.S. Degree Requirements

Complete the B.S. degree requirements. (p. 142)

As part of the B.S. degree requirements, complete:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS F201</td>
<td>Computer Science I</td>
<td>3</td>
</tr>
<tr>
<td>CS F202</td>
<td>Computer Science II</td>
<td>3</td>
</tr>
<tr>
<td>CS F301</td>
<td>Assembly Language Programming</td>
<td>3</td>
</tr>
<tr>
<td>CS F311</td>
<td>Data Structures and Algorithms</td>
<td>3</td>
</tr>
<tr>
<td>CS F321</td>
<td>Operating Systems</td>
<td>3</td>
</tr>
<tr>
<td>CS F331</td>
<td>Programming Languages</td>
<td>3</td>
</tr>
<tr>
<td>CS F371</td>
<td>Computer Ethics and Technical Communication</td>
<td>3</td>
</tr>
<tr>
<td>CS F372</td>
<td>Software Construction</td>
<td>3</td>
</tr>
<tr>
<td>CS F411</td>
<td>Analysis of Algorithms</td>
<td>3</td>
</tr>
<tr>
<td>CS F441</td>
<td>System Architecture</td>
<td>3-4</td>
</tr>
<tr>
<td>or EE F443</td>
<td>Computer Engineering Analysis and Design</td>
<td></td>
</tr>
<tr>
<td>CS F471</td>
<td>Senior Capstone I</td>
<td>3</td>
</tr>
<tr>
<td>CS F472</td>
<td>Senior Capstone II</td>
<td>3</td>
</tr>
<tr>
<td>EE F341</td>
<td>Digital and Computer Analysis and Design</td>
<td>4</td>
</tr>
</tbody>
</table>

Electives in computer science at the F300 or F400 level or approved electives, such as:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE F443</td>
<td>Computer Engineering Analysis and Design</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits 75-76

1 Fulfills the baccalaureate capstone requirement.

B.S./M.S., Computer Science

Complete the following admission requirements:

1. CS major (junior preferred) or senior standing.
2. GPA 3.25 or above based on a minimum of 24 credits. Students must maintain a cumulative GPA of 3.0 to remain in the program.
3. Submit a study goal statement.
4. Submit a UAF graduate application for admission.

Minimum Requirements for Degree: 141 credits

Students must earn a C- grade or better in each course.

General University Requirements

Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)
As part of the general education requirements, complete:
MATH F251X Calculus I 4
Any approved ethics course

B.S. Degree Requirements
Complete the B.S. degree requirements. (p. 142)
As part of the B.S. degree requirements, complete:
MATH F252X Calculus II 4
PHYS F211X General Physics I 4
PHYS F212X General Physics II 4

B.S. Program Requirements
CS F201 Computer Science I 3
CS F202 Computer Science II 3
CS F301 Assembly Language Programming 3
CS F311 Data Structures and Algorithms 3
CS F321 Operating Systems 3
CS F331 Programming Languages 3
CS F371 Computer Ethics and Technical Communication 3
CS F372 Software Construction 3
CS F411 Analysis of Algorithms 3
CS F441 System Architecture 3-4
or EE F443 Computer Engineering Analysis and Design
CS F471 Senior Capstone I 1 3
CS F472 Senior Capstone II 1 3
EE F341 Digital and Computer Analysis and Design 4
MATH F253X Calculus III 4
MATH elective at the F300/F400 level 3
MATH F307 Discrete Mathematics 3
STAT F300 Statistics 3

M.S. Program Requirements
CS F600 Professional Software Development 4
CS F601 Algorithms, Architecture and Languages 4
CS F690 Graduate Seminar and Project 3
CS F691 Graduate Seminar and Project 3
CS upper-division/graduate level electives. 3

Exam
Pass a written comprehensive exam in computer science theory and practice.

Total Credits 92-93

1. the student meets the B.S. degree requirements for computer science.

Minor, Computer Science
Minimum Requirements for Minor: 15 credits
Students must earn a C- grade or better in each course.
CS F201 Computer Science I 3
CS F202 Computer Science II 3
Select three from the following electives: 9
F300 or F400 level from CS
EE F341 Digital and Computer Analysis and Design
MATH F310 Numerical Analysis
MATH F460 Mathematical Modeling
Electives approved by a computer science advisor

Total Credits 15

Note: Courses completed to satisfy this minor can be used to simultaneously satisfy other major or general distribution requirements.

Digital Journalism
College of Liberal Arts
Department of Journalism
907-474-7761
www.uaf.edu/journal/ (http://www.uaf.edu/journal)

B.A. Degree
Minimum Requirements for Degree: 120 credits

The digital journalism program equips students with the broad skill set valued in the nation's newsrooms and other communication fields.

In addition to the solid academic foundation delivered in the classroom, students receive practical experience working in media on and off campus. On campus, these include KUAC, a public television and radio station; KSUA, the student-owned FM radio station; and the Sun Star, the campus newspaper. Students complete their required professional media internships at a variety of radio and television stations, newspapers and other media-related businesses and organizations in and out of Alaska.

The department runs several laboratory facilities, including a digital newsroom and photography lab, dedicated audio and video bays, an advanced video editing/digital printing lab, two wet darkrooms and a photography studio.

Degree
• B.A., Digital Journalism (p. 174)

Minor
• Minor, Digital Journalism (p. 175)

B.A., Digital Journalism
Minimum Requirements for Degree: 120 credits
Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

**General Education Requirements**
Complete the general education requirements. (p. 137)

**B.A. Degree Requirements**
Complete the B.A. degree requirements. (p. 139)
As part of the B.A. degree requirements, complete:

- HIST F132X  
  History of the U.S.  
  3

**Program Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>JRN F101X</td>
<td>Media and Culture</td>
<td>3</td>
</tr>
<tr>
<td>JRN F202</td>
<td>News Writing for the Media</td>
<td>3</td>
</tr>
<tr>
<td>JRN F251</td>
<td>Introduction to Video Production</td>
<td>4</td>
</tr>
<tr>
<td>JRN F302</td>
<td>Reporting</td>
<td>3</td>
</tr>
<tr>
<td>JRN F400</td>
<td>Professional Media Internship</td>
<td>3</td>
</tr>
<tr>
<td>JRN F404</td>
<td>Photojournalism I</td>
<td>3</td>
</tr>
<tr>
<td>JRN F413</td>
<td>Mass Media Law and Regulation</td>
<td>3</td>
</tr>
<tr>
<td>JRN F421</td>
<td>Journalism in Perspective</td>
<td>3</td>
</tr>
<tr>
<td>JRN F432</td>
<td>Public Relations Techniques</td>
<td>3</td>
</tr>
<tr>
<td>JRN F454</td>
<td>Newscast</td>
<td>3</td>
</tr>
<tr>
<td>JRN F490</td>
<td>Online Publication: “Extreme Alaska”</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one from the following:

- JRN F215 Radio Production  
- JRN F323 Editing for Journalists  
- JRN F406 Photojournalism II  
- JRN F480 Documentary Filmmaking

Select one course from the following list of approved journalism electives:

- JRN F204/ART F284 Basic Digital Photography  
- JRN F215 Radio Production  
- JRN F240 Foreign Corresponding  
- JRN F250 Website Design  
- JRN/FLPA F280 Video Storytelling  
- JRN F311 Magazine Article Writing  
- JRN F323 Editing for Journalists  
- JRN F324 Typography and Publication Design  
- JRN/WGS F380 Women, Minorities and the Media  
- JRN F390 Social Media Toolkit  
- JRN F402/ART F483 Advanced Photography  
- JRN F405/ART F465 Advanced Photography Seminar  
- JRN F406 Photojournalism II  
- JRN F407/ART F487 Digital Darkroom  
- JRN F411 Writing for a Living  
- JRN F443 Ethics and Reporting in the Far North  
- JRN F444 Investigative Reporting  
- JRN F452 Radio and Television News Writing  
- JRN F453 Television News Reporting  
- JRN F454 Newscast  
- JRN F456 Science Writing for Magazines and Newspapers  
- JRN F480 Documentary Filmmaking

**JRN/ART F484** Multimedia Theory and Practice

**JRN F493** Special Topics

**JRN F497** Independent Study

**JRN F498** Undergraduate Research

Complete credits outside of journalism

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>To assure the journalist a broad liberal arts education, 80 credits must be taken from outside of journalism, 65 of which should be from any of these departments; ALST, ANL, ANS, ANTH, ART, ATM, BIOL, CHEM, COMM, ECON, ENGL, ENVE, ESK, FISH, FL, FLPA, FREN, GEOG, GEOS, GER, HIST, HONR, HUM, JPN, JUST, LING, LS, MATH, MSL, MUS, NORS, NRM, PHIL, PHYS, PS, PSY, RUSS, SOC, SPAN, STAT and WGS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fulfills the baccalaureate capstone requirement.</td>
<td></td>
</tr>
</tbody>
</table>

**Minor, Digital Journalism**

Minimum Requirements for Minor: 15 credits

Students must earn a C- grade or better in each course.

- JRN F101X Media and Culture 3
- JRN F202 News Writing for the Media 3

Approved JRN electives

<table>
<thead>
<tr>
<th>Total Credits</th>
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<tbody>
<tr>
<td>9</td>
</tr>
</tbody>
</table>

Any journalism course taken for the major serves as an approved elective for the minor. Other approved electives for the minor are the same as those listed for the major.

**Early Childhood Education**

College of Rural and Community Development  
907-474-7143

Community and Technical College  
907-455-2800

www.ctc.uaf.edu/programs/e-childhood/ (http://www.ctc.uaf.edu/programs/e-childhood)

**Minor Only**

- Minor, Early Childhood Education (p. 175)

**Minor, Early Childhood Education**

Minimum Requirements for Minor: 18 credits

- ECE F101 Introduction to Early Childhood Profession 3
- ECE F104X Child Development I: Prenatal, Infants and Toddlers 3
  
or ECE F107 Child Development II: The Preschool and Primary Years

Select 12 ECE credits

<table>
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<th>Total Credits</th>
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<tr>
<td>12</td>
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<tr>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
</tr>
</tbody>
</table>
Earth Science

Including a minimum of 6 upper-division ECE credits and excluding special topics (ECE F-93) and current issue (ECE F249) courses.

Earth Science
College of Natural Science and Mathematics
Department of Geosciences
907-474-7565
www.uaf.edu/geology/ (http://www.uaf.edu/geology)

B.A. Degree
Minimum Requirements for Degree: 120-130 credits

This program provides broad training in various aspects of earth systems science. Three concentrations are available:

• earth systems science
• geological hazards and mitigation
• secondary education

The concentrations allow students to focus on different interests and career paths during their junior and senior years but offer considerable flexibility during the freshman and sophomore years.

The earth science concentration offers students a sound background in a broad spectrum of geoscience disciplines, with an emphasis on the interaction between earth systems. The geological hazards and mitigation concentration is designed for students who wish to pursue careers in communicating science, hazards analysis or emergency management-related natural disasters. The secondary education concentration is designed for students who plant to teach earth science in secondary school in Alaska. Requirements for certified teachers have been built into this concentration in consultation with the School of Education. Students choosing this concentration should consult with both the Department of Geosciences and the School of Education for advising.

Degree

• B.A., Earth Science (p. 176)

B.A., Earth Science

Concentrations: Earth Systems Science, Geological Hazards and Mitigation, Secondary Education

Minimum Requirements for Degree: 120-130 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)
As part of the general education requirements, complete:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRM F303X</td>
<td>Environmental Ethics and Actions</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM F103X</td>
<td>Basic General Chemistry</td>
<td></td>
</tr>
<tr>
<td>and CHEM F104X</td>
<td>and Survey of Organic Chemistry and Biochemistry</td>
<td></td>
</tr>
<tr>
<td>CHEM F105X</td>
<td>General Chemistry I</td>
<td></td>
</tr>
<tr>
<td>and CHEM F106X</td>
<td>and General Chemistry II</td>
<td></td>
</tr>
</tbody>
</table>

B.A. Degree Requirements
Complete the B.A. degree requirements. (p. 139)

Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOS F101X</td>
<td>The Dynamic Earth</td>
<td>4</td>
</tr>
<tr>
<td>or GEOS F120X</td>
<td>Glaciers, Earthquakes and Volcanoes: Past, Present and Future</td>
<td></td>
</tr>
<tr>
<td>GEOS F112X</td>
<td>The History of Earth and Life</td>
<td>4</td>
</tr>
<tr>
<td>or GEOS F106X</td>
<td>Life in the Age of Dinosaurs</td>
<td></td>
</tr>
</tbody>
</table>

Concentrations

Select one from the following concentrations: 31-49

Earth Systems Science
Geological Hazards and Mitigation
Secondary Education

Total Credits 50-68

Concentrations

EARTH SYSTEMS SCIENCE

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOS F304</td>
<td>Geomorphology</td>
<td>3</td>
</tr>
<tr>
<td>GEOS F315</td>
<td>Paleobiology and Paleontology</td>
<td>4</td>
</tr>
<tr>
<td>GEG F483</td>
<td>Research Design, Writing and Presentation Methods</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one course from each of the following areas: 9-12

Earth Systems

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG F101X</td>
<td>Expedition Earth: Introduction to Geography</td>
<td></td>
</tr>
<tr>
<td>MSL F111X</td>
<td>The Oceans</td>
<td></td>
</tr>
<tr>
<td>NRM F101</td>
<td>Natural Resources Conservation and Policy</td>
<td></td>
</tr>
<tr>
<td>PHYS F175X</td>
<td>Introduction to Astronomy</td>
<td></td>
</tr>
</tbody>
</table>

Earth Materials

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOS F213</td>
<td>Mineralogy</td>
<td></td>
</tr>
<tr>
<td>GEOS F262</td>
<td>Rocks and Minerals</td>
<td></td>
</tr>
</tbody>
</table>

Geospatial Sciences

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOS F338</td>
<td>Introduction to Geographic Information Systems</td>
<td></td>
</tr>
<tr>
<td>GEOS F225</td>
<td>Field and Computer Methods in Geology and Photogeology</td>
<td></td>
</tr>
</tbody>
</table>

Select one course from any two of the following areas: 6-7

Weather and Climate

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATM F101X</td>
<td>Weather and Climate of Alaska</td>
<td></td>
</tr>
<tr>
<td>GEOG F307</td>
<td>Weather and Climate</td>
<td></td>
</tr>
</tbody>
</table>

Natural Resources

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG F302</td>
<td>Geography of Alaska</td>
<td></td>
</tr>
<tr>
<td>GEOS F332</td>
<td>Ore Deposits and Structure</td>
<td></td>
</tr>
</tbody>
</table>

Geoscience

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOS F309</td>
<td>Tectonics</td>
<td></td>
</tr>
<tr>
<td>GEOS F322</td>
<td>Stratigraphy and Sedimentation</td>
<td></td>
</tr>
</tbody>
</table>

Geobiology

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOS F485</td>
<td>Mass Extinctions, Neocatastrophism and the History of Life</td>
<td></td>
</tr>
</tbody>
</table>


### GEOLICAL HAZARDS AND MITIGATION

As part of the general education requirements, complete:

<table>
<thead>
<tr>
<th>Program Requirements</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM F300X</td>
<td>Communicating Ethics</td>
<td>3</td>
</tr>
<tr>
<td>SOC F100X</td>
<td>Individual, Society and Culture</td>
<td>3</td>
</tr>
<tr>
<td>STAT F200X</td>
<td>Elementary Probability and Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

**As part of the B.A. requirements, complete:**

<table>
<thead>
<tr>
<th>Program Requirements</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ED F486</td>
<td>Media Literacy</td>
<td>3</td>
</tr>
<tr>
<td>ENGL F314</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>GEOG F483</td>
<td>Research Design, Writing and Presentation Methods</td>
<td>3</td>
</tr>
<tr>
<td>GEOS F304</td>
<td>Geomorphology</td>
<td>3</td>
</tr>
<tr>
<td>GEOs F380</td>
<td>Geological Hazards</td>
<td>3</td>
</tr>
<tr>
<td>GEOs F406</td>
<td>Volcanology</td>
<td>3</td>
</tr>
<tr>
<td>HSEM F301</td>
<td>Principles of Emergency Management and Homeland Security</td>
<td>3</td>
</tr>
<tr>
<td>PHYS F175X</td>
<td>Introduction to Astronomy</td>
<td>4</td>
</tr>
</tbody>
</table>

Select one course from each of the following areas: 9-12

<table>
<thead>
<tr>
<th>Earth Materials</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOs F213</td>
<td>Mineralogy</td>
<td></td>
</tr>
<tr>
<td>GEOs F262</td>
<td>Rocks and Minerals</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Geospatial Sciences</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG F338</td>
<td>Introduction to Geographic Information Systems</td>
<td></td>
</tr>
<tr>
<td>GEOs F225 and GEOs F408</td>
<td>Field and Computer Methods in Geology and Photogeology</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weather and Climate</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ATM F101X</td>
<td>Weather and Climate of Alaska</td>
<td></td>
</tr>
<tr>
<td>GEOG F307</td>
<td>Weather and Climate</td>
<td></td>
</tr>
</tbody>
</table>

Select two courses from one of the following specialized areas: 6

<table>
<thead>
<tr>
<th>Mitigation</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HSEM F412</td>
<td>Emergency Planning and Preparedness</td>
<td></td>
</tr>
<tr>
<td>HSEM F423</td>
<td>Disaster Response Operations and Management</td>
<td></td>
</tr>
<tr>
<td>HSEM F434</td>
<td>All-Hazards Risk Analysis</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Communications</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM F335</td>
<td>Organizational Communication</td>
<td></td>
</tr>
<tr>
<td>COMM F353</td>
<td>Conflict, Mediation and Communication</td>
<td></td>
</tr>
<tr>
<td>COMM F441</td>
<td>Persuasion</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credits** 49-52

---

1. Fulfills the baccalaureate capstone requirement.
2. These credits should have an emphasis in geology, geography, biology, natural resources management or other Earth science-related field as approved by the undergraduate advisor.

### SECONDARY EDUCATION

As part of the general education requirements, complete:

<table>
<thead>
<tr>
<th>Program Requirements</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG F101X</td>
<td>Expedition Earth: Introduction to Geography</td>
<td>3</td>
</tr>
<tr>
<td>PSY F101X</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

**Program Requirements**

<table>
<thead>
<tr>
<th>Program Requirements</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOs F262</td>
<td>Rocks and Minerals</td>
<td>3</td>
</tr>
<tr>
<td>GEOs F315</td>
<td>Paleobiology and Paleontology</td>
<td>4</td>
</tr>
<tr>
<td>GEOs F475</td>
<td>Presentation Techniques in the Geosciences</td>
<td>2</td>
</tr>
<tr>
<td>GEOs F497</td>
<td>Individual Study</td>
<td></td>
</tr>
<tr>
<td>MSL F111X</td>
<td>The Oceans</td>
<td>4</td>
</tr>
<tr>
<td>PHYS F175X</td>
<td>Introduction to Astronomy</td>
<td>4</td>
</tr>
</tbody>
</table>

Select one course from each of the following areas: 14-17

<table>
<thead>
<tr>
<th>Landform Analysis</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG F111X</td>
<td>Earth and Environment: Elements of Physical Geography</td>
<td></td>
</tr>
<tr>
<td>GEOs F304</td>
<td>Geomorphology</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Geospatial Sciences</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOs F225</td>
<td>Field and Computer Methods in Geology</td>
<td></td>
</tr>
<tr>
<td>GEOG F338</td>
<td>Introduction to Geographic Information Systems</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weather and Climate</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ATM F101X</td>
<td>Weather and Climate of Alaska</td>
<td></td>
</tr>
<tr>
<td>GEOG F307</td>
<td>Weather and Climate</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Natural Resources</th>
<th></th>
<th></th>
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<tbody>
<tr>
<td>GEOG F302</td>
<td>Geography of Alaska</td>
<td></td>
</tr>
<tr>
<td>GEOs F332</td>
<td>Ore Deposits and Structure</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Evolutionary Processes</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOs F309</td>
<td>Tectonics</td>
<td></td>
</tr>
<tr>
<td>GEOs F485</td>
<td>Mass Extinctions, Neocatastrophism and the History of Life</td>
<td></td>
</tr>
<tr>
<td>GEOs F486</td>
<td>Vertebrate Paleontology</td>
<td></td>
</tr>
</tbody>
</table>

Minor in secondary education (p. 183) 16

Additional requirements in secondary education licensure program (p. 183) 19

**Total Credits** 72-75

---

1. Fulfills the baccalaureate capstone requirement.

**Note:** We strongly recommend that prospective secondary science teachers seek advising from the UAF School of Education early in your undergraduate degree program, so that you can be appropriately advised of the state of Alaska requirements for teacher licensure.

### Economics

School of Management
Department of Economics
907-474-7461
www.uaf.edu/som/degrees/undergraduate/econ/ (http://www.uaf.edu/som/degrees/undergraduate/econ)
B.A., B.B.A. Degrees
These programs are currently suspended.
Minimum Requirements for Degrees: 120 credits

Economics is the study of social activities concerned with the production, distribution and consumption of goods and services. Nearly all social phenomena and problems have economic aspects, and therefore, knowledge of economic systems and their relations with each other is essential to an understanding of the complex world in which we live.

The department has three undergraduate instructional goals:

1. to provide students with basic tools of analysis and the factual, statistical and descriptive materials they will need to perform their duties as citizens;
2. to introduce economics majors to the various fields of economics to prepare them for positions in business and government and for graduate study; and
3. to offer a course of study suitable for a minor in economics.

Degrees

• B.A., Economics (p. 178) — This program is currently suspended.
• B.B.A., Economics (p. 178) — This program is currently suspended.

Minor

• Minor, Economics (p. 178) — This program is currently suspended.

B.A., Economics
THIS PROGRAM IS CURRENTLY SUSPENDED.
Minimum Requirements for Degrees: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)

As part of the general education requirements, complete:
- MATH F230X Calculus Essentials with Applications 3

B.A. Degree Requirements
Complete the B.A. degree requirements. (p. 139)

As part of the B.A. degree requirements, complete:
- ECON F201X Principles of Economics I: Microeconomics 3
- ECON F202X Principles of Economics II: Macroeconomics 3
- MATH F122X Precalculus for Business and Economics 3

Political science elective 3

Program Requirements
- ACCT F261X Principles of Financial Accounting 3
- ECON F227 Introductory Statistics for Economics and Business 3
- ECON F321 Intermediate Microeconomics 3
- ECON F324 Intermediate Macroeconomics 3

ECON F327 Intermediate Econometrics for Forecasting and Business 3
ECON F463 International Economics 3
Economics electives at the F300 level or above 1 18

Total Credits 51

1 Up to 6 credits of the following courses may be included: BA F325, BA F343 and BA F360. At least 6 credits of electives must be courses designated writing-intensive (W).

B.B.A., Economics
This program is currently suspended.
Minimum Requirements for Degrees: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)

As part of the general education requirements, complete:
- BA F323X Business Ethics 3
- MATH F230X Calculus Essentials with Applications 3

B.B.A. Degree Requirements
Complete the B.B.A. degree requirements. (p. 144)

As part of the Common Body of Knowledge, complete:
- AIS F310 Management of Information Systems (as part of the Common Body of Knowledge) 3

Program Requirements
- ECON F321 Intermediate Microeconomics 3
- ECON F324 Intermediate Macroeconomics 1 3
- ECON F327 Intermediate Econometrics for Forecasting and Business 3
- ECON F350 Money and Banking 1 3
- ECON F463 International Economics 3
- ECON F351 Public Finance 3
- or ECON F451 Public Expenditure Analysis 3
- ECON F409 Industrial Organization and Public Policy 3
- or ECON F420 Labor Markets and Public Policy 3
- ECON F434 Environmental Economics 3
- or ECON F439 Energy Economics 3

Minor complex (optional) or free electives to meet minimum credits required

Total Credits 33

1 If not taken in the B.B.A. Common Body of Knowledge (CBK).

Note: At least 6 credits in the major must be courses designated writing-intensive (W).

Minor, Economics
Minimum Requirements for Minor: 18 credits


**B.A. Degree and Postbaccalaureate Licensure**

Minimum Requirements for Degree: 121-128 credits

Postbaccalaureate secondary licensure (Grades 7-12): 31 credits

Music Education: 33 credits (See the B.M. in Music Education (p. 219)).

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 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 elementary education and secondary education; and postbaccalaureate programs are offered in elementary education, secondary education, counseling and special education.

The 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 Alaska, 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 all School of Education programs are required to have a laptop computer and iPad. Laptops may be of any type but must have capacities that enable candidates to meet School of Education requirements. Laptop and iPad requirements and purchase information can be viewed by accessing the “Technology Requirement” link at the website of the School of Education, www.uaf.edu/soe/ (http://www.uaf.edu/educ). If you have questions about how a laptop or iPad 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 or Praxis Core Academic Skills for Educators (ASE) for this purpose. For additional information, see the Alaska State Department of Education and Early Development website.

**Degrees**

- B.A. Degree, Elementary Education (K-8) (p. 179)
- B.A. Degree, Secondary Education (7-12) (p. 181)

**Minors**

- Minor, General Education (p. 183)
- Minor, Elementary Education (p. 183)
- Minor, Secondary Education (p. 183)

**Licensure**

- K-12 Art Licensure (p. 182)
- Secondary Postbaccalaureate Licensure Program (p. 183)

**B.A., Elementary Education (K-8)**

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. Completion of the B.A. in Education will meet the requirements for a major and minor.

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 general education 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.

B.A. 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 B.A. in Elementary Education students are required to submit Praxis I or Praxis Core ASE 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 5014 or 5018) 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 B.A. 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 B.A. 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 all required courses. Students with less than a 2.75 overall GPA may be considered for conditional admission in special circumstances.
2. Official copies of ACT or SAT scores.
3. Alaska Passing scores from the Praxis I or Praxis Core ASE exams in reading, writing and math, and Praxis II exam (test 5014 or 5018).
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/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.
8. A one-to-two-page autobiographical sketch (appropriate for presenting to prospective principals and mentor teachers).
9. Extemporaneous writing sample. Contact the School of Education advising office for date, time and location information.
10. Evidence of successful experiences in teaching and learning situations.
11. Evidence of ability to work collaboratively and respectfully in cross-cultural contexts.
12. Completed Alaska Student Teacher Authorization Packet (including fingerprint cards and criminal background check. Forms are available from the School of Education).
13. Complete an interview, when requested.
14. 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.

Minimum Requirements for Degree: 128 credits

Students must earn a C grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)

As part of the general education requirements, complete:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL F100X</td>
<td>Human Biology</td>
<td>4</td>
</tr>
<tr>
<td>or BIOL F104X</td>
<td>Natural History of Alaska</td>
<td></td>
</tr>
<tr>
<td>CHEM F100X</td>
<td>Chemistry in Complex Systems</td>
<td>4</td>
</tr>
<tr>
<td>or PHYS F115X</td>
<td>Physical Sciences</td>
<td></td>
</tr>
</tbody>
</table>

B.A. Degree and Program Requirements

Mathematics Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F211</td>
<td>Mathematics for Elementary School Teachers</td>
<td>3</td>
</tr>
<tr>
<td>MATH F212</td>
<td>Mathematics for Elementary School Teachers II</td>
<td>3</td>
</tr>
</tbody>
</table>

Science Requirement

Select one from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATM F101X</td>
<td>Weather and Climate of Alaska</td>
<td>4</td>
</tr>
</tbody>
</table>
University of Alaska Fairbanks

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG F111X</td>
<td>Earth and Environment: Elements of Physical Geography</td>
</tr>
<tr>
<td>GEOS F101X</td>
<td>The Dynamic Earth</td>
</tr>
<tr>
<td>GEOS F120X</td>
<td>Glaciers, Earthquakes and Volcanoes: Past, Present and Future</td>
</tr>
</tbody>
</table>

**Social Sciences Requirements**
- ANTH F242 Native Cultures of Alaska 3
- ED/PSY F245 Child Development 3
- GEOS F101X Expedition Earth: Introduction to Geography 3
- HIST F131 History of the U.S. 3
- HIST F461 History of Alaska 3
- or HIST F115 Alaska, Land and Its People 3

**Humanities Requirements**
- ED/LING F100 Language, Education, Linguistics 3
- or LING F101X Nature of Language 3
- ED F329 Teaching with Technology 3
- ED F486 Media Literacy 3
- Select one from the following: 3
  - ENGL F314 Technical Writing
  - ENGL F375 Intermediate Creative Writing: Fiction
  - ENGL F376 Intermediate Creative Writing: Poetry
  - ENGL F377 Intermediate Creative Writing: Nonfiction
  - JRN F311 Magazine Article Writing

**Education Requirements**
- ED F110 Becoming a Teacher in the 21st Century 1
- ED F201 Introduction to Education 3
- ED F204 Literature for Children 3
- EDSE F316 Introduction to Special Education for Elementary Classroom Teachers 3
- EDSE F320 Adapting and Accommodating Instructions for Students with Disabilities 3
- ED F330 Assessment of Learning 3
- ED F344 Foundations of Literacy Development 3
- Select one from the following: 3
  - ED F350 Communication in Cross-Cultural Classrooms
  - ED/ANS F420 Alaska Native Education
  - ED/ANS F461 Native Ways of Knowing

**Professional Internship Year with Integrated Course Work**

**First Semester**
- ED F411 Reading, Writing, Language Arts: Methods and Curriculum Development 3
- ED F412 Integrated Social Studies and Language Arts: Methods and Curriculum Development 3
- ED F466 Internship and Collaborative Student Teaching 1 3
- ED F467 Synthesizing the Standards I 2
- ED F478 Math Methods and Curriculum Development 3
- ED F479 Science Methods and Curriculum Development 3

**Second Semester**
- ED F414 Art, Music and Drama in Elementary Classrooms 3
- ED F417 Physical and Health Education for Elementary Teachers 3
- ED F468 Internship and Student Teaching 4
- ED F469 Synthesizing the Standards II 2
- ED F476 Assessment of Literacy Development 1

**Total Credits: 112**

1. Fulfills the baccalaureate capstone requirement.

**B.A., Secondary Education (7-12)**

The requirements for a secondary school teaching certificate include completion of both a teaching major in an academic subject area appropriate to the secondary school and the professional education sequence. The degree is awarded as a B.A. with a double major. Upon declaration of a major in secondary education, students are assigned an advisor in the Education Department to plan the completion of the teaching major and the education sequence of courses.

The teaching major must be in an academic subject area approved for a State of Alaska secondary school teaching certificate and available as a B.A. degree: art, biology, chemistry, Earth science, economics, English, French, German, history, mathematics, political science or Spanish.

**Transition/Admission Requirements**

Declaring a B.A. major in secondary 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. 15. 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 secondary children.

Students must submit the following information to the School of Education by February 15:

1. Copies of transcripts from all institutions attended. Evidence of completion of all B.A. degree in secondary education degree courses and completion of the majority of the content major requirements by August 1st (except for those required in the Professional Internship Year), with a minimum of a 2.75 overall GPA.
2. Three current letters of reference that address qualifications and potential as a teacher.
3. A personal statement of 500-800 words addressing motivation to enter the teaching profession, self-assessed qualifications to teach, experiences which have prepared candidate for teaching.
4. Official copies of ACT or SAT scores.
5. Alaska Passing scores from the Praxis I or Praxis Core ASE exams in reading, writing and math.
6. Alaska Passing scores from the Praxis II in the relevant content knowledge Praxis II Subject test for each content area the applicant expects to teach. Applicants applying to teach a World Language are
required to submit Praxis II scores in the target language AND for the ACTFL Oral Proficiency Interview and Writing Test; Applicants must meet the Advanced Low rating for both tests.

7. Extemporaneous writing sample. Contact the School of Education advising office for date, time and location information.

8. All applicants will be required to interview with secondary faculty as part of the admission process.

To review the application review process, acceptance to the program information, and professional field experience, please refer to the secondary post-baccalaureate licensure program catalog information section.

Minimum Requirements for Degree: 121 credits

Students must earn a C grade or better in each course.

### General University Requirements
Complete the general university requirements (p. 134)

### General Education Requirements
Complete the general education requirements. (p. 137)

### B.A. Degree and Major Requirements
Complete the B.A. degree requirements. (p. 139)

### Education Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDSC F110</td>
<td>Becoming a Middle/High School Teacher</td>
</tr>
<tr>
<td>EDSC F407</td>
<td>Developing Literacy in the Content Areas</td>
</tr>
<tr>
<td>EDSC F458</td>
<td>Classroom Organization and Management</td>
</tr>
<tr>
<td>EDSC F205</td>
<td>Introduction to Secondary Education</td>
</tr>
<tr>
<td>or EDSC F415</td>
<td>Foundations of Modern Educational Practice</td>
</tr>
<tr>
<td>Select one from the following:</td>
<td></td>
</tr>
<tr>
<td>EDSC F414</td>
<td>Learning, Development and Special Needs Instruction</td>
</tr>
<tr>
<td>EDSE F422</td>
<td>Curriculum, Management and Strategies II: High Incidence</td>
</tr>
<tr>
<td>EDSE F482</td>
<td>Inclusive Classrooms for All Children</td>
</tr>
</tbody>
</table>

### Professional Internship Year with Integrated Coursework

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDSC F402</td>
<td>Methods of Teaching in the Secondary School</td>
</tr>
<tr>
<td>Select one from the following:</td>
<td></td>
</tr>
<tr>
<td>EDSC F432</td>
<td>English/Language Arts Secondary Instruction and Assessment</td>
</tr>
<tr>
<td>EDSC F433</td>
<td>Mathematics Secondary Instruction and Assessment</td>
</tr>
<tr>
<td>EDSC F434</td>
<td>Science Secondary Instruction and Assessment</td>
</tr>
<tr>
<td>EDSC F435</td>
<td>Social Studies Secondary Instruction and Assessment</td>
</tr>
<tr>
<td>EDSC F436</td>
<td>Art Secondary Instruction and Assessment</td>
</tr>
<tr>
<td>EDSC F437</td>
<td>World Language Secondary Instruction and Assessment</td>
</tr>
</tbody>
</table>

### Content Area

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDSC F449</td>
<td>Elementary Art Methods</td>
</tr>
<tr>
<td>ED F445</td>
<td>Elementary Internship</td>
</tr>
<tr>
<td>ED SC F452/ART F458</td>
<td>Secondary Internship</td>
</tr>
<tr>
<td>EDSC F402</td>
<td>Methods of Teaching in the Secondary School</td>
</tr>
<tr>
<td>EDSC F414</td>
<td>Learning, Development and Special Needs Instruction</td>
</tr>
</tbody>
</table>

Total Credits: 29-35

1. Candidates must take the section or course that corresponds with their major teaching content area.
2. Fulfills the baccalaureate capstone requirement.

### K-12 Art Licensure Program

Offered only in Fairbanks and Anchorage, this is an intensive, classroom-based K-12 art licensure program (34 credits) that prepares postbaccalaureate 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 internship in the fall semester of their professional year.

### Admission Process and Requirements

Applicants will follow the admission process and requirements listed in the catalog for the Secondary Postbaccalaureate Licensure Program (p. 183), 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

Minimum Requirements for Licensure: 34 credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDSC F457</td>
<td>Multicultural Education and School-Community Relations</td>
</tr>
<tr>
<td>EDSC F471</td>
<td>Secondary Teaching: School Internship I and Seminar</td>
</tr>
<tr>
<td>EDSC F472</td>
<td>Secondary Teaching: School Internship II and Seminar</td>
</tr>
<tr>
<td>EDSC F205</td>
<td>Introduction to Secondary Education</td>
</tr>
<tr>
<td>or EDSC F415</td>
<td>Foundations of Modern Educational Practice</td>
</tr>
<tr>
<td>Select one from the following:</td>
<td></td>
</tr>
<tr>
<td>EDSC F432</td>
<td>English/Language Arts Secondary Instruction and Assessment</td>
</tr>
<tr>
<td>EDSC F433</td>
<td>Mathematics Secondary Instruction and Assessment</td>
</tr>
<tr>
<td>EDSC F434</td>
<td>Science Secondary Instruction and Assessment</td>
</tr>
<tr>
<td>EDSC F435</td>
<td>Social Studies Secondary Instruction and Assessment</td>
</tr>
<tr>
<td>EDSC F436</td>
<td>Art Secondary Instruction and Assessment</td>
</tr>
<tr>
<td>EDSC F437</td>
<td>World Language Secondary Instruction and Assessment</td>
</tr>
<tr>
<td>EDSC F442</td>
<td>Technology Applications in Education I</td>
</tr>
<tr>
<td>EDSC F443</td>
<td>Technology Application in Education II</td>
</tr>
</tbody>
</table>

Total Credits: 29-35

1. Candidates must take the section or course that corresponds with their major teaching content area.
2. Fulfills the baccalaureate capstone requirement.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>or EDSE F422</td>
<td>Curriculum, Management and Strategies II: High Incidence</td>
<td></td>
</tr>
<tr>
<td>or EDSE F482</td>
<td>Inclusive Classrooms for All Children</td>
<td></td>
</tr>
<tr>
<td>EDSC F415</td>
<td>Foundations of Modern Educational Practice</td>
<td>3</td>
</tr>
<tr>
<td>or EDSC F205</td>
<td>Introduction to Secondary Education</td>
<td></td>
</tr>
<tr>
<td>EDSC F436</td>
<td>Art Secondary Instruction and Assessment</td>
<td>3</td>
</tr>
<tr>
<td>EDSC F442</td>
<td>Technology Applications in Education I</td>
<td>1</td>
</tr>
<tr>
<td>EDSC F443</td>
<td>Technology Application in Education II</td>
<td>2</td>
</tr>
<tr>
<td>EDSC F457</td>
<td>Multicultural Education and School-Community Relations</td>
<td>4</td>
</tr>
<tr>
<td>EDSC F458</td>
<td>Classroom Organization and Management</td>
<td>3</td>
</tr>
<tr>
<td>PSY F240</td>
<td>Psychology of Development</td>
<td>3</td>
</tr>
<tr>
<td>or PSY F245</td>
<td>Child Development</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Credits</td>
<td>19</td>
</tr>
</tbody>
</table>

**Minor, Elementary Education**

The elementary education minor is designed for students who intend to pursue a license in elementary education. Students who complete ED F110, ED F201, ED F330, ED F344 and EDSE F316 with grades of C or better will be allowed to substitute this sequence for ED F624, ED F625 and ED F626 in the postbaccalaureate elementary licensure program available on the UAF campus.

Minimum Requirements for Minor: 19 credits

Students must earn a C grade or better in each course.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED F110</td>
<td>Becoming a Teacher in the 21st Century</td>
<td>1</td>
</tr>
<tr>
<td>ED F201</td>
<td>Introduction to Education</td>
<td>3</td>
</tr>
<tr>
<td>ED F204</td>
<td>Literature for Children</td>
<td>3</td>
</tr>
<tr>
<td>ED F330</td>
<td>Assessment of Learning</td>
<td>3</td>
</tr>
<tr>
<td>ED F344</td>
<td>Foundations of Literacy Development</td>
<td>3</td>
</tr>
<tr>
<td>ED F350</td>
<td>Communication in Cross-Cultural Classrooms</td>
<td>3</td>
</tr>
<tr>
<td>or ANS/ED F420</td>
<td>Alaska Native Education</td>
<td></td>
</tr>
<tr>
<td>EDSE F316</td>
<td>Introduction to Special Education for Elementary Classroom Teachers</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total Credits</td>
<td>19</td>
</tr>
</tbody>
</table>

**Note:** Practicum may be required in each education course.

**Minor, General Education**

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.

Minimum Requirements for Minor: 16 credits

Students must earn a C grade or better in each course.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED F110</td>
<td>Becoming a Teacher in the 21st Century</td>
<td>1</td>
</tr>
<tr>
<td>ED F201</td>
<td>Introduction to Education</td>
<td>3</td>
</tr>
<tr>
<td>ED F350</td>
<td>Communication in Cross-Cultural Classrooms</td>
<td>3</td>
</tr>
<tr>
<td>or ANS/ED F420</td>
<td>Alaska Native Education</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Credits</td>
<td>16</td>
</tr>
</tbody>
</table>

**Secondary Postbaccalaureate Licensure Program**

Program delivery is offered in Fairbanks and in areas served by the College of Rural and Community Development 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 postbaccalaureate 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, 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.

**Minor, Secondary Education**

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.

Minimum Requirements for Minor: 16 credits

Students must earn a C grade or better in each course.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDSC F110</td>
<td>Becoming a Middle/High School Teacher</td>
<td>1</td>
</tr>
<tr>
<td>EDSC F205</td>
<td>Introduction to Secondary Education</td>
<td>3</td>
</tr>
<tr>
<td>or EDSC F415</td>
<td>Foundations of Modern Educational Practice</td>
<td></td>
</tr>
<tr>
<td>EDSC F458</td>
<td>Classroom Organization and Management</td>
<td>3</td>
</tr>
<tr>
<td>EDSC F407</td>
<td>Developing Literacy in the Content Areas</td>
<td>3</td>
</tr>
<tr>
<td>PSY F240</td>
<td>Psychology of Development</td>
<td>3</td>
</tr>
<tr>
<td>or ED/PSY F245</td>
<td>Child Development</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select one from the following:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EDSE F482 Inclusive Classrooms for All Children</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>EDSC F414 Learning, Development and Special Needs Instruction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EDSE F422 Curriculum, Management and Strategies II: High Incidence</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Credits</td>
<td>16</td>
</tr>
</tbody>
</table>

**Note:** Practicum may be required in each education course.
Student outcomes for the program are based on the Standards for Alaska’s Teachers located at: http://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 Postbaccalaureate 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 postbaccalaureate 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 Alaska school district. Generally, this option is available only to those candidates in areas of teacher shortage. Candidates complete the secondary postbaccalaureate licensure program over a period of 24 months.

**PROFESSIONAL FIELD EXPERIENCES**
The secondary postbaccalaureate 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 Postbaccalaureate 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 postbaccalaureate licensure program does not guarantee an internship placement.

**Admissions Process and Requirements**

Admission to the secondary postbaccalaureate 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.
2. 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.
3. Official copies of ACT or SAT test scores.

Submit the following information to the School of Education:

1. 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 the date, time and location information.
5. Alaska Passing scores from the Praxis I or Praxis Core ASE 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 (https://education.alaska.gov/TeacherCertification/). 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) Test. Applicants must meet the Advanced Low rating for both tests (www languagetesting.com
7. Demonstrated evidence of content competency in one of the UAF-approved secondary endorsement areas: art, biology, chemistry, Earth science, economics, English, French, German, political science, history, mathematics, political science, Spanish or physics.
   a. The applicant holds a degree in an approved UAF secondary endorsement area or;
   b. Applicants who do not hold a degree in the academic content area they expect to teach must have documentation of content competency reviewed by a secondary program faculty review team prior to application to the 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.

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 (summer or fall admissions) and Oct. 15 (spring admissions), and are reviewed thereafter for admission. 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 postbaccalaureate 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 postbaccalaureate 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 the 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’
- some school districts require completion of district substitute training which may include a fee, a finger print card and AST background check; 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 nonrefundable once submitted to the state). The 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.

Minimum Requirements for Licensure: 31 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDSC F402</td>
<td>Methods of Teaching in the Secondary School</td>
<td>3</td>
</tr>
<tr>
<td>EDSC F407</td>
<td>Developing Literacy in the Content Areas</td>
<td>3</td>
</tr>
<tr>
<td>EDSC F415</td>
<td>Foundations of Modern Educational Practice</td>
<td>3</td>
</tr>
<tr>
<td>or EDSC F205</td>
<td>Introduction to Secondary Education</td>
<td></td>
</tr>
<tr>
<td>EDSC F442</td>
<td>Technology Applications in Education I</td>
<td>1</td>
</tr>
<tr>
<td>EDSC F443</td>
<td>Technology Application in Education II</td>
<td>2</td>
</tr>
<tr>
<td>EDSC F457</td>
<td>Multicultural Education and School-Community Relations</td>
<td>4</td>
</tr>
<tr>
<td>EDSC F458</td>
<td>Classroom Organization and Management</td>
<td>3</td>
</tr>
<tr>
<td>EDSC F471</td>
<td>Secondary Teaching: School Internship I and Seminar</td>
<td>3</td>
</tr>
<tr>
<td>EDSC F472</td>
<td>Secondary Teaching: School Internship II and Seminar</td>
<td>3</td>
</tr>
<tr>
<td>Select one from the following:</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>EDSC F414</td>
<td>Learning, Development and Special Needs Instruction</td>
<td></td>
</tr>
<tr>
<td>EDSE F422</td>
<td>Curriculum, Management and Strategies II: High Incidence</td>
<td></td>
</tr>
<tr>
<td>EDSE F482</td>
<td>Inclusive Classrooms for All Children</td>
<td></td>
</tr>
<tr>
<td>Select one from the following:</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>EDSC F432</td>
<td>English/Language Arts Secondary Instruction and Assessment</td>
<td></td>
</tr>
<tr>
<td>EDSC F433</td>
<td>Mathematics Secondary Instruction and Assessment</td>
<td></td>
</tr>
<tr>
<td>EDSC F434</td>
<td>Science Secondary Instruction and Assessment</td>
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<tr>
<td>EDSC F435</td>
<td>Social Studies Secondary Instruction and Assessment</td>
<td></td>
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<tr>
<td>EDSC F436</td>
<td>Art Secondary Instruction and Assessment</td>
<td></td>
</tr>
<tr>
<td>EDSC F437</td>
<td>World Language Secondary Instruction and Assessment</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credits:** 31

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

College of Engineering and Mines
Department of Electrical and Computer Engineering
907-474-7137
http://cem.uaf.edu/ece/

B.S. Degree

Minimum Requirements for Degree: 135 credits

The mission of the UAF Electrical and Computer Engineering Department is to offer the highest-quality contemporary education at the undergraduate and graduate levels and to perform research appropriate to the technical needs of the state of Alaska, the nation and the world.

Electrical and computing engineering encompasses telecommunications, electrical power generation, transmission and distribution, control systems, and computer applications and design. Electrical engineers can typically expect gainful employment in one or more of these areas after graduation.

Communication engineers design, build and operate communication devices and systems, including satellites, antennas, wireless devices and computer networks. Electric power engineers design and oversee the construction, installation and maintenance of electrical systems that provide light, heat and power. Power engineers are also instrumental in the development of systems using modern power electronic devices to control power generation and distribution and build electric drives. People trained in computer engineering automate businesses, factories, pipelines and refineries. They design control systems and computers that guide trains, planes and space vehicles. Electrical engineers design the integrated circuits and automatic control systems used in many areas of science and engineering. Process controls in the mining and petroleum industries are also largely the responsibility of the electrical and computer engineer.

Undergraduate research and design project opportunities are available at UAF in the areas of communications, radar, sonar and lidar remote sensing, instrumentation and microwave circuit design, electric power and energy systems, digital and computer engineering and nanotechnology. The Student Rocket Project brings electrical and computer engineering and mechanical engineering students together to build and launch rockets at the Poker Flat Research Range, the only university-affiliated rocket range in the country. This program offers real engineering experience as well as fellowships, paid internships and scholarships.

The curriculum is designed to ensure that fundamentals and specialized skills are acquired by the student. The program prepares engineers to enter practice upon graduation and provides the theoretical background for students entering graduate studies. Candidates for the B.S. degree are required to take the State of Alaska Fundamentals of Engineering Examination in their general field.

The faculty of the Electrical and Computer Engineering Department provide a positive learning environment that enables students to pursue their goals in an innovative program that is rigorous and challenging, open and supportive. The BSEE program develops practical skills by emphasizing hands-on experience in the design, implementation, and validation of electrical systems in an environment that fosters and encourages innovation and creativity. This approach builds the foundation for the following program educational objectives.

1. Breadth: Graduates will utilize their broad education emphasizing electrical engineering to serve as the foundation for productive careers in the public or private sectors, graduate education, and lifelong learning.
2. Depth: Graduates will apply their understanding of the fundamental knowledge prerequisite for the practice of and/or advanced study in electrical engineering, including its scientific principles, rigorous analysis, and creative design. The BSEE program offers depth concentration areas in communications, computer engineering, and power and control.
3. Professional skills: Graduates will apply skills for clear communication, responsible teamwork, professional attitudes and ethics needed to succeed in the complex modern work environment.

These objectives serve the department, college and university missions by insuring that all graduates of the BSEE program have received a high quality, contemporary education that prepares them for rewarding careers in electrical engineering.

For more information about the Electrical Engineering Program mission, goals and educational objectives, visit http://cem.uaf.edu/ece/abet/.

Degree

• B.S., Electrical Engineering (p. 186)

B.S., Electrical Engineering

Concentrations: Communications, Computer Engineering, Power and Control

Minimum Requirements for Degree: 135 credits

Students must earn a C- grade or better in each course.

General University Requirements

Complete the general university requirements. (p. 134)

General Education Requirements

Complete the general education requirements. (p. 137)

As part of the general education requirements, complete:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F251X</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>or PHYS F213X</td>
<td>Elementary Modern Physics</td>
<td></td>
</tr>
<tr>
<td>CHEM F105X</td>
<td>General Chemistry I</td>
<td>8</td>
</tr>
<tr>
<td>and CHEM F106X</td>
<td>and General Chemistry II</td>
<td></td>
</tr>
<tr>
<td>or PHYS F213X</td>
<td>Elementary Modern Physics</td>
<td>4</td>
</tr>
</tbody>
</table>

B.S. Degree Requirements

Complete the B.S. degree requirements. (p. 142)

As part of the B.S. degree requirements, complete:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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</tr>
</thead>
<tbody>
<tr>
<td>MATH F252X</td>
<td>Calculus II</td>
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</tr>
<tr>
<td>PHYS F211X</td>
<td>General Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS F212X</td>
<td>General Physics II</td>
<td>4</td>
</tr>
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</table>

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>EE F102</td>
<td>Introduction to Electrical and Computer Engineering</td>
<td>3</td>
</tr>
<tr>
<td>EE F203</td>
<td>Electrical Engineering Fundamentals I</td>
<td>4</td>
</tr>
<tr>
<td>EE F204</td>
<td>Electrical Engineering Fundamentals II</td>
<td>4</td>
</tr>
<tr>
<td>EE F303</td>
<td>Electrical Machinery</td>
<td>4</td>
</tr>
<tr>
<td>EE F311</td>
<td>Applied Engineering Electromagnetics</td>
<td>3</td>
</tr>
<tr>
<td>EE F331</td>
<td>High-Frequency Lab</td>
<td>1</td>
</tr>
<tr>
<td>EE F333</td>
<td>Physical Electronics</td>
<td>4</td>
</tr>
<tr>
<td>EE F334</td>
<td>Electronic Circuit Design</td>
<td>4</td>
</tr>
</tbody>
</table>

Minimum Requirements for Degree: 135 credits
**Concentrations**

### COMMUNICATIONS

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
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<tbody>
<tr>
<td>EE F412</td>
<td>Electromagnetic Waves and Devices</td>
<td>3</td>
</tr>
<tr>
<td>EE F432</td>
<td>Electromagnetics Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>EE F461</td>
<td>Communication Systems</td>
<td>4</td>
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</tbody>
</table>

Select one from the following approved engineering science electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES F331</td>
<td>Mechanics of Materials</td>
</tr>
<tr>
<td>ES F341</td>
<td>Fluid Mechanics</td>
</tr>
<tr>
<td>ES F346</td>
<td>Basic Thermodynamics</td>
</tr>
<tr>
<td>ME F334</td>
<td>Elements of Material Science/Engineering</td>
</tr>
</tbody>
</table>

Approved mathematics elective 3

**Capstone Requirement**

Complete the baccalaureate capstone requirement as determined by the program.

**Fundamentals of Engineering (FE) Examination**

Complete the Fundamentals of Engineering (FE) examination administered by the State of Alaska.

### Concentrations

Select one from the following concentrations:

- Communications
- Computer Engineering
- Power and Control

Total Credits: 107-110

1. Mathematics elective to be chosen from the following advanced topics: linear algebra and matrices, probability and statistics, partial differential equations, numerical analysis, advanced calculus or complex variables.

2. EE F408, EE F444 or EE F464 may fulfill the baccalaureate capstone requirement. These courses may also fulfill approved electrical engineering electives.

---

**English**

College of Liberal Arts
Department of English
907-474-7193
www.uaf.edu/english/ (http://www.uaf.edu/english)

**B.A. Degree**

Minimum Requirements for Degree: 120 credits

The B.A. in English at UAF provides training in rhetorical dexterity, critical acumen and creative ingenuity — habits of mind that develop alongside intellectual inquiries concerning the production and reception of literary (and nonliterary) texts. As effective creators and thoughtful consumers of print and digital information, students learn how to identify critical methods, analyze language in varying historical, cultural and institutional contexts, and employ research in writing and speaking for a professional audience in the humanities.

The department has a particular strength in creative writing; students will have the opportunity to attend lectures and workshops with respected visiting writers and scholars as well as resident faculty. Mindful of how language shapes problems, communities and environments, students are prepared for a variety of graduate programs and careers in diverse fields such as education, law and business.

**Degree**

- B.A., English (p. 188)

**Minor**

- Minor, English (p. 189)
B.A., English

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)

B.A. Degree Requirements
Complete the B.A. degree requirements. (p. 139)

Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL F310</td>
<td>Literary Criticism</td>
<td>3</td>
</tr>
<tr>
<td>ENGL F301</td>
<td>Continental Literature in Translation:</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>The Ancient World</td>
<td></td>
</tr>
<tr>
<td>ENGL F302</td>
<td>Continental Literature in Translation:</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Medieval and Renaissance</td>
<td></td>
</tr>
<tr>
<td>ENGL F306</td>
<td>Survey of American Literature:</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Beginnings to the Civil War</td>
<td></td>
</tr>
<tr>
<td>ENGL F307</td>
<td>Survey of American Literature:</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Civil War to the Present</td>
<td></td>
</tr>
<tr>
<td>ENGL F308</td>
<td>Survey of British Literature:</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Beowulf to the Romantic Period</td>
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<tr>
<td>ENGL F309</td>
<td>Survey of British Literature:</td>
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<tr>
<td></td>
<td>Romantic Period to the Present</td>
<td></td>
</tr>
<tr>
<td>Select one from the following:</td>
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</tr>
<tr>
<td>ENGL F422</td>
<td>Shakespeare: History Plays and Tragedies</td>
<td></td>
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<tr>
<td>ENGL F425</td>
<td>Shakespeare: Comedies and Nondramatic Poetry</td>
<td>3</td>
</tr>
<tr>
<td>Select one from the following:</td>
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<td>3</td>
</tr>
<tr>
<td>ENGL F317</td>
<td>Traditional English Grammar</td>
<td></td>
</tr>
<tr>
<td>ENGL F318</td>
<td>Modern English Grammar</td>
<td></td>
</tr>
<tr>
<td>ENGL F462</td>
<td>Applied English Linguistics</td>
<td></td>
</tr>
<tr>
<td>ENGL F472</td>
<td>History of the English Language</td>
<td></td>
</tr>
<tr>
<td>Select one from the following:</td>
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<tr>
<td>ENGL F333</td>
<td>Women's Literature</td>
<td></td>
</tr>
<tr>
<td>ENGL F340</td>
<td>Contemporary Native American Literature</td>
<td></td>
</tr>
<tr>
<td>ENGL F341</td>
<td>Contemporary Alaska Native Literature</td>
<td></td>
</tr>
<tr>
<td>ENGL F347</td>
<td>Voices of Native American Peoples</td>
<td></td>
</tr>
<tr>
<td>ENGL F349</td>
<td>Narrative Art of Alaska Native Peoples</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(in English Translation)</td>
<td></td>
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<tr>
<td>ENGL F360</td>
<td>Multiethnic Literatures of the United</td>
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<tr>
<td></td>
<td>States</td>
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<tr>
<td>ENGL F380</td>
<td>Topics in Colonial and Postcolonial</td>
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<tr>
<td></td>
<td>Literature</td>
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<tr>
<td>ENGL F433</td>
<td>Women, Gender and Sexuality in</td>
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<tr>
<td></td>
<td>Language, Literature and Culture</td>
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</tr>
<tr>
<td>ENGL F449</td>
<td>Northern and Environmental Literature</td>
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<tr>
<td>Select one from the following:</td>
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<tr>
<td>ENGL F410</td>
<td>Studies in American Literature to 1900</td>
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</tr>
<tr>
<td>ENGL F415</td>
<td>Studies in 17th- and 18th-Century British</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Literature</td>
<td></td>
</tr>
<tr>
<td>ENGL F420</td>
<td>Studies in Medieval and 16th-Century</td>
<td></td>
</tr>
<tr>
<td></td>
<td>British Literature</td>
<td></td>
</tr>
<tr>
<td>ENGL F440</td>
<td>Studies in 20th- and 21st-Century British</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Literature</td>
<td></td>
</tr>
<tr>
<td>ENGL F450</td>
<td>Studies in 19th-Century British</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Literature</td>
<td></td>
</tr>
<tr>
<td>ENGL F455</td>
<td>Studies in 20th- and 21st-Century American</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Literature</td>
<td></td>
</tr>
<tr>
<td>ENGL F460</td>
<td>Studies in Comparative/World Literature</td>
<td></td>
</tr>
<tr>
<td>Select one from the following:</td>
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</tr>
<tr>
<td>ENGL F427</td>
<td>Topics in Film Studies</td>
<td></td>
</tr>
<tr>
<td>ENGL F435</td>
<td>Authors</td>
<td></td>
</tr>
<tr>
<td>ENGL F465</td>
<td>Genre</td>
<td></td>
</tr>
<tr>
<td>ENGL F482</td>
<td>Topics in Language and Literature</td>
<td></td>
</tr>
<tr>
<td>ENGL F485</td>
<td>Teaching Composition in the Schools</td>
<td></td>
</tr>
<tr>
<td>Three ENGL F300- and ENGL F400-level courses (at least one at the F400 level)</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Complete the baccalaureate capstone requirement as determined by the program.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Credits</td>
<td>36</td>
<td></td>
</tr>
</tbody>
</table>

REQUIREMENTS FOR ENGLISH TEACHERS (GRADES 7-12)

Please ask your advisor for an advising sheet for teaching majors. We strongly recommend that prospective secondary English teachers seek advising from the UAF School of Education early in their undergraduate degree program so that they can be appropriately advised of the State of Alaska requirements for teacher licensure. They will apply for admission to the UAF School of Education’s postbaccalaureate one-year intensive teacher preparation program during their senior year.

Complete all the requirements for the English B.A. degree.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED F486</td>
<td>Media Literacy</td>
<td>3</td>
</tr>
<tr>
<td>ENGL/FL F200X</td>
<td>World Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL F317</td>
<td>Traditional English Grammar</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL F318</td>
<td>Modern English Grammar</td>
<td>3</td>
</tr>
<tr>
<td>ENGL F472</td>
<td>History of the English Language</td>
<td>3</td>
</tr>
<tr>
<td>A writing course — see list of approved electives</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Two multicultural literature courses, including one Alaska Native literature course, from list of approved electives</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Total Credits</td>
<td>27</td>
<td></td>
</tr>
</tbody>
</table>

Note: The above courses can also be used as humanities electives for B.A. degree requirements. If ENGL F200X/FL F200X or LING F101X is used to meet general education requirements, it will not meet the B.A. humanities electives requirement.

Minor, Creative Writing

Minimum Requirements for Minor: 15 credits

Students must earn a C- grade or better in each course.
ENGL F270X Introduction to Creative Writing 3
Select two from the following: 6
  ENGL F375 Intermediate Creative Writing: Fiction
  ENGL F376 Intermediate Creative Writing: Poetry
  ENGL F377 Intermediate Creative Writing: Nonfiction
Select two from the following: 6
  ENGL F470 Topics in Creative Writing
  ENGL F471 Undergraduate Writers’ Workshop
  ENGL F488 Dramatic Writing
Total Credits 15

Minor, English
Minimum Requirements for Minor: 18 credits
Select two from the following: 6
  ENGL F301 Continental Literature in Translation: The Ancient World
  or ENGL F302 Continental Literature in Translation: Medieval and Renaissance
  ENGL F306 Survey of American Literature: Beginnings to the Civil War
  ENGL F307 Survey of American Literature: Civil War to the Present
  ENGL F308 Survey of British Literature: Beowulf to the Romantic Period
  ENGL F309 Survey of British Literature: Romantic Period to the Present
  ENGL F422 Shakespeare: History Plays and Tragedies
  or ENGL F425 Shakespeare: Comedies and Nondramatic Poetry
ENGL electives at the F300 or F400 level 9
Total Credits 15

Environmental Politics
Minimum Requirements for Degree: 120 credits
Students must earn a C- grade or better in each course.

Minor
  • Minor, Environmental Politics (p. 189)

Minor, Environmental Politics
Minimum Requirements for Minor: 15 credits
  PS F101 Introduction to American Government and Politics 3
Select 12 elective political science credits from the following: 12
  PS F447 U.S. Environmental Politics
  PS F454 International Law and the Environment
  PS F455 Political Economy of the Global Environment
  PS F456 Science, Technology, and Politics
  PS F458 Comparative Environmental Politics
Total Credits 15

Eskimo
Minimum Requirements for Degree: 120 credits
Students who obtain a B.A. in Central Yup’ik or Inupiaq Eskimo may be employed as Native language instructors or language specialists for school districts or Native organizations. No other university in the United States offers a B.A. in Eskimo.

Degrees
  • B.A., Inupiaq Eskimo (p. 189)
  • B.A., Yup’ik Eskimo (p. 190)

Minor
  • Minor, Eskimo (p. 190)

B.A., Inupiaq Eskimo
Minimum Requirements for Degree: 120 credits
Students must earn a C- grade or better in each course.
### General University Requirements
Complete the general university requirements. (p. 134)

### General Education Requirements
Complete the general education requirements. (p. 137)

### B.A. Degree Requirements
Complete the B.A. degree requirements. (p. 139)

#### Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANL F315</td>
<td>Alaska Native Languages: Eskimo-Aleut</td>
<td>3</td>
</tr>
<tr>
<td>ESK F111X</td>
<td>Elementary Inupiaq</td>
<td>5</td>
</tr>
<tr>
<td>ESK F112X</td>
<td>Elementary Inupiaq</td>
<td>5</td>
</tr>
<tr>
<td>ESK F211</td>
<td>Intermediate Inupiaq</td>
<td>3</td>
</tr>
<tr>
<td>ESK F212</td>
<td>Intermediate Inupiaq</td>
<td>3</td>
</tr>
<tr>
<td>ESK F417</td>
<td>Advanced Inupiaq</td>
<td>3</td>
</tr>
<tr>
<td>LING F101X</td>
<td>Nature of Language</td>
<td>3</td>
</tr>
<tr>
<td>or ANS F320</td>
<td>Language and Culture in Alaska</td>
<td>3</td>
</tr>
</tbody>
</table>

Select three from the following: 9

- ANL F287 Teaching Methods for Alaska Native Languages
- ANL F316 Alaska Native Languages: Indian Languages
- ANS/ENGL F349 Narrative Art of Alaska Native Peoples (in English Translation)
- ANTH F242 Native Cultures of Alaska
- ESK F417 Advanced Inupiaq
- HIST F110 History of Alaska Natives
- LING/ED F303 Language Acquisition
- LING F318 Introduction to Phonetics and Phonology
- LING F320 Introduction to Morphology
- LING F410 Theory and Methods of Second Language Teaching
- LING F430 Historical Linguistics
- LING F450 Language Policy and Planning
- MUS F223X Alaska Native Music
- PS F263 Alaska Native Politics
- Yup’ik course or approved course

**Total Credits** 34

1. Fulfills the baccalaureate capstone requirement.

---

### B.A., Yup’ik Eskimo

#### Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

#### General University Requirements
Complete the general university requirements. (p. 134)

#### General Education Requirements
Complete the general education requirements. (p. 137)

#### B.A. Degree Requirements
Complete the B.A. degree requirements. (p. 139)

#### Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANL F315</td>
<td>Alaska Native Languages: Eskimo-Aleut</td>
<td>3</td>
</tr>
<tr>
<td>ESK F101X</td>
<td>Elementary Central Yup’ik</td>
<td>5</td>
</tr>
</tbody>
</table>

#### Select two from the following: 6

- ANL F287 Teaching Methods for Alaska Native Languages
- ANL F316 Alaska Native Languages: Indian Languages
- ANS/ENGL F349 Narrative Art of Alaska Native Peoples (in English Translation)
- ANTH F242 Native Cultures of Alaska
- HIST F110 History of Alaska Natives
- LING/ED F303 Language Acquisition
- LING F318 Introduction to Phonetics and Phonology
- LING F320 Introduction to Morphology
- LING F430 Historical Linguistics
- LING F450 Language Policy and Planning
- MUS F223X Alaska Native Music
- PS F263 Alaska Native Politics
- Yup’ik course or approved course

**Total Credits** 34

1. Fulfills the baccalaureate capstone requirement.

---

### Minor, Eskimo

#### Minimum Requirements for Minor: 15 credits

Complete Eskimo electives

**Total Credits** 15

---

### Film and Performing Arts

#### College of Liberal Arts
Department of Theatre and Film
907-474-6590
www.uaf.edu/theatrefilm/ (http://www.uaf.edu/theatrefilm)

#### B.A. Degree

#### Minimum Requirements for Degree: 120 credits

The Theatre and Film Department teaches courses in media and performing arts, technology, theory and criticism. The department recognizes the importance of the role of the fine and performing arts within the humanities program of a liberal arts education. Courses in film and performing arts help develop students' original, creative and critical thinking while developing mastery in technical or dramatic skills.

A degree in film and performing arts gives students a critical understanding of the history, theory and technologies of cinema, new media arts and theatre arts while giving them opportunities, tools and resources for careers in media and performing arts industries, to pursue graduate study, or become media or theatre artists. Students...
take a shared group of classes in performance, production design and filmmaking, and then choose either a film or theatre concentration.

Film concentration: Through an interdisciplinary approach to film and media studies, the program produces media-literate professionals who can play a leading role in an increasingly information-centered world where every profession will require skilled media creators. Film students have opportunities to produce their own creative, time-based content for a variety of multimedia applications. Emphasis is placed on the cultures, lifestyles and environments of Alaska and the North and the unique opportunities they afford for skilled media creators and artists.

Theatre concentration: Students become well-rounded and prepared artists who can contribute their design, technical and performance skills to stage and screen work. The theatre concentration emphasizes stage and screen practicum work, so students learn through hands-on experience on stage and screen sets. These experiences provide unique opportunities for creative expression and workforce development.

Classes and productions are open to film and performing arts majors, theatre or film minors, and students in other fields.

Degree
- B.A., Film and Performing Arts (p. 191)

Minor
- Minor, Film Studies (p. 192)
- Minor, Theatre (p. 192)

B.A., Film and Performing Arts

Concentrations: Film, Theatre

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)

B.A. Degree Requirements
Complete the B.A. degree requirements. (p. 139)

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLPA F121</td>
<td>Fundamentals of Acting</td>
<td>3</td>
</tr>
<tr>
<td>FLPA F271</td>
<td>Film Set Production I</td>
<td>3</td>
</tr>
<tr>
<td>FLPA F247</td>
<td>Introduction to Production Design</td>
<td>3</td>
</tr>
</tbody>
</table>

Concentrations

Complete one of the following concentrations: 30

- Film
- Theatre

Total Credits 39

To graduate, all students must complete 39 upper-division credits. Some of these will be covered by the upper-division required courses for the film and performing arts B.A., but not all of them. Film and performing arts students will need to take upper-division electives (in film and performing arts or other disciplines) to complete the upper-division requirement.

Concentrations

**FILM**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLPA/JRN/ENGL F217X</td>
<td>Introduction to the Study of Film</td>
<td>3</td>
</tr>
<tr>
<td>FLPA/ART F231</td>
<td>Previsualization and Preproduction for Digital Cinema</td>
<td>3</td>
</tr>
<tr>
<td>FLPA F260/JRN F290</td>
<td>Digital Video Editing</td>
<td>3</td>
</tr>
<tr>
<td>FLPA/JRN F280</td>
<td>Video Storytelling</td>
<td>3</td>
</tr>
<tr>
<td>FLPA F289</td>
<td>Reel Workshop/Review and Reel Workshop/Review</td>
<td>0</td>
</tr>
<tr>
<td>and FLPA F389</td>
<td>and Reel Workshop/Review</td>
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</tr>
<tr>
<td>and FLPA F489</td>
<td>and Reel Workshop/Review</td>
<td>0</td>
</tr>
<tr>
<td>FLPA F331</td>
<td>Directing Film/Video</td>
<td>3</td>
</tr>
<tr>
<td>FLPA F403</td>
<td>Practicum in Film Production: FRAME</td>
<td>3</td>
</tr>
<tr>
<td>FLPA F431</td>
<td>Film Set Production II</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one from the following: 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>FLPA F334</td>
<td>Movies and Films: Watching and Analyzing</td>
<td>3</td>
</tr>
<tr>
<td>FLPA/ANS F381</td>
<td>Alaska Natives in Film</td>
<td>3</td>
</tr>
<tr>
<td>FLPA/ENGL F488</td>
<td>Dramatic Writing</td>
<td>3</td>
</tr>
<tr>
<td>or approved FLPA elective</td>
<td></td>
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</table>

Select two from the following: 6

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLPA F310</td>
<td>Acting for the Camera</td>
<td>3</td>
</tr>
<tr>
<td>FLPA F358</td>
<td>Lights, Camera, Audio!</td>
<td>3</td>
</tr>
<tr>
<td>FLPA/ART F371</td>
<td>Digital Imaging</td>
<td>3</td>
</tr>
<tr>
<td>FLPA F418</td>
<td>Internship in Film Production</td>
<td>3</td>
</tr>
<tr>
<td>FLPA F458</td>
<td>SFX Up Your Video</td>
<td>3</td>
</tr>
<tr>
<td>or FLPA/ART F475</td>
<td>Digital Video Compositing</td>
<td>3</td>
</tr>
<tr>
<td>FLPA/ART/ANTH F460</td>
<td>Cross-Cultural Filmmaking</td>
<td>3</td>
</tr>
<tr>
<td>FLPA/ART F472</td>
<td>3D Animation</td>
<td>3</td>
</tr>
<tr>
<td>FLPA/JRN F480</td>
<td>Documentary Filmmaking</td>
<td>3</td>
</tr>
<tr>
<td>FLPA F481</td>
<td>Advanced Topics in Film or Stage Production</td>
<td>3</td>
</tr>
<tr>
<td>FLPA F498</td>
<td>Undergraduate Research</td>
<td>3</td>
</tr>
<tr>
<td>FLPA F499</td>
<td>Thesis Project 1</td>
<td>3</td>
</tr>
<tr>
<td>or approved FLPA elective</td>
<td></td>
<td></td>
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</tbody>
</table>

Total Credits 30

1. Fulfills the baccalaureate capstone requirement.

**THEATRE**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLPA F190</td>
<td>Audition or Portfolio Review and Audition or Portfolio Review Participation</td>
<td>0</td>
</tr>
<tr>
<td>and FLPA F191</td>
<td>Participation and Audition or Portfolio Review Participation</td>
<td>0</td>
</tr>
<tr>
<td>FLPA F215X</td>
<td>Dramatic Literature and History</td>
<td>3</td>
</tr>
<tr>
<td>FLPA F241</td>
<td>Basic Stagecraft</td>
<td>4</td>
</tr>
<tr>
<td>FLPA F290</td>
<td>Audition or Portfolio Review Participation II</td>
<td>0</td>
</tr>
<tr>
<td>and FLPA F291</td>
<td>Audition or Portfolio Review Participation II</td>
<td>0</td>
</tr>
<tr>
<td>FLPA F310</td>
<td>Acting for the Camera</td>
<td>3</td>
</tr>
</tbody>
</table>
Complete 8 credits from the following, at least 3 of which must be FLPA F402:

- FLPA F401 Theatre Practicum: Performance
- FLPA F402 Theatre Practicum: Technical

Select four from the following: 12

- FLPA F320 Acting II: Voice and Speech
- FLPA F321 Acting III: Movement
- FLPA F332 Stage Directing I
- FLPA F347 Lighting Design
- FLPA/ANS F361 Advanced Alaska Native Performance
- FLPA F423 Acting IV: Scene Study
- FLPA F481 Advanced Topics in Film or Stage Production
- FLPA/ENGL F488 Dramatic Writing
- FLPA F498 Undergraduate Research
- FLPA F499 Thesis Project
- or approved FLPA elective

Total Credits 30

1 Fulfills the baccalaureate capstone requirement.

Note: FLPA film concentration majors cannot minor in film but may minor in theatre. FLPA theatre concentration majors cannot minor in theatre but may minor in film.

**Minor, Film Studies**

Minimum Requirements for Minor: 18 credits

- FLPA/ENGL F217X Introduction to the Study of Film 3
- FLPA/ART F231 Previsualization and Preproduction for Digital Cinema 3
- FLPA F271 Film Set Production I 3
  or FLPA/JRN F280 Video Storytelling
- Department-approved electives 9

Total Credits 18

**B.A., B.S. Degree**

Minimum Requirements for Degrees: 120 credits

The undergraduate programs in fisheries offer students broad education and training, in the fields of fish and fisheries biology and ecology, marine biology and oceanography. In addition to rigorous scientific coursework, students work with professionals from local, state, federal, tribal, university and private organizations during a required internship or research project.

The B.S. degree in fisheries and ocean sciences prepares graduates to work as professionals in fisheries and ocean management, research, conservation, education, policy, and industry organizations. Typically, fisheries and ocean sciences graduates obtain employment with state, federal, provincial, Alaska Native, Native American, university and nongovernmental organizations in Alaska and throughout North America. The program also provides a solid foundation for graduate study for students contemplating careers in advanced research, management, administration and teaching.

The B.A. degree in fisheries prepares graduates to work as professionals in fishing and seafood processing, marketing and business industries, community and tribal development organizations, subsistence research and management, social sciences and other human dimensions of fisheries in Alaska and throughout North America. Typically, fisheries graduates with this degree obtain employment with fisheries governmental agencies and non-governmental organizations in the areas of fisheries business administration, policy, education, social science, rural development and extension. The program also provides a solid foundation for graduate study for students contemplating careers in advanced research, management, administration and teaching.

The undergraduate fisheries program is administered through the Fairbanks campus. Students have the option of completing their program in Fairbanks, Anchorage or Juneau, with many fisheries courses offered via distance education for students in outlying areas.

**Degrees**

- B.A., Fisheries (p. 192)
- B.S., Fisheries and Ocean Sciences (p. 193)

**Minor**

- Minor, Fisheries (p. 194)

**B.A., Fisheries**

Concentrations: Fisheries Business and Social Science, Rural and Community Development

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

**General University Requirements**

Complete the general university requirements. (p. 134)

**General Education Requirements**

Complete the general education requirements. (p. 137)

**B.A. Degree and Program Requirements**

Complete the B.A. degree requirements. (p. 139)

**Program Requirements**

- ENGL F314 Technical Writing 3

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**Fisheries**

School of Fisheries and Ocean Sciences
Fisheries Program
907-474-7289
www.sfos.uaf.edu/academics/ (http://www.sfos.uaf.edu/academics)
or ENGL F414 Research Writing

FISH F102 Fact or Fishin': Case Studies in Fisheries

FISH F103 The Harvest of the Sea

FISH F110 Fish and Fisheries in a Changing World

FISH F261 Introduction to Fisheries Utilization

FISH F288 Fish and Fisheries of Alaska

STAT F200X Elementary Probability and Statistics

Select one from the following: 3

FISH F411 Human Dimensions of Environmental Systems

FISH F487 Fisheries Management

FISH F490 Experiential Learning – Fisheries Internship

GEOG F312 People, Places, and Environment: Principles of Human Geography

SOC F440 Environmental Sociology

Concentrations

Select one from the following concentrations: 21-24

Fisheries Business and Social Science
Rural and Community Development

Total Credits 42-45

1 Students who take ANTH F403 or ANS F401 should be aware that these two courses require additional prerequisites that are not part of the Bachelor of Arts in fisheries degree program.

RURAL AND COMMUNITY DEVELOPMENT

Select one from the following: 3

ANTH F428 Ecological Anthropology and Regional Sustainability

RD F245 Fisheries and Marine Wildlife Development in Rural Alaska

RD F265 Perspectives on Subsistence in Alaska

RD F300 Rural Development in a Global Perspective

RD F350 Community Research in Indigenous Contexts

RD F351 Strategic Planning for Rural Communities

RD F352 Rural Business Planning and Proposal Development

RD F450 Managing Rural Projects and Programs

RD F475 Rural Development Senior Project

Total Credits 21

B.S., Fisheries and Ocean Sciences

Concentrations: Fisheries Science, Ocean Sciences

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements

Complete the general university requirements. (p. 134)

General Education Requirements

Complete the general education requirements. (p. 137)

As part of the general education requirements, complete:

BIOL F115X Fundamentals of Biology I 4

BIOL F116X Fundamentals of Biology II 4

ECON F201X Principles of Economics I: Microeconomics 3

or ECON F235X Introduction to Natural Resource Economics

MATH F230X Calculus Essentials with Applications 3-4

or MATH F251X Calculus I
B.S. Degree Requirements
Complete the B.S. degree requirements. (p. 142)
As part of the B.S. degree requirements, complete:

**CHEM** F105X General Chemistry I 4
**CHEM** F106X General Chemistry II 4
**STAT** F200X Elementary Probability and Statistics 3

Program Requirements
**BIOL** F260 Principles of Genetics 4
**BIOL** F371 Principles of Ecology 4
**FISH** F102 Fact or Fishin': Case Studies in Fisheries 1
**FISH** F103 The Harvest of the Sea 2
**FISH** F110 Fish and Fisheries in a Changing World 3

**or** **FISH** F414 Field Methods in Marine Ecology and Fisheries
**or** **MSL** F450 Marine Biology and Ecology Field Course
**or** **MSL** F456 Kelp Forest Ecology

**FISH** F490 Experiential Learning – Fisheries Internship 1

**MSL** F211 Introduction to Marine Science I 3
**MSL** F212 Introduction to Marine Science II 3
**MSL** F213L Marine Science Laboratory 1

**PHYS** F103X College Physics I 4

**or** **PHYS** F115X Physical Sciences
**or** **PHYS** F211X General Physics I

**STAT** F401 Regression and Analysis of Variance 4

**or** **STAT** F402 Scientific Sampling
**or** **MATH** F252X Calculus II

Complete 9 credits of electives* from fisheries, biology, marine sciences and limnology or natural resource management (of which at least 5 credits must be upper-division).

Concentrations
Complete one from the following concentrations: 23

Fisheries Science
Ocean Sciences

Total Credits 90-91

Note: Fisheries and ocean science majors are encouraged to reinforce their fisheries qualifications by earning a minor in a program related to fisheries and ocean sciences. Some examples are biology, fisheries (ocean sciences concentration only), marine science (fisheries science concentration only), business management, chemistry, economics, mathematics, natural resources management (animal science), northern studies, statistics or wildlife.

Concentrations

**FISHERIES SCIENCE**

**FISH** F261 Introduction to Fisheries Utilization 3
**FISH** F288 Fish and Fisheries of Alaska 3
**FISH** F411 Human Dimensions of Environmental Systems

**or** **GEOG** F312 People, Places, and Environment: Principles of Human Geography

**or** **SOC** F440 Environmental Sociology

**FISH** F425 Fish Ecology 3
**FISH** F426 Behavioral Ecology of Fishes
**FISH** F428 Physiological Ecology of Fishes
**FISH** F433 Pacific Salmon Life Histories

**FISH** F427 Ichthyology 4
**FISH** F487 Fisheries Management 2

Complete 4 credits of electives from chemistry, geology or physics 4

Total Credits 23

1 Students who take **GEOG** F312 or **SOC** F440 should be aware that these two courses require additional prerequisites that are not part of the fisheries science concentration.

2 **FISH** F487 and **MSL** F499 will serve as the capstone course for fisheries science and ocean sciences concentrations, respectively.

**OCEAN SCIENCES**

**MSL** F499 Senior Thesis 1

Select 20 credits from the following: 20

**MSL** F215 Marine Geological Drama and Undersea Catastrophes
**MSL** F216 The Oceans and Global Change
**MSL** F220 Scientific Diving
**MSL** F317 Introduction to Marine Mammal Biology
**MSL** F403 Estuaries Oceanography
**MSL** F411 Current Topics in Oceanographic Research
**MSL** F412 Early Life Histories of Marine Invertebrates
**MSL** F419 Concepts in Physical Oceanography
**MSL** F421 Field Course in Subtidal Studies
**MSL** F431 Polar Marine Science
**MSL** F440 Oceanography for Fisheries
**MSL** F449 Biological Oceanography
**MSL** F461 Chemical Oceanography
**MSL** F463 Chemical Coastal Processes
**MSL** F467 Introduction to Marine Macroalgae
**MSL** F492 Seminar

Additional electives to complete minimum credits required.

Total Credits 23

1 **FISH** F487 and **MSL** F499 will serve as the capstone course for fisheries science and ocean sciences concentrations, respectively.

**Minor, Fisheries**

Concentrations: Fisheries Science; Fisheries Business Administration and Economics; Fisheries Policy and Rural Development

Minimum Requirements for Minor: 15 credits

**FISH** F101 Introduction to Fisheries 3
**or** **NRM** F101 Natural Resources Conservation and Policy
**FISH** F288 Fish and Fisheries of Alaska 3
A least 6 additional credit hours designated FISH, with the exception of any FISH F492 courses

Concentrations
Select at most 3 credit hours from one of the following concentrations:
- Fisheries Science
- Fisheries Business Administration and Economics
- Fisheries Policy and Rural Development

Total Credits 15

Concentrations
FISHERIES SCIENCE
- BIOL F305 Invertebrate Zoology 4
- BIOL F310 Animal Physiology 4
- BIOL F441 Animal Behavior 3
- BIOL F471 Population Ecology 3
- BIOL F472 Community Ecology 3
- BIOL F473 Limnology 3
- BIOL F476 Ecosystem Ecology 3
- BIOL F483 Stream Ecology 3
- NRM F370 Introduction to Watershed Management 3

FISHERIES BUSINESS ADMINISTRATION AND ECONOMICS
- ACCT F261X Principles of Financial Accounting 3
- ACCT F262 Principles of Managerial Accounting 3
- BA F151X Introduction to Business 3
- BA F307 Introductory Human Resources Management 3
- BA F325 Financial Management 3
- BA F330 The Legal Environment of Business 4
- BA F343 Principles of Marketing 3
- BA F390 Organizational Theory and Behavior 3
- ECON F235X Introduction to Natural Resource Economics 3
- ECON F335 Intermediate Natural Resource Economics 3
- ECON F434 Environmental Economics 3

FISHERIES POLICY AND RURAL DEVELOPMENT
- ANS F350 Cross-Cultural Communication: Alaska Perspectives 3
- ANS F401 Cultural Knowledge of Native Elders 3
- ANTH F242 Native Cultures of Alaska 3
- ANTH F403 Political Anthropology 3
- ANTH F428 Ecological Anthropology and Regional Sustainability 3
- HIST F411 Environmental History 3
- NRM F407 Environmental Law 3
- NRM F430 Resource Management Planning 3
- PS F101 Introduction to American Government and Politics 3
- PS F447 U.S. Environmental Politics 3
- PS F454 International Law and the Environment 3
- PS F455 Political Economy of the Global Environment 3
- PS F458 Comparative Environmental Global Politics 3
- RD F200X Rural Development in the North 3
- RD F245 Fisheries and Marine Wildlife Development in Rural Alaska 3
- RD F265 Perspectives on Subsistence in Alaska 3
- RD F300 Rural Development in a Global Perspective 3
- RD F350 Community Research in Indigenous Contexts 3
- RD F430 Indigenous Economic Development and Entrepreneurship 3

Foreign Languages
College of Liberal Arts
Department of Foreign Languages and Literatures
907-474-7396
www.uaf.edu/language/ (http://www.uaf.edu/language)

B.A. Degree
Minimum Requirements for Degree: 120 credits

Language is the embodiment of culture and an expression of a people’s way of thinking, feeling and viewing the world. We have an increasing need to communicate directly with other peoples to achieve mutual understanding. To learn a new language opens new avenues of thought, new modes of expression and new models of understanding. The study of foreign languages and literatures liberates the student from the confines of one culture.

Foreign language majors are encouraged to spend one or both semesters of their junior year in an exchange program appropriate to their language focus.

Degree
- B.A., Foreign Languages (p. 195)

Minor
- Minor, Foreign Languages (p. 196)

B.A., Foreign Languages
Concentrations: Two Languages, Single Language (French, German, Russian, Spanish)

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)

B.A. Degree and Program Requirements
Complete the B.A. degree requirements. (p. 139)

Complete the baccalaureate capstone requirement as determined by the program. 1
Concentrations
Select one from the following concentrations: 30-33

Two languages
French, German, Russian or Spanish

Total Credits 30-33

1 The baccalaureate capstone requirement for foreign languages may be fulfilled by FREN F431, SPAN F431, JPN F475, RUSS F488, GER F431 or GER F432.

Note: In addition to a first and second language, students should complete a well-defined minor related to their career goals. When choosing a minor it is highly recommended that students see an advisor as early as possible.

Note: Recommended background courses: LING F101X and LING F216X.

Note: F100-level language courses (which are preparatory to, but not part of the foreign language degree) may be counted toward fulfillment of general education requirements.

Concentrations

TWO LANGUAGES
F200 level or above in the first language: French, German, Japanese, Russian or Spanish. 1
F200 level or above in the second language: French, German, Japanese, Russian or Spanish.

Total Credits 33

1 These must include two F400-level courses in the target language taken in residence at UAF.

FRENCH, GERMAN, RUSSIAN OR SPANISH
Target language at the F200 level or above 1

Total Credits 30

1 These may include target language courses and/or courses taken in the target language on an approved study abroad program and up to 6 credits of advisor-approved electives from education or linguistics, but must include two F400-level courses in the target language taken in residence at UAF.

JAPANESE
See requirements under Japanese Studies major (p. 209).

Minor, Foreign Languages
Minimum Requirements for Minor: 15 credits

Foreign language credits at the F100 level or above 3
Foreign language credits at the F200 level or above 12

Total Credits 15

General Science
College of Natural Science and Mathematics
Department of Physics
907-474-6108
www.uaf.edu/physics/ (http://www.uaf.edu/physics)

B.S. Degree
Minimum Requirements for Degree: 130 credits

The B.S. degree program in general science provides a broad background in the natural sciences. The program allows specialization in at least two disciplines within the natural sciences as well as an additional area of associated interest. This degree offers more breadth in the natural sciences than other degree programs and may be classified as an interdisciplinary degree.

Degree
- B.S., General Science (p. 196)

B.S., General Science
Minimum Requirements for Degree: 130 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)

B.S. Degree Requirements
Complete the B.S. degree requirements. (p. 142)

Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL F115X</td>
<td>Fundamentals of Biology I</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F116X</td>
<td>Fundamentals of Biology II</td>
<td>4</td>
</tr>
<tr>
<td>CHEM F105X</td>
<td>General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHEM F106X</td>
<td>General Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>GEOS F101X</td>
<td>The Dynamic Earth</td>
<td>4</td>
</tr>
<tr>
<td>GEOS F112X</td>
<td>The History of Earth and Life</td>
<td>4</td>
</tr>
<tr>
<td>MATH F151X</td>
<td>College Algebra for Calculus</td>
<td>4</td>
</tr>
<tr>
<td>MATH F152X</td>
<td>Trigonometry</td>
<td>3</td>
</tr>
<tr>
<td>MATH F251X</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS F103X</td>
<td>College Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS F104X</td>
<td>College Physics II</td>
<td>4</td>
</tr>
</tbody>
</table>

Select one from the following by the start of the junior year: 3

Two majors
One major and two minors 4

Select one from the following: 20-24

Complete a second major from the following: biological sciences, chemistry, geosciences, physics or mathematics. 5

Complete two minors, one of which must be in the natural sciences or mathematics, while the other may be selected from the following disciplines: anthropology, English, French, German, Spanish, Russian, history, political science or economics. 6

Complete the baccalaureate capstone requirement as determined by the program.
provides the framework for the integration of existing and emerging economic and political developments all over the world. Geography also caused environmental hazards, land-use change, regional conflicts, and climate change, resource development, energy use and conservation, interdisciplinary approach to develop an integrated understanding of natural/environmental, political, cultural and economic systems, and Geography is a broad, holistic study of the interactions among various components of the discipline, including global geographic perspectives, geography of the earth’s natural systems, geography of human systems, geospatial sciences (GIS, remote sensing, geo-visualization), and the synthesis of these core perspectives through an integrating capstone experience.

Our students find work in such fields as geospatial sciences (GIS/remote sensing/cartography), regional planning, international relations, state and federal resource management, transportation planning, environmental impact assessment, tourism, and teaching. Many of our students go on to graduate study in geography, natural resources, environmental science or planning. The geography B.A. degree gives students a broad understanding of the interactions among the physical environments, economics, political events, and cultures of various regions of the world, and equips students with the ability to interpret contemporary geopolitical and environmental issues. The B.A. prepares students for careers in management, policy, teaching, field-based research, regional planning, and a variety of private sector careers. The B.A. also provides an excellent foundation for graduate studies in a wide range of academic disciplines.

B.A. students are encouraged to coordinate minors, electives and internships to develop further expertise within a chosen region or topic, to take advantage of the considerable topical and regional expertise found throughout the UAF community, and also to underscore the important role other disciplines play within the field of geography.

Three specialized concentrations are available to students pursuing the B.S. degree:
• environmental studies
• landscape analysis and climate change studies
• geospatial sciences

The environmental studies concentration provides the foundation for understanding interactions between natural and human systems, analysis of environmental issues from an interdisciplinary geographic perspective, a diverse technical and scientific approach to environmental issues, and the ability to design balanced solutions to environmental problems.

The landscape analysis and climate change studies concentration integrates and synthesizes courses in geography, climate, geologic and biological sciences, as well as geospatial sciences. Students gain a sound and interdisciplinary understanding of how environmental change influences landscape patterns and human activity and welfare on both spatial and temporal scales. Senior capstone and internship courses offer integrating capstone experiences, enabling students to apply what they have learned in real-world settings.

The geospatial sciences concentration emphasizes skills and practices in geographic information systems, remote sensing, geovisualization and analysis of spatial patterns. Courses in GIS, remote sensing, GPS, map design, spatial statistics and computer programming are integrated with the geography foundation curriculum and courses in the natural sciences.

Requirements for General Science Teachers (grades 7-12)

1. Complete all the requirements of the general science B.S.
2. If the student opts for one major and two minors, all must represent science or mathematics disciplines.
3. All prospective science teachers must complete the following:

   PHIL F481 Philosophy of Science 3

Note: We strongly recommend that prospective secondary science teachers seek advising from the UAF School of Education early in your undergraduate degree program so that you can be appropriately advised of the State of Alaska requirements for teacher licensure. You will apply for admission to the UAF School of Education’s postbaccalaureate teacher preparation program, a one-year intensive program, during your senior year. Above requirements apply to all candidates who apply to the UAF School of Education Spring 2006 or later for licensure in General Science.

Geography

College of Natural Science and Mathematics
Department of Geosciences
907-474-7565
www.uaf.edu/geology/geography/ (http://uaf.edu/geology/geography)

B.A., B.S. Degrees
Minimum Requirements for Degrees: 120 credits

Geography is a broad, holistic study of the interactions among various natural/environmental, political, cultural and economic systems, and how those interactions create the world we see today at both local and global scales. Geography takes a synthesizing and inherently interdisciplinary approach to develop an integrated understanding of climate change, resource development, energy use and conservation, geopolitics, sustainable development, assessment of natural and human-caused environmental hazards, land-use change, regional conflicts, and economic and political developments all over the world. Geography also provides the framework for the integration of existing and emerging technologies such as GIS, remote sensing and geo-visualization into a broad range of academic and professional fields.

The geography B.A. and B.S. degrees are built upon a group of required courses that gives students a firm grounding in the fundamental components of the discipline, including global geographic perspectives, geography of the earth’s natural systems, geography of human systems, geospatial sciences (GIS, remote sensing, geo-visualization), and the synthesis of these core perspectives through an integrating capstone experience.

A student does not need to take MATH F151X and MATH F152X if the student completes MATH F251X with a C or better. Complete a B.S. degree mathematics elective for 3 credits if MATH F151X and MATH F152X are not taken.

A general science student, after meeting with his/her general science advisor, should contact the head of the major/minor department as early as possible to determine course requirements in that discipline. These courses will be determined by the department head of the discipline and will reflect the student’s needs as well as the intent of the general science program.

Complete one major from the following: biological sciences, chemistry, geosciences or physics. The major requires the completion of at least 20 credits in addition to the foundation courses in the discipline.

The major requires the completion of at least 20 credits in addition to the foundation courses in the discipline.

The minor must include 12 or more credits in addition to the foundation courses in that discipline.
Degrees

- B.A., Geography (p. 198)
- B.S., Geography (p. 198)

Minor

- Minor, Geography (p. 200)
- Minor, Geographic Information Systems (p. 200)

B.A., Geography

Minimum Requirements for Degree: 120 credits

Students must earn a C grade or better in each course.

General University Requirements

Complete the general university requirements. (p. 134)

General Education Requirements

Complete the general education requirements. (p. 137)

As part of the general education requirements, complete:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRM F303X</td>
<td>Environmental Ethics and Actions</td>
<td>3</td>
</tr>
</tbody>
</table>

B.A. Degree Requirements

Complete the B.A. degree requirements. (p. 139)

Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG F101X</td>
<td>Expedition Earth: Introduction to Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG F111X</td>
<td>Earth and Environment: Elements of Physical Geography</td>
<td>4</td>
</tr>
<tr>
<td>GEOG F312</td>
<td>People, Places, and Environment: Principles of Human Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG F490</td>
<td>Geography Seminar</td>
<td>3</td>
</tr>
<tr>
<td>NRM F338</td>
<td>Introduction to Geographic Information Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

Regional Geography

Select two from the following: 6

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>GEOG F302</td>
<td>Geography of Alaska</td>
</tr>
<tr>
<td>GEOG F303</td>
<td>Geography of United States and Canada</td>
</tr>
<tr>
<td>GEOG F305</td>
<td>Geography of Europe</td>
</tr>
<tr>
<td>GEOG F306</td>
<td>Geography of Russia</td>
</tr>
<tr>
<td>GEOG F311</td>
<td>Geography of Asia</td>
</tr>
<tr>
<td>GEOG F410</td>
<td>Geography of the Pacific Rim</td>
</tr>
<tr>
<td>GEOG F427</td>
<td>Polar Geography</td>
</tr>
</tbody>
</table>

Physical Geography

Select one from the following: 3-4

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG F307</td>
<td>Weather and Climate</td>
</tr>
<tr>
<td>GEOG F339</td>
<td>Maps and Landscape Analysis</td>
</tr>
<tr>
<td>GEOG F412</td>
<td>Geography of Climate and Environmental Change</td>
</tr>
<tr>
<td>GEOG F418</td>
<td>Biogeography</td>
</tr>
<tr>
<td>GEOG F460</td>
<td>The Dynamic Alaska Coastline</td>
</tr>
</tbody>
</table>

Human Geography

Select one from the following: 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG F405</td>
<td>Political Geography</td>
</tr>
<tr>
<td>GEOG F420</td>
<td>Geopolitics of Energy</td>
</tr>
</tbody>
</table>

NRM F403    Environmental Decision-Making

Select one from the following: 3-4

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG F309</td>
<td>Digital Cartography and Geo-Visualization</td>
</tr>
<tr>
<td>GEOG F430</td>
<td>Google Earth and Neogeography</td>
</tr>
<tr>
<td>GEOG F483</td>
<td>Research Design, Writing and Presentation Methods</td>
</tr>
<tr>
<td>GEOS F422</td>
<td>Geoscience Applications of Remote Sensing</td>
</tr>
<tr>
<td>GEOS F458</td>
<td>Applications of GPS and GIS in Geophysics</td>
</tr>
<tr>
<td>NRM F366</td>
<td>Survey Research in Natural Resources Management</td>
</tr>
</tbody>
</table>

NRM F435    GIS Analysis

Geography Electives

Select two courses from any of the above categories or other courses appropriate to the student's chosen program of study: 3

Total Credits: 40-42

¹ Students will tailor their program through course selection from the categories below in consultation with their advisor to focus on a subspecialty such as Alaska, the circumpolar North, Europe, Asia, or other region or topic of their choice.

² Fulfills the baccalaureate capstone requirement.

³ Both courses must be at F300 level or higher and approved by the student's advisor.

Note: Geography majors are encouraged to reinforce their program focus with a minor in one of the following areas: Alaska Native studies, anthropology, Asian studies, economics, environmental politics, foreign languages, geology, geophysics, global studies, history, journalism, natural resource management, Northern studies, political science and rural development.

Note: Students and faculty advisors should carefully review prerequisites for courses outlined in each required and/or optional area. Some courses require successful completion of up to three prerequisite courses. Therefore, students and faculty should note that while the minimum degree credit hours are 120, the actual number of required course credits may exceed that number.

B.S., Geography

Concentrations: Environmental Studies, Landscape Analysis and Climate Change Studies, and Geospatial Sciences

Minimum Requirements for Degree: 120 credits

Students must earn a C grade or better in each course.

General University Requirements

Complete the general university requirements. (p. 134)

General Education Requirements

Complete the general education requirements. (p. 137)

As part of the general education requirements, complete:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRM F303X</td>
<td>Environmental Ethics and Actions</td>
<td>3</td>
</tr>
<tr>
<td>STAT F200X</td>
<td>Elementary Probability and Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>
### B.S. Degree Requirements

Complete the B.S. degree requirements. (p. 142)

As part of the B.S. degree requirements, complete:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>MATH F230X</td>
<td>Calculus Essentials with Applications</td>
<td>3</td>
</tr>
<tr>
<td>or MATH F251X</td>
<td>Calculus I</td>
<td></td>
</tr>
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</table>

#### Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG F101X</td>
<td>Expedition Earth: Introduction to Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG F111X</td>
<td>Earth and Environment: Elements of Physical Geography</td>
<td>4</td>
</tr>
<tr>
<td>GEOG F312</td>
<td>People, Places, and Environment: Principles of Human Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG F483</td>
<td>Research Design, Writing and Presentation Methods</td>
<td>3</td>
</tr>
<tr>
<td>GEOG F490</td>
<td>Geography Seminar</td>
<td>3</td>
</tr>
<tr>
<td>GEOS F488</td>
<td>Undergraduate Research</td>
<td>1-3</td>
</tr>
<tr>
<td>or GEOG F300</td>
<td>Internship in Geography</td>
<td></td>
</tr>
<tr>
<td>NRM F338</td>
<td>Introduction to Geographic Information Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Concentrations

Select one from the following concentrations: 30-56

- **Environmental Studies**
- **Landscape Analysis and Climate Change Studies**
- **Geospatial Sciences**

Total Credits: 59-87

---

### Concentrations

#### ENVIRONMENTAL STUDIES

As part of the general education requirements, complete:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CHEM F105X</td>
<td>General Chemistry I</td>
<td>4</td>
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As part of the B.S. degree requirements, complete:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BIOL F115X</td>
<td>Fundamentals of Biology I</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F116X</td>
<td>Fundamentals of Biology II</td>
<td>4</td>
</tr>
</tbody>
</table>

#### Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG F207</td>
<td>Research Methods and Statistics in Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG F307</td>
<td>Weather and Climate</td>
<td>3</td>
</tr>
<tr>
<td>GEOG F339</td>
<td>Maps and Landscape Analysis</td>
<td>3</td>
</tr>
<tr>
<td>GEOG F483</td>
<td>Research Design, Writing and Presentation Methods</td>
<td>3</td>
</tr>
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</table>

Select two from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG F412</td>
<td>Geography of Climate and Environmental Change</td>
<td>3</td>
</tr>
<tr>
<td>or ATM F456</td>
<td>Climate and Climate Change</td>
<td></td>
</tr>
<tr>
<td>GEOS F304</td>
<td>Geomorphology</td>
<td>3</td>
</tr>
</tbody>
</table>

Select three from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG F339</td>
<td>Maps and Landscape Analysis</td>
<td></td>
</tr>
<tr>
<td>GEOG F418</td>
<td>Biogeography</td>
<td></td>
</tr>
<tr>
<td>GEOG F427</td>
<td>Polar Geography</td>
<td></td>
</tr>
<tr>
<td>GEOG F460</td>
<td>The Dynamic Alaska Coastline</td>
<td></td>
</tr>
</tbody>
</table>

#### LANDSCAPE ANALYSIS AND CLIMATE CHANGE STUDIES

As part of the general education requirements, complete:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATM F101X</td>
<td>Weather and Climate of Alaska</td>
<td>4</td>
</tr>
<tr>
<td>PHYS F103X</td>
<td>College Physics I</td>
<td>4</td>
</tr>
</tbody>
</table>

#### Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG F412</td>
<td>Geography of Climate and Environmental Change</td>
<td>3</td>
</tr>
<tr>
<td>or ATM F456</td>
<td>Climate and Climate Change</td>
<td></td>
</tr>
<tr>
<td>GEOS F304</td>
<td>Geomorphology</td>
<td>3</td>
</tr>
</tbody>
</table>

Select three from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG F302</td>
<td>Geography of Alaska</td>
<td></td>
</tr>
<tr>
<td>GEOG F307</td>
<td>Weather and Climate</td>
<td></td>
</tr>
<tr>
<td>GEOG F478</td>
<td>Ice Age Alaska</td>
<td></td>
</tr>
<tr>
<td>GEOS F477</td>
<td>Ice in the Climate System</td>
<td></td>
</tr>
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</table>

Select two from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG F207</td>
<td>Research Methods and Statistics in Geography</td>
<td></td>
</tr>
<tr>
<td>GEOG F309</td>
<td>Digital Cartography and Geo-Visualization</td>
<td></td>
</tr>
<tr>
<td>GEOS F422</td>
<td>Geoscience Applications of Remote Sensing</td>
<td></td>
</tr>
<tr>
<td>GEOS F458</td>
<td>Applications of GPS and GIS in Geophysics</td>
<td></td>
</tr>
</tbody>
</table>
**Minor, Geographic Information Systems**

Minimum Requirements for Minor: 15 credits

Students must earn a C grade or better in each course.

**Select four from the following:** 12-15

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG F111X</td>
<td>Expedition Earth: Introduction to Geography</td>
</tr>
<tr>
<td>GEOG F460</td>
<td>The Dynamic Alaska Coastline</td>
</tr>
<tr>
<td>GEOG F478</td>
<td>Ice Age Alaska</td>
</tr>
<tr>
<td>GEOS F304</td>
<td>Geomorphology</td>
</tr>
</tbody>
</table>

**Total Credits** 24-26

**Note:** Students and faculty advisors should carefully review prerequisites for courses outlined in each required and/or optional area. Some courses require successful completion of up to three prerequisite courses. Therefore, while students and faculty should note minimum degree credit hours are 120, the actual number of required course credits may exceed that number.

**Geological Engineering**

College of Engineering and Mines
Department of Mining and Geological Engineering
907-474-7388
http://cem.uaf.edu/mingeo/

**B.S. Degree**

Minimum Requirements for Degree: 133 credits

The mission of the geological engineering program is to advance and disseminate knowledge related to mineral and energy exploration, evaluation, development and production; engineering site selection, construction and construction material production; and groundwater and geo-environmental engineering including geologic hazards assessment, through creative teaching, research and public service with an emphasis on Alaska, the North and its diverse peoples.

Geological engineering deals with the application of geology in the environment. Properties of earth materials exploration activities, geophysical and geochemical prospecting, site investigations and engineering geology are all phases of geological engineering.

The program prepares students for employment with industry, consulting companies and government agencies.
The educational objectives of the geological engineering program are to produce:

1. Graduates who are employed in one of the following professional areas: mineral and energy exploration and development; geotechnical engineering; groundwater engineering; or geo-environmental engineering.
2. Graduates will possess technical knowledge required to meet the unique challenges of geological engineering problems germane to cold regions, especially Alaska.
3. Graduates will pursue life-long learning through continuing education opportunities, professional registration/certification, and/or graduate studies.

For more information about the geological engineering program mission, goals and educational objectives, visit http://cem.uaf.edu/mingeo/abet/.

Degree

• B.S., Geological Engineering (p. 201)

B.S., Geological Engineering

Minimum Requirements for Degree: 133 credits

Students must earn a C grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)

As part of the general education requirements, complete:

- CHEM F105X General Chemistry I 4
- CHEM F106X General Chemistry II 4
- MATH F251X Calculus I 4

B.S. Degree Requirements
Complete the B.S. degree requirements. (p. 142)

As part of the B.S. degree requirements, complete:

- MATH F252X Calculus II 4
- PHYS F211X General Physics I 4
- PHYS F212X General Physics II 4

Program Requirements

- ES F208 Mechanics 4
- ES F331 Mechanics of Materials 3
- ES F341 Fluid Mechanics 4
- ES F346 Basic Thermodynamics 3
- GE F101 Introduction to Geological Engineering 1
- GE F261 General Geology for Engineers 3
- GE F365 Geological Materials Engineering 3
- GE F371 Remote Sensing for Engineering 3
- GE F375 Principles of Engineering Geology and Terrain Analysis 3
- GE F381 Field Methods and Applied Design I 2
- GE F382 Field Methods and Applied Design II 4
- GE F405 Exploration Geophysics 3
- GE F420 Subsurface Hydrology 3
- GE F480 Senior Design 1 3
- GEOS F213 Mineralogy 4
- GEOS F214 Petrology and Petrography 4
- GEOS F314 Structural Geology 4
- GEOS F320 Sedimentology for Geological Engineers 3
- MATH F253X Calculus III 4
- MATH F302 Differential Equations 3
- MIN F202 Mine Surveying 3
- MIN F225 Quantitative Methods in Mining Engineering 2
- MIN F370 Rock Mechanics 3
- MIN F408 Mineral Valuation and Economics 3

Technical Electives 2

Highly recommended technical electives:

- CE F341 Environmental Engineering
- CE F344 Water Resources Engineering
- CE F422 Foundation Engineering
- CE F424 Introduction to Permafrost Engineering
- CE F442 Environmental Engineering Design
- GE F603 Arctic Engineering
- ESM F422 Engineering Decisions
- GE F322 Erosion Mechanics and Conservation
- GE F376 GIS Applications in Geological and Environmental Engineering
- GE F384 Engineering Geology of Alaska
- GE F400 Geological Engineering Internship
- GE F422 Soil Physics
- GE F430 Geomechanical Instrumentation
- GE F435 Exploration Design
- GE F440 Slope Stability
- GE F441 Geohazard Analysis
- GE F445 Design of Earth Dams and Embankments
- MIN F443 Principles and Applications of Industrial Explosives
- MIN F482 Computer-Aided Mine Design--VULCAN
- NRM F435 GIS Analysis
- PETE F302 Well Logging
- PETE F407 Petroleum Production Engineering
- PETE F426 Drilling Engineering

Fundamentals of Engineering (FE) Examination

Complete the Fundamentals of Engineering (FE) examination administered by the State of Alaska.

Total Credits 105

1 Fulfills the baccalaureate capstone requirement.
2 Technical elective credits must contain engineering design and be selected by the student from the list of approved technical electives from the geological engineering program in conference with his or her advisor and approved by the department.

Geoscience

College of Natural Science and Mathematics
Department of Geosciences
907-474-7565
B.S. Degree
Minimum Requirements for Degree: 120 credits

Graduates in geoscience have broad backgrounds in the earth sciences and firm foundations in mathematics, physics and chemistry. Four concentrations are available to allow students to pursue their own emphasis:

- geology
- paleontology
- geospatial science
- geophysics

The concentrations allow students to focus early in their studies but are flexible enough to allow students to pursue their own interests in their junior and senior years. All the concentrations prepare students for industry jobs in oil, mining and environmental consulting; jobs with agencies such as the U.S. Geological Survey, NASA, the Alaska Division of Geological and Geophysical Surveys; or graduate studies.

The geology concentration offers students a sound background in a spectrum geological disciplines with an emphasis on current field mapping techniques essential to exploration and research. The paleontology concentration is designed to provide students with the skills necessary to locate, excavate, interpret and curate specimens for museums, agencies or universities. The geospatial sciences concentration focuses on the principles, techniques and applications of remote sensing, GIS and GPS to prepare students for careers that require geospatial data analysis and visualization. The geophysics concentration challenges students to use physics in understanding geoscience concepts, emphasizing applications in seismology, volcanology and glaciology in the context of the Alaska landscape. This concentration prepares students for graduate work in geophysics and environmental engineering fields or other disciplines that use geophysical tools such as ground-penetrating radar or exploration seismology.

Degree
- B.S., Geoscience (p. 202)

Minors
- Minor, Geology (p. 204)
- Minor, Paleontology (p. 204)
- Minor, Geospatial Sciences (p. 204)
- Minor, Geophysics (p. 204)

B.S., Geoscience
Concentrations: Geology, Paleontology, Geospatial Sciences and Geophysics

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)
As part of the general education requirements, complete:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM F105X</td>
<td>General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>MATH F251X</td>
<td>Calculus I</td>
<td>4</td>
</tr>
</tbody>
</table>

B.S. Degree Requirements
Complete the B.S. degree requirements. (p. 142)

Program Requirements
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOS F101X</td>
<td>The Dynamic Earth</td>
<td>4</td>
</tr>
<tr>
<td>GEOS F112X</td>
<td>The History of Earth and Life</td>
<td>4</td>
</tr>
<tr>
<td>GEOS F309</td>
<td>Tectonics</td>
<td>3</td>
</tr>
</tbody>
</table>

Concentrations
Select one from the following concentrations: 62-73

- Geology
- Paleontology
- Geospatial Sciences
- Geophysics

Total Credits 81-92

Concentrations
GEOLOGY

Program Requirements
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM F106X</td>
<td>General Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS F103X</td>
<td>College Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS F104X</td>
<td>College Physics II</td>
<td>4</td>
</tr>
<tr>
<td>GEOS F213</td>
<td>Mineralogy</td>
<td>4</td>
</tr>
<tr>
<td>GEOS F214</td>
<td>Petrology and Petrography</td>
<td>4</td>
</tr>
<tr>
<td>GEOS F225</td>
<td>Field and Computer Methods in Geology</td>
<td>2</td>
</tr>
<tr>
<td>GEOS F304</td>
<td>Geomorphology</td>
<td>3</td>
</tr>
<tr>
<td>GEOS F314</td>
<td>Structural Geology</td>
<td>4</td>
</tr>
<tr>
<td>GEOS F315</td>
<td>Paleobiology and Paleontology</td>
<td>4</td>
</tr>
<tr>
<td>GEOS F322</td>
<td>Stratigraphy and Sedimentation</td>
<td>4</td>
</tr>
<tr>
<td>GEOS F351</td>
<td>Field Geology&lt;sup&gt;1,2&lt;/sup&gt;</td>
<td>8</td>
</tr>
<tr>
<td>GEOS F430</td>
<td>Statistics and Data Analysis in Geology</td>
<td>3</td>
</tr>
<tr>
<td>STAT F200X</td>
<td>Elementary Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>or STAT F300</td>
<td>Statistics</td>
<td></td>
</tr>
</tbody>
</table>

Complete 12 additional credits of upper-division GEOS courses or other upper-division courses approved by the undergraduate advisor including one O (oral-intensive) course from any department

Total Credits 63

<sup>1</sup> GEOS F351 is offered at UAF during the summer of odd-numbered years. Students may substitute a 6-credit field geology class at another institution. The geology and geophysics undergraduate advisor will assist students in placement in an approved field geology class.

<sup>2</sup> Fulfills the baccalaureate capstone requirement.

PALEONTOLOGY

Program Requirements
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM F106X</td>
<td>General Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS F103X</td>
<td>College Physics I</td>
<td>4</td>
</tr>
<tr>
<td>GEOS F213</td>
<td>Mineralogy</td>
<td>4</td>
</tr>
</tbody>
</table>
GEOS F214 Petrology and Petrography 4
GEOS F225 Field and Computer Methods in Geology 2
GEOS F314 Structural Geology 4
GEOS F322 Stratigraphy and Sedimentation 4
GEOS F351 Field Geology 8
GEOS F430 Statistics and Data Analysis in Geology 3
STAT F200X Elementary Probability and Statistics 3
or STAT F300 Statistics
GEOS F315 Paleobiology and Paleontology 4
GEOS F317 Paleontological Research and Laboratory Methods
Select at least two from the following electives: 5-7
GEOS F453 Palynology and Paleopalynology
GEOS F485 Mass Extinctions, Neocatastrophism and the History of Life
GEOS F486 Vertebrate Paleontology
GEOS F488 Undergraduate Research
Complete the requirements for a minor in biological sciences 20
Total Credits 71-73

1 GEOS F351 is offered at UAF during the summer of odd-numbered years. Students may substitute a 6-credit field geology class at another institution. The geology and geophysics undergraduate advisor will assist students in placement in an approved field geology class.

2 Fulfills the baccalaureate capstone requirement.

GEOSPATIAL SCIENCES

Program Requirements
CHEM F106X General Chemistry II 4
PHYS F103X College Physics I 4
PHYS F104X College Physics II 4
GEOS F213 Mineralogy 4
GEOS F214 Petrology and Petrography 4
GEOS/GEOG F222 Fundamentals of Geospatial Science 3
GEOS F225 Field and Computer Methods in Geology 2
GEOS F304 Geomorphology 3
GEOS F314 Structural Geology 4
GEOS F322 Stratigraphy and Sedimentation 4
GEOS F351 Field Geology 8
GEOS F430 Statistics and Data Analysis in Geology 3
STAT F200X Elementary Probability and Statistics 3
or STAT F300 Statistics
Electives
Remote sensing electives
Select at least two of the following: 4-7
GEOS F408 Photogeology
GEOS F422 Geoscience Applications of Remote Sensing
GEOS F488 Undergraduate Research
NRM F641 Natural Resource Applications of Remote Sensing
GIS electives
Select at least two of the following: 6-7
GEOG F309 Digital Cartography and Geovisualization
GEOG F435 GIS Analysis
GEOS F458 Applications of GPS and GIS in Geophysics
NRM F338 Introduction to Geographic Information Systems
Complete 9 additional credits of upper-division GEOS courses or other upper-division courses approved by the undergraduate advisor
including one O (oral-intensive) course and one additional W (writing-intensive) course from any department
Total Credits 69-73

1 GEOS F351 is offered at UAF during the summer of odd-numbered years. Students may substitute a 6-credit field geology class at another institution. The geology and geophysics undergraduate advisor will assist students in placement in an approved field geology class.

2 Fulfills the baccalaureate capstone requirement.

GEOPHYSICS

Program Requirements
GEOS F262 Rocks and Minerals 3
GEOS F406 Volcanology 3
GEOS F419 Solid Earth Geophysics 3
GEOS F431 Foundations of Geophysics 4
GEOS F475 Presentation Techniques in the Geosciences 2
GEOS F477 Ice in the Climate System 3
GEOS F488 Undergraduate Research 1 2
MATH F252X Calculus II 4
MATH F253X Calculus III 4
MATH F302 Differential Equations 3
MATH F314 Linear Algebra 3
PHYS F211X General Physics I 4
and PHYS F212X General Physics II 8
PHYS F213X Elementary Modern Physics 4
PHYS F220 Introduction to Computational Physics 4
Select at least three of the following science and engineering electives: 9-12
ES F331 Mechanics of Materials
ES F341 Fluid Mechanics
GEOS F314 Structural Geology
GEOS F322 Stratigraphy and Sedimentation
GEOS F422 Geoscience Applications of Remote Sensing
ME F441 Heat and Mass Transfer
PHYS F301 Introduction to Mathematical Physics
PHYS F341 Classical Physics I: Particle Mechanics
Additional upper-division GEOS credits or other upper-division courses as approved by the undergraduate advisor 3
Complete one W (writing-intensive) course approved by the undergraduate advisor.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOS F101X</td>
<td>The Dynamic Earth</td>
<td>4</td>
</tr>
<tr>
<td>GEOS F112X</td>
<td>The History of Earth and Life</td>
<td>4</td>
</tr>
</tbody>
</table>

Additional credits of GEOS courses as approved by the undergraduate geoscience advisor 12

Total Credits 20

**Global Studies**

College of Liberal Arts
907-474-7231
www.uaf.edu/cla (http://www.uaf.edu/cla)

**Global Studies**

This interdisciplinary program enhances students’ understanding of issues resulting from an increasingly interdependent world and giving students an opportunity to broaden their horizons beyond their chosen major and achieve a more integrated vision of contemporary global problems, alternative concepts of global society, and strategies for moving toward a more just and humane world order.

The program's flexibility allows students, in consultation with their advisor, to select an array of courses and co-curricular experiences that best complement their majors as well as their goals for their careers and/or postbaccalaureate education.

Global studies students are encouraged to pursue opportunities for study abroad and foreign language acquisition as part of their minor requirements. Working with their advisor and the UAF Office of International Programs and Initiatives, global studies students may discover ways to build on their UAF course work and satisfy a significant portion of their global studies minor requirements at a foreign college or university.

**Minor, Global Studies**

Minimum Requirements for Minor: 16-18 credits

**Entry-level Course**

Select one from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH F245</td>
<td>Culture and Global Issues</td>
<td>3</td>
</tr>
<tr>
<td>ENGL F218</td>
<td>Themes in Literature</td>
<td></td>
</tr>
<tr>
<td>ENGL F280</td>
<td>Introduction to Colonial and Postcolonial Literature</td>
<td></td>
</tr>
<tr>
<td>GEOG F203</td>
<td>World Economic Geography</td>
<td></td>
</tr>
<tr>
<td>JUST F201</td>
<td>Dispute Resolution and Restorative Practices</td>
<td></td>
</tr>
<tr>
<td>LING F216X</td>
<td>Languages of the World</td>
<td></td>
</tr>
<tr>
<td>PS F202</td>
<td>Democracy and Global Society</td>
<td></td>
</tr>
</tbody>
</table>

**Program Requirements**

Select four from the following with no more than two courses (6 credits) from the same department:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH/RD F315</td>
<td>Human Variation</td>
<td></td>
</tr>
<tr>
<td>ANTH F428</td>
<td>Ecological Anthropology and Regional Sustainability</td>
<td></td>
</tr>
<tr>
<td>ANTH/WGS F445</td>
<td>Gender in Cross-Cultural Perspective</td>
<td></td>
</tr>
<tr>
<td>ANTH F446</td>
<td>Economic Anthropology</td>
<td></td>
</tr>
<tr>
<td>BIOL F476</td>
<td>Ecosystem Ecology</td>
<td></td>
</tr>
<tr>
<td>COMM F330</td>
<td>Intercultural Communication</td>
<td></td>
</tr>
<tr>
<td>COMM F353</td>
<td>Conflict, Mediation and Communication</td>
<td></td>
</tr>
</tbody>
</table>
The History Department prepares students to critically analyze and interpret cultural heritage, the great problems that have faced humans throughout history and how we have sought to solve them. If you enjoy studying and researching major cultural, social, economic and political events of the past, then a B.A. in history may be for you. Through our program you will develop skills in oral and written presentation, research and critical thinking, and gain a greater awareness of the human condition. Our students also acquire an appreciation of the complexity of the discipline, an understanding that historical narratives are constructed, contested and always changing, and the recognition that there are varied perspectives on the past.

As liberal arts majors, history prepares students for a multitude of careers in the public, private and nonprofit sectors. History graduates may find work as educators, researchers and analysts, public relations representatives, advocates, and businessmen and -women.

**Degree**
- B.A., History (p. 205)

**Minor**
- Minor, History (p. 206)

**B.A., History**

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

**General University Requirements**
Complete the general university requirements. (p. 134)

**General Education Requirements**
Complete the general education requirements. (p. 137)

As part of the general education requirements, complete:

- HIST F100X Modern World History 3

**B.A. Degree Requirements**
Complete the B.A. degree requirements. (p. 139)

**Program Requirements**
Select three from the following: 9
- HIST F101 Western Civilization
- HIST F102X Western Civilization Since 1500
- HIST F121 East Asian Civilization
- HIST F122X East Asian Civilization
- HIST F131 History of the U.S.
- HIST F132X History of the U.S.
- HIST F275 Perspectives on History 3

5 HIST courses at the F300 or F400 level, at least 2 of which must be at the F400 level 15

Of the courses for the major, at least two (at any level) must be taken in each of the following three fields: 1

- United States history
- European history
- Other areas, such as:
  - Northern history (including Alaska)
  - World or non-western (non-U.S., non-European) history
  - Women’s history

- HIST F475 Historiography Capstone 2 3

---

1. Complete a variable credit civic engagement/internship project working collaboratively with one of the faculty in the student’s primary course interest. The number of credits will be determined by the student’s advisor based on the number of hours worked in the nature of the academic component of the internship or project.

Note: The Program in Global Studies also strongly encourages students to study abroad for at least one semester, and to work toward fluency in a second language.

Because of the flexibility of the program and the internship requirement, it will be important for students to work closely with an advisor familiar with the program. Please contact the Program Coordinator with any questions you may have about the program.

For more information and advising:
Peter A. DeCaro
Program Coordinator
907-474-6799
padecaro@alaska.edu

**History**

College of Liberal Arts
Department of History
907-474-7126
www.uaf.edu/history/ (http://www.uaf.edu/history)

**B.A. Degree**

Minimum Requirements for Degree: 120 credits
Minor, History

Minimum Requirements for Minor: 18 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST electives at the F300 level or above</td>
<td>6</td>
</tr>
<tr>
<td>HIST electives</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

Note: Students who are considering graduate work in history are strongly urged to take at least two years of a foreign language.

Note: History majors are strongly urged to consult with the history department regarding the selection of a minor.


Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)

B.E.M. Degree Requirements
Complete the B.E.M. degree requirements. (p. 141)

Program Requirements
Complete major requirements from UAF HSEM lower-division courses, the emergency services A.A.S. degree from UAF or any regionally accredited institution. BA F307 Introductory Human Resources Management 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA F307</td>
<td>Introductory Human Resources Management 3</td>
</tr>
<tr>
<td>BA F390</td>
<td>Organizational Theory and Behavior 3</td>
</tr>
<tr>
<td>BA F457</td>
<td>Training and Management Development 3</td>
</tr>
<tr>
<td>HSEM/ACCT F271</td>
<td>Fiscal Management for Emergency Management Operations 3</td>
</tr>
<tr>
<td>Select 12 credits from the following:</td>
<td>12</td>
</tr>
<tr>
<td>URSA</td>
<td>Any course</td>
</tr>
<tr>
<td>HSEM</td>
<td>Any course not counted in major requirements</td>
</tr>
<tr>
<td>BA F330</td>
<td>The Legal Environment of Business</td>
</tr>
<tr>
<td>BA F317</td>
<td>Employment Law</td>
</tr>
<tr>
<td>BA F490</td>
<td>Services Marketing</td>
</tr>
<tr>
<td>COMM F300X</td>
<td>Communicating Ethics</td>
</tr>
<tr>
<td>COMM F335</td>
<td>Organizational Communication</td>
</tr>
<tr>
<td>COMM F353</td>
<td>Conflict, Mediation and Communication</td>
</tr>
<tr>
<td>ECON F201X</td>
<td>Principles of Economics I: Microeconomics</td>
</tr>
<tr>
<td>ENGL F314</td>
<td>Technical Writing</td>
</tr>
<tr>
<td>GEOS F380</td>
<td>Geological Hazards</td>
</tr>
<tr>
<td>HSEM F452</td>
<td>Internship in Emergency Management</td>
</tr>
</tbody>
</table>
### Concentrations

**HOMELAND SECURITY**
- HSEM F406 Comparative Homeland Security 3
- HSEM F408 Homeland Defense and Security 3

**EMERGENCY MANAGEMENT**
- HSEM F405 Introduction to Emergency Management Exercise Design 3
- HSEM F407 Comparative Emergency Management 3

**FIRE ADMINISTRATION**
- HSEM F439 Supervising Emergency Services 3

**Emergency Medical Management**
- Select 6 credits from the following: 6
  - HSEM F412 Emergency Planning and Preparedness 3
  - HSEM F423 Disaster Response Operations and Management 3
  - HSEM F434 All-Hazards Risk Analysis 3
  - HSEM F445 Business Continuity and Crisis Management 3
  - HSEM F456 Leadership in Dangerous Contexts 2 3

**Concentrations**

Select one from the following concentrations: 6
- Homeland Security
- Emergency Management
- Fire Administration
- Emergency Medical Management
- Cybersecurity Management

**Total Credits** 81

1. Complete 33 credits of major requirements from UAF HSEM lower-division courses, the emergency services A.A.S. degree from UAF or any regionally accredited institution within these subject areas: emergency/para-medical, environmental health and safety, fire science, law enforcement, network/cybersecurity, process technology, public safety or wildland fire, or commensurate military credit from the above subject areas as approved by the program director.

2. Fulfills the baccalaureate capstone requirement.

**Note:** Of the above, at least 39 credits must be taken in upper-division (F300-level or higher) courses.

**Note:** Must take two upper-division writing-intensive and one upper-division oral-intensive course(s) or two half oral-intensive course(s).

**Minor, Emergency Management**

Minimum Requirements for Minor: 15 credits

Students must earn a C- grade or better in each course.


Select three from the following: 9
- HSEM F412 Emergency Planning and Preparedness 3
- HSEM F423 Disaster Response Operations and Management 3
- HSEM F434 All-Hazards Risk Analysis 3
- HSEM F445 Business Continuity and Crisis Management 3
- HSEM F456 Leadership in Dangerous Contexts 3

Select at least 3 credits from the following: 1 3
- BA F317 Employment Law 3
- BA F490 Services Marketing 3
- COMM F335 Organizational Communication 3
- COMM F353 Conflict, Mediation and Communication 3
- GEOS F120X Glaciers, Earthquakes and Volcanoes: Past, Present and Future 3
- GEOS/GEOG F222 Fundamentals of Geospatial Science 3
- HSEM F452 Internship in Emergency Management 3

**Total Credits** 15

1. Or course(s) pre-approved by the program director.

**Minor, Military Security Studies**

Minimum Requirements for Minor: 16 credits

Students must earn a C- grade or better in each course.
Leadership in Dangerous Contexts
Emergency Planning and Preparedness
All-Hazards Risk Analysis

The student then obtains an advisory committee of at least three faculty members from the appropriate disciplines and includes a discussion showing that current UAF resources are available to ensure an approximation of a normal undergraduate degree.

Students interested in pursuing an undergraduate interdisciplinary degree can contact the Office of the Graduate School and Interdisciplinary Programs for help in finding faculty advisors and developing their curriculum proposal.

**GENERAL STUDIES DEGREE COMPLETION OPTION (MAY NOT BE USED AS A DOUBLE MAJOR)**

Students may not declare this major until they have accumulated at least 100 credits.

**Degrees**
- B.A., Interdisciplinary Studies (p. 208)
- B.S., Interdisciplinary Studies (p. 208)
- B.A.A.S., Interdisciplinary Studies (p. 208)

**Minor**
- Minor (p. 208)

**B.A., B.A.A.S., or B.S. in Interdisciplinary Studies**

Minimum Requirements for Degree: 130 credits

1. Contact the Academic Advising Center at 907-474-6396 or 888-823-8780 for materials and procedures. Prepare and submit a rationale/justification letter.
2. Three faculty members serving in the Academic Advising Center or at rural campuses will serve as the degree completion interdisciplinary studies committee.
3. Prepare rationale/justification letter explaining the need for the degree completion program.
4. Conduct committee meeting to finalize degree proposal.
5. Submit to the dean of general studies for final approval.
6. Complete all the requirements for the baccalaureate program including:
   a. Completing the general education requirements
   b. Completing the residency requirement
   c. Completing 39 upper-division credits
   d. Complete the baccalaureate capstone requirement as determined by the program.

**Minor, Interdisciplinary Studies**

Minimum Requirements for Minor: 18 credits

1. Contact the Academic Advising Center at 907-474-6396 or 888-823-8780 for materials and procedures.
2. Prepare and submit a draft declaration of interdisciplinary minor form and submit it electronically to the Academic Advising Center.
at www.uaf.edu/advising/ (http://www.uaf.edu/advising) or in person at 510 Gruening Building. Include a title for the minor, briefly describe the body of knowledge and skills intended to fulfill the minor, including courses specifying the knowledge and skills relevant to the minor title. For example: Food Science minor, including relevant course work from transfer credits in Food Science from a regionally accredited university, as well as credits from chemistry, fisheries or natural resources management, and biological sciences. An interdisciplinary minor cannot be titled the same as an existing minor and must demonstrate a cohesive body of knowledge and skills. The approved title will appear on the student’s transcript.

3. Three faculty members approved by the dean of General Studies will serve as the interdisciplinary minor committee. This committee will ensure that an appropriate and cohesive body of knowledge and skills is addressed in the planned minor and that the interdisciplinary minor does not overlap with an existing minor, and will discuss alternatives with the student as needed.

Japanese Studies

College of Liberal Arts
Department of Foreign Languages and Literatures
907-474-7396
www.uaf.edu/language/ (http://www.uaf.edu/language)

B.A. Degree
Minimum Requirements for Degree: 120 credits

Students majoring in Japanese studies are required to successfully complete at least one semester on an exchange program in Japan. Spending a full academic year abroad is strongly encouraged.

Degree
• B.A., Japanese Studies (p. 209)

Minor
• Minor, Japanese Studies (p. 209)

B.A., Japanese Studies
Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

<table>
<thead>
<tr>
<th>General University Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete the general university requirements. (p. 134)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General Education Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete the general education requirements. (p. 137)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B.A. Degree Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete the B.A. degree requirements. (p. 139)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Program Requirements (all courses in this category are taught in Japanese)</th>
</tr>
</thead>
<tbody>
<tr>
<td>JPN F301 Advanced Japanese (^1) 3</td>
</tr>
<tr>
<td>JPN F302 Advanced Japanese (^1) 3</td>
</tr>
<tr>
<td>JPN F431 Studies in Japanese Culture (^1) 3</td>
</tr>
<tr>
<td>JPN F432 Studies in Japanese Language (^1) 3</td>
</tr>
<tr>
<td>JPN F475 Seminar on Contemporary Japan (^2) 3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japanese Studies Electives</td>
</tr>
</tbody>
</table>

Select 6 credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>JPN F330</td>
<td>Classical Japanese Literature</td>
</tr>
<tr>
<td>JPN F331</td>
<td>Women’s Voices in Japanese Literature</td>
</tr>
<tr>
<td>JPN F332</td>
<td>Japanese Cultural Traditions and Arts</td>
</tr>
<tr>
<td>JPN F333</td>
<td>20th-Century Japanese Prose Fiction</td>
</tr>
<tr>
<td>JPN F482</td>
<td>Selected Topics in Japanese</td>
</tr>
</tbody>
</table>

Japan-Related Electives
Select 12 credits from the following as approved by an advisor: \(^3, 4\)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>JPN F210</td>
<td>Beginning Kanji</td>
</tr>
<tr>
<td>JPN F310</td>
<td>Intermediate Kanji</td>
</tr>
<tr>
<td>JPN F311</td>
<td>Advanced Kanji</td>
</tr>
<tr>
<td>JPN F330</td>
<td>Classical Japanese Literature</td>
</tr>
<tr>
<td>JPN F331</td>
<td>Women’s Voices in Japanese Literature</td>
</tr>
<tr>
<td>JPN F332</td>
<td>Japanese Cultural Traditions and Arts</td>
</tr>
<tr>
<td>JPN F333</td>
<td>20th-Century Japanese Prose Fiction</td>
</tr>
<tr>
<td>JPN F482</td>
<td>Selected Topics in Japanese</td>
</tr>
<tr>
<td>HIST F121</td>
<td>East Asian Civilization</td>
</tr>
<tr>
<td>HIST F122X</td>
<td>East Asian Civilization</td>
</tr>
<tr>
<td>HIST F331</td>
<td>Modern Japan</td>
</tr>
<tr>
<td>HIST F333</td>
<td>Foundations of Japanese History</td>
</tr>
<tr>
<td>HIST F414</td>
<td>Women and Gender in East Asian History</td>
</tr>
<tr>
<td>GEOG F311</td>
<td>Geography of Asia</td>
</tr>
<tr>
<td>PS F321</td>
<td>International Politics</td>
</tr>
<tr>
<td>PS F464</td>
<td>East Asian Governments and Politics</td>
</tr>
</tbody>
</table>

Completion of semester exchange in Japan or written departmental approval. \(^1\)

Total Credits 33

1. After completion of language training through the 200 level, students may study in Japan as long as they complete a minimum of 15 credits of Japanese language study at the upper-division level to fulfill the Japanese studies core requirements. JPN F475 must be taken in residence at UAF.

2. Fulfills the baccalaureate capstone requirement.

3. Instructor-approved Japan-related courses taken during time abroad may count toward this requirement.

4. Courses taken to satisfy Japanese studies electives requirement may not be retaken or otherwise counted to satisfy Japan-related electives requirement.

Note: Students planning a double major for a single B.A. may double count a maximum of 9 credits from the major requirements toward a second major. Students earning two degrees are not subject to double-counting restrictions.

Minor, Japanese Studies

Minimum Requirements for Minor: 15 credits

<table>
<thead>
<tr>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japanese course credits at the F100 level or above</td>
</tr>
<tr>
<td>Japanese course credits at the F200 level or above</td>
</tr>
</tbody>
</table>

Total Credits 15
Justice
College of Liberal Arts
Justice Program
907-474-5500
www.uaf.edu/justice/ (http://www.uaf.edu/justice)

B.A. Degree
Minimum Requirements for Degree: 120 credits

The justice discipline represents a melding of theoretical and applied concepts, and both the B.A. degree in justice and the M.A. degree in administration of justice reflect that dichotomy. Consequently, students explore theoretical models associated with different aspects of the criminal justice system, and also study its structure and administration.

The applied nature of the degree results in graduates with a B.A. in justice who can compete for positions in various justice employment fields. Justice juniors and seniors also enjoy opportunities for internships with various justice agencies.

Justice courses are available online and in the classroom.

Degree
• B.A., Justice (p. 210)

Minor
• Minor, Justice (p. 210)

B.A., Justice
Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements, (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)

B.A. Degree Requirements
Complete the B.A. degree requirements. (p. 139)

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>JUST F110X</td>
<td>Introduction to Justice</td>
<td>3</td>
</tr>
<tr>
<td>JUST F125</td>
<td>Introduction to Addictive Processes</td>
<td>3</td>
</tr>
<tr>
<td>JUST F222</td>
<td>Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>JUST F251</td>
<td>Criminology</td>
<td>3</td>
</tr>
<tr>
<td>JUST F300X</td>
<td>Ethics and Justice 1</td>
<td>3</td>
</tr>
<tr>
<td>JUST F310</td>
<td>Principles of Corrections</td>
<td>3</td>
</tr>
<tr>
<td>JUST F340</td>
<td>Rural Justice in Alaska</td>
<td>3</td>
</tr>
<tr>
<td>JUST F358</td>
<td>Juvenile Delinquency</td>
<td>3</td>
</tr>
<tr>
<td>Select one from the following capstone courses: 2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>JUST F475</td>
<td>Internship</td>
<td></td>
</tr>
<tr>
<td>JUST F490</td>
<td>Seminar in Critical Issues in Criminal Justice</td>
<td></td>
</tr>
<tr>
<td>JUST F498</td>
<td>Research Project</td>
<td></td>
</tr>
</tbody>
</table>

Select 18 credits from the following, 12 of which need to be justice electives:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH F242</td>
<td>Native Cultures of Alaska</td>
</tr>
<tr>
<td>ANTH F320</td>
<td>Language and Culture in Alaska</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Credits 45

1 If taken to meet the ethics requirement in the general education requirements, then the student must take an additional upper-division justice elective for 3 credits to complete the major.

2 Fulfills the baccalaureate capstone requirement.

Minor, Justice
Minimum Requirements for Minor: 15 credits

Students must earn a C- grade or better in each course.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>JUST F110X</td>
<td>Introduction to Justice</td>
</tr>
<tr>
<td>JUST electives</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits 15

Note: 400-level courses require junior standing or instructor permission

Law and Society
College of Liberal Arts
Department of Political Science
907-474-7609
www.uaf.edu/polisci/ (http://www.uaf.edu/polisci)

Minor Only
This program helps students understand law in relationship to the larger society. It is based firmly on the view that the law is a rich humanistic tradition and study of legal ideas and institutions will promote sustained reflection on such fundamental concepts and values as equality, freedom, privacy, justice and human rights.
While the program is of special interest to students who plan graduate studies in law or careers in government service, it is recommended for any student who desires to understand the role of law in society. The program provides students with tools for reasoned appraisal of how the law works, ideas and policies that underlie it, and the ability to think clearly and analyze arguments critically.

**Minor**

- **Minor, Law and Society (p. 211)**

**Minor, Law and Society**

Minimum Requirements for Minor: 15 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS F303</td>
<td>Politics and the Judicial Process</td>
<td>3</td>
</tr>
<tr>
<td>PS F435</td>
<td>Constitutional Law I: Federalism</td>
<td>3</td>
</tr>
<tr>
<td>PS F436</td>
<td>Constitutional Law II: Civil Rights and</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Liberties</td>
<td></td>
</tr>
<tr>
<td>Select 6 credits from the following:</td>
<td>[6]</td>
<td></td>
</tr>
<tr>
<td>ANS F425</td>
<td>Federal Indian Law and Alaska Natives</td>
<td></td>
</tr>
<tr>
<td>BA F317</td>
<td>Employment Law</td>
<td></td>
</tr>
<tr>
<td>BA F330</td>
<td>The Legal Environment of Business</td>
<td></td>
</tr>
<tr>
<td>JRN F413</td>
<td>Mass Media Law and Regulation</td>
<td></td>
</tr>
<tr>
<td>JUST F352</td>
<td>Criminal Law</td>
<td></td>
</tr>
<tr>
<td>JUST F354</td>
<td>Procedural Law</td>
<td></td>
</tr>
<tr>
<td>PS F322</td>
<td>International Law and Organization</td>
<td></td>
</tr>
<tr>
<td>PS F450</td>
<td>Comparative Indigenous Rights and Policies</td>
<td></td>
</tr>
<tr>
<td>SOC F435</td>
<td>Sociology of Law</td>
<td></td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

**Leadership**

School of Management
Northern Leadership Center
907-474-7461
www.uaf.edu/som/ (http://www.uaf.edu/som)

**Minor Only**

The minor in leadership and management is administered by the Northern Leadership Center. Its purpose is to strengthen the abilities of UAF graduates to lead and contribute effectively in both the public and private spheres, especially in the Alaska economy.

**Minor**

- **Minor, Leadership (p. 211)**

**Minor, Leadership**

Minimum Requirements for Minor: 15 credits

**Minor Requirements**

Select two of the following: \[6\]

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSEM/LEAD F456</td>
<td>Leadership in Dangerous Contexts ¹</td>
</tr>
<tr>
<td>LEAD/BA F470</td>
<td>Leadership Theory and Development ¹</td>
</tr>
<tr>
<td>LEAD/BA F472</td>
<td>Leading Change ¹</td>
</tr>
</tbody>
</table>

Select 9 credits from one the following tracks: \[9\]

**Tracks**

Select 9 credits from one the following tracks: \[9\]

**Business Administration Track**

- BA F280  Sports Leadership
- BA F307  Introductory Human Resources Management
- BA F460  International Business

**Military Science Track**

- MILS F101  Foundations of Officership
- MILS F102  Basic Leadership
- MILS F201  Individual Leadership Studies
- MILS F202  Leadership and Teamwork

**Political Science Track**

- PS F212  Introduction to Public Administration
- PS F301  American Presidency ¹
- PS/PHIL F412  Modern Political Theory ¹
- PS F437  United States Foreign Policy ¹

**Communication Track**

- COMM F330  Intercultural Communication
- COMM F331  Advanced Group Communication
- COMM F335  Organizational Communication
- COMM F475  Applied Communication in Training and Development ¹

**Outdoor Leadership Track**

- NRM F161  Wilderness Leadership Education
- NRM F361  Advanced Wilderness Leadership Education ¹

Select 3 credits from the following skills courses for the remaining 3 credits:

- EMS F150  Wilderness Emergency Care
- RECR F140H  Beginning Rock Climbing
- RECR F140K  Advanced Rock Climbing
- RECR F140L  Technical Climbing
- RECR F140Y  Kayaking
- RECR F170G  Introduction to Ski Mountaineering
- RECR F170N  Introduction to Winter Camping

**Alaska Native Community Leadership Track**

- ANS F310  Indigenous Land Settlements
- ANS F325  Native Self-Government
- ANS/RD F401  Cultural Knowledge of Native Elders
- ANS F425  Federal Indian Law and Alaska Natives
- RD F492  Rural Development Seminar

Total Credits 15

¹ These courses have prerequisites that need to be taken into consideration. Consult with the leadership minor coordinator.

² Complete 9 credit hours from one of the “tracks” OR with the written approval of the Director of the Northern Leadership Center, any three 3-credit hour courses from any combination of tracks.

**Linguistics**

College of Liberal Arts
Linguistics Program
907-474-6585
www.uaf.edu/linguist/ (http://www.uaf.edu/linguist)
B.A. Degree

Minimum Requirements for Degree: 120 credits

Linguistics is the study of language and covers a variety of subjects from theories of grammar and how we produce language to applications of linguistic knowledge in areas such as language teaching. The undergraduate degree program seeks to give an overview of the discipline to raise students’ awareness of the many aspects of that uniquely human phenomenon, language.

Degree

- B.A., Linguistics (p. 212)

Minor

- Minor, Linguistics (p. 212)

B.A., Linguistics

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements

Complete the general university requirements. (p. 134)

General Education Requirements

Complete the general education requirements. (p. 137)

As part of the general education requirements, complete two semesters of a single foreign or Alaska Native language. 1

B.A. Degree Requirements

Complete the B.A. degree requirements. (p. 139)

Program Requirements

Four semesters (or equivalent) of a foreign, Alaska Native or American Sign language. The language chosen must be different from that used to meet GER above. 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL F318</td>
<td>Modern English Grammar</td>
<td>3</td>
</tr>
<tr>
<td>LING F101X</td>
<td>Nature of Language 1</td>
<td>3</td>
</tr>
<tr>
<td>LING F318</td>
<td>Introduction to Phonetics and Phonology</td>
<td>3</td>
</tr>
<tr>
<td>LING F320</td>
<td>Introduction to Morphology</td>
<td>3</td>
</tr>
<tr>
<td>LING F430</td>
<td>Historical Linguistics</td>
<td>3</td>
</tr>
<tr>
<td>or LING F420</td>
<td>Semantics</td>
<td>3</td>
</tr>
<tr>
<td>LING F441</td>
<td>Topics in Linguistics</td>
<td>3</td>
</tr>
<tr>
<td>LING F482</td>
<td>Seminar in Linguistics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Select four approved electives, three of which must be upper-division. 3</td>
<td>12</td>
</tr>
</tbody>
</table>

Total Credits: 45-49

1 It is recommended that at least one of the languages be other than an Indo-European language.

2 Fulfills the baccalaureate capstone requirement.

3 Possible electives include: ANL F251X, ANL F315, ANL F316, ANS F320, COMM F320, ENGL F462, ENGL F472 or any LING course not used above.

Minor, Linguistics

Minimum Requirements for Minor: 15 credits

Students must earn a C- grade or better in each course.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LING F101X</td>
<td>Nature of Language</td>
<td>3</td>
</tr>
<tr>
<td>LING F318</td>
<td>Introduction to Phonetics and Phonology</td>
<td>3</td>
</tr>
<tr>
<td>LING F320</td>
<td>Introduction to Morphology</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL F318</td>
<td>Modern English Grammar</td>
<td></td>
</tr>
</tbody>
</table>

Select two LING electives: 6

Three of these credits may be from related courses in other departments of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANL F251X</td>
<td>Introduction to Athabascan Linguistics</td>
<td></td>
</tr>
<tr>
<td>ANL F315</td>
<td>Alaska Native Languages: Eskimo-Aleut</td>
<td></td>
</tr>
<tr>
<td>ANL F316</td>
<td>Alaska Native Languages: Indian Languages</td>
<td></td>
</tr>
<tr>
<td>ANS F320</td>
<td>Language and Culture in Alaska</td>
<td></td>
</tr>
<tr>
<td>ANTH/WGS F308</td>
<td>Language and Gender</td>
<td></td>
</tr>
<tr>
<td>COMM F320</td>
<td>Communication and Language</td>
<td></td>
</tr>
<tr>
<td>ENGL F462</td>
<td>Applied English Linguistics</td>
<td></td>
</tr>
<tr>
<td>ENGL F472</td>
<td>History of the English Language</td>
<td></td>
</tr>
<tr>
<td>LING F410</td>
<td>Theory and Methods of Second Language Teaching</td>
<td></td>
</tr>
<tr>
<td>LING F420</td>
<td>Semantics</td>
<td></td>
</tr>
<tr>
<td>LING F430</td>
<td>Historical Linguistics</td>
<td></td>
</tr>
<tr>
<td>LING F431</td>
<td>Field Methods in Descriptive Linguistics I</td>
<td></td>
</tr>
<tr>
<td>LING F434</td>
<td>Field Methods in Descriptive Linguistics II</td>
<td></td>
</tr>
<tr>
<td>LING F450</td>
<td>Language Policy and Planning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other upper-division LING electives</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits: 15

Marine Science

School of Fisheries and Ocean Sciences
907-474-7824
www.sfos.uaf.edu/academics/ (http://www.sfos.uaf.edu/academics)

Minor Only

Though the marine science minor is available to students in all degree programs, fisheries students will particularly benefit from the breadth this minor offers. The program will also appeal to students from other disciplines (e.g., political science, earth sciences, biology and wildlife, environmental science, resource management, education) in which possible career paths may require and/or benefit from training in marine science (policymaking, resource management, education, the seafood industry, etc.).

Students who complete the minor in marine science will possess a knowledge base and skill set that will make them more competitive for a wide variety of agency and organization positions, particularly within the state of Alaska. The education and training will be applicable to jobs within government management agencies such as the Alaska Department of Fish and Game and the U.S. Fish and Wildlife Service, as well as Alaska Native organizations, nonprofit conservation organizations, the seafood industry, or in other policy development, fisheries, education or outreach capacities.
Minor

• Minor, Marine Science (p. 213)

Minor, Marine Science

Minimum Requirements for Minor: 15 credits

Minor Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSL F211</td>
<td>Introduction to Marine Science I</td>
<td>3</td>
</tr>
<tr>
<td>MSL F212</td>
<td>Introduction to Marine Science II</td>
<td>3</td>
</tr>
<tr>
<td>MSL F213L</td>
<td>Marine Science Laboratory</td>
<td>1</td>
</tr>
</tbody>
</table>

Select 3 credits from the following: 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSL F317</td>
<td>Introduction to Marine Mammal Biology</td>
</tr>
<tr>
<td>MSL F330</td>
<td>The Dynamic Alaskan Coastline</td>
</tr>
<tr>
<td>MSL F403</td>
<td>Estuaries Oceanography</td>
</tr>
<tr>
<td>MSL F412</td>
<td>Early Life Histories of Marine Invertebrates</td>
</tr>
<tr>
<td>MSL F431</td>
<td>Polar Marine Science</td>
</tr>
<tr>
<td>MSL F449</td>
<td>Biological Oceanography</td>
</tr>
<tr>
<td>MSL F463</td>
<td>Chemical Coastal Processes</td>
</tr>
</tbody>
</table>

Select 5 credits from the following: 5

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSL F220</td>
<td>Scientific Diving</td>
</tr>
<tr>
<td>MSL F317</td>
<td>Introduction to Marine Mammal Biology</td>
</tr>
<tr>
<td>MSL F330</td>
<td>The Dynamic Alaskan Coastline</td>
</tr>
<tr>
<td>MSL F403</td>
<td>Estuaries Oceanography</td>
</tr>
<tr>
<td>MSL F412</td>
<td>Early Life Histories of Marine Invertebrates</td>
</tr>
<tr>
<td>MSL F419</td>
<td>Concepts in Physical Oceanography</td>
</tr>
<tr>
<td>MSL F421</td>
<td>Field Course in Subtidal Studies</td>
</tr>
<tr>
<td>MSL F431</td>
<td>Polar Marine Science</td>
</tr>
<tr>
<td>MSL F440</td>
<td>Oceanography for Fisheries</td>
</tr>
<tr>
<td>MSL F449</td>
<td>Biological Oceanography</td>
</tr>
<tr>
<td>MSL F450</td>
<td>Marine Biology and Ecology Field Course</td>
</tr>
<tr>
<td>MSL F456</td>
<td>Kelp Forest Ecology</td>
</tr>
<tr>
<td>MSL F461</td>
<td>Chemical Oceanography</td>
</tr>
<tr>
<td>MSL F463</td>
<td>Chemical Coastal Processes</td>
</tr>
<tr>
<td>MSL F492</td>
<td>Seminar</td>
</tr>
</tbody>
</table>

Mathematics

College of Natural Science and Mathematics
Department of Mathematics and Statistics
907-474-7332 or 474-5374
www.uaf.edu/dms/ (http://www.uaf.edu/dms)

B.A., B.S. Degrees

Minimum Requirements for Degrees: 120 credits

The number of new fields in which professional mathematicians find employment grows continually. This department prepares students for careers in industry, government and education.

In addition to the major programs, the department provides a number of service courses in support of other programs within the university. Current and detailed information on mathematics degrees and course offerings is available from the department.

The department maintains a math lab which is available for assistance to all students studying mathematics at the baccalaureate level.

The Department of Mathematics and Statistics also offers a minor in statistics (p. 238).

Degrees

• B.A., Mathematics (p. 213)
• B.S., Mathematics (p. 213)

Minor

• Minor, Mathematics (p. 214)

B.A. or B.S., Mathematics

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

Pre-major Requirement

Students must be ready to matriculate into MATH F251X before they will be allowed to declare mathematics as their major.

General University Requirements

Complete the general university requirements. (p. 134)

General Education Requirements

Complete the general education requirements. (p. 137)

As part of the general education requirements, complete:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F251X</td>
<td>Calculus I</td>
</tr>
</tbody>
</table>

B.A. or B.S. Degree Requirements

Select one from the following:

Complete the B.A. degree requirements. (p. 139)

As part of the B.A. requirements, complete:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F252X</td>
<td>Calculus II</td>
</tr>
</tbody>
</table>

Complete the B.S. degree requirements. (p. 142)
As part of the B.S. requirements, complete:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F252X</td>
<td>Calculus II</td>
<td></td>
</tr>
<tr>
<td>PHYS F103X</td>
<td>College Physics I</td>
<td></td>
</tr>
<tr>
<td>and PHYS F104X</td>
<td>and College Physics II</td>
<td></td>
</tr>
<tr>
<td>or PHYS F211X</td>
<td>General Physics I</td>
<td></td>
</tr>
<tr>
<td>and PHYS F212X</td>
<td>and General Physics II</td>
<td></td>
</tr>
</tbody>
</table>

**Program Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F253X</td>
<td>Calculus III</td>
<td>4</td>
</tr>
<tr>
<td>MATH F265</td>
<td>Introduction to Mathematical Proofs</td>
<td>3</td>
</tr>
<tr>
<td>MATH F314</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one from the following options: 29

**Mathematics Option**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F401</td>
<td>Introduction to Real Analysis</td>
<td></td>
</tr>
<tr>
<td>MATH F405</td>
<td>Abstract Algebra</td>
<td></td>
</tr>
<tr>
<td>MATH F490</td>
<td>Senior Seminar</td>
<td>1</td>
</tr>
</tbody>
</table>

Select at least 21 additional credits of electives. Following are some suggested elective packages: 2

**Pure Math:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F305</td>
<td>Geometry</td>
<td>3</td>
</tr>
<tr>
<td>MATH F320</td>
<td>Topics in Combinatorics</td>
<td></td>
</tr>
<tr>
<td>or MATH F321</td>
<td>Number Theory</td>
<td></td>
</tr>
<tr>
<td>MATH F404</td>
<td>Topology</td>
<td></td>
</tr>
<tr>
<td>MATH F422</td>
<td>Introduction to Complex Analysis</td>
<td></td>
</tr>
</tbody>
</table>

Additional 9 elective credits

**Applied Math:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F302</td>
<td>Differential Equations</td>
<td></td>
</tr>
<tr>
<td>MATH F421</td>
<td>Applied Analysis</td>
<td></td>
</tr>
<tr>
<td>MATH F422</td>
<td>Introduction to Complex Analysis</td>
<td></td>
</tr>
<tr>
<td>MATH F460</td>
<td>Mathematical Modeling</td>
<td></td>
</tr>
</tbody>
</table>

Select two from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F307</td>
<td>Discrete Mathematics</td>
<td></td>
</tr>
<tr>
<td>MATH F310</td>
<td>Numerical Analysis</td>
<td></td>
</tr>
<tr>
<td>STAT F300</td>
<td>Statistics</td>
<td></td>
</tr>
</tbody>
</table>

**Statistics Option**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS F201</td>
<td>Computer Science I</td>
<td>3</td>
</tr>
<tr>
<td>MATH F305</td>
<td>Geometry</td>
<td>3</td>
</tr>
<tr>
<td>MATH F306</td>
<td>Introduction to the History and Philosophy of Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>STAT F300</td>
<td>Statistics</td>
<td>3</td>
</tr>
<tr>
<td>or MATH F371</td>
<td>Probability</td>
<td></td>
</tr>
<tr>
<td>and MATH F408</td>
<td>and Mathematical Statistics</td>
<td></td>
</tr>
</tbody>
</table>

Select one from the following: 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F320</td>
<td>Topics in Combinatorics</td>
<td></td>
</tr>
<tr>
<td>MATH F321</td>
<td>Number Theory</td>
<td></td>
</tr>
<tr>
<td>MATH F307</td>
<td>Discrete Mathematics</td>
<td></td>
</tr>
</tbody>
</table>

Select two from the following: 6-7

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F302</td>
<td>Differential Equations</td>
<td></td>
</tr>
<tr>
<td>MATH F310</td>
<td>Numerical Analysis</td>
<td></td>
</tr>
<tr>
<td>MATH F421</td>
<td>Applied Analysis</td>
<td></td>
</tr>
<tr>
<td>MATH F422</td>
<td>Introduction to Complex Analysis</td>
<td></td>
</tr>
<tr>
<td>MATH F460</td>
<td>Mathematical Modeling</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits 21-22

2 Acceptable elective courses include any math or statistics course at the F300 level or above, and CS F201. At least 15 credits must be math courses (In some cases, courses with strong mathematical content from other disciplines may be used as electives. Such an elective must be approved by an advisor in the Department of Mathematics and Statistics. The requirement that at least 15 credits be math courses still applies).

**Note:** All mathematics majors — including double majors — must have an advisor from the Department of Mathematics and Statistics.

**Note:** At least 12 approved mathematics credits at the F300 level or above must be taken while in residence on the Fairbanks campus.

**Requirements for Mathematics Teachers (Grades 7-12)**

We strongly recommend that prospective secondary science teachers seek advising from the UAF School of Education early in your undergraduate degree program, so that you can be appropriately advised of the State of Alaska requirements for teacher licensure. You may choose to pursue a double major with education or complete a postbaccalaureate teacher certification program.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS F201</td>
<td>Computer Science I</td>
<td>3</td>
</tr>
<tr>
<td>MATH F305</td>
<td>Geometry</td>
<td>3</td>
</tr>
<tr>
<td>MATH F306</td>
<td>Introduction to the History and Philosophy of Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>STAT F300</td>
<td>Statistics</td>
<td>3</td>
</tr>
<tr>
<td>or MATH F371</td>
<td>Probability</td>
<td></td>
</tr>
<tr>
<td>and MATH F408</td>
<td>and Mathematical Statistics</td>
<td></td>
</tr>
</tbody>
</table>

Select one from the following: 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F320</td>
<td>Topics in Combinatorics</td>
<td></td>
</tr>
<tr>
<td>MATH F321</td>
<td>Number Theory</td>
<td></td>
</tr>
<tr>
<td>MATH F307</td>
<td>Discrete Mathematics</td>
<td></td>
</tr>
</tbody>
</table>

Select two from the following: 6-7

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F302</td>
<td>Differential Equations</td>
<td></td>
</tr>
<tr>
<td>MATH F310</td>
<td>Numerical Analysis</td>
<td></td>
</tr>
<tr>
<td>MATH F421</td>
<td>Applied Analysis</td>
<td></td>
</tr>
<tr>
<td>MATH F422</td>
<td>Introduction to Complex Analysis</td>
<td></td>
</tr>
<tr>
<td>MATH F460</td>
<td>Mathematical Modeling</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits 21-22

**Minor, Mathematics**

**Minimum Requirements for Minor: 21 credits**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F251X</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH F252X</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>MATH F253X</td>
<td>Calculus III</td>
<td>4</td>
</tr>
</tbody>
</table>

Select at least 9 additional credits of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F265</td>
<td>Introduction to Mathematical Proofs</td>
<td></td>
</tr>
<tr>
<td>STAT F300</td>
<td>Statistics</td>
<td></td>
</tr>
<tr>
<td>Any F300- or F400-level MATH course</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Electives approved by a mathematics advisor

Total Credits 21
Note: Courses completed to satisfy this minor can be used to simultaneously satisfy other major or general distribution requirements.

Mechanical Engineering

College of Engineering and Mines
Department of Mechanical Engineering
907-474-7136
http://cem.uaf.edu/me/

B.S., B.S./M.S. Degrees

Minimum Requirements for Degree: B.S.: 130 credits; B.S./M.S.: 151 credits

The mission of the mechanical engineering department at UAF is to offer the highest quality contemporary education at undergraduate and graduate levels, and to perform research appropriate to the technical needs of the state of Alaska, the nation and the world.

Mechanical engineers conceive, plan, design and direct the manufacturing, distribution and operation of a wide variety of devices, machines and systems for energy conversion, environmental control, materials processing, transportation, materials handling and other purposes. Mechanical engineers are engaged in creative design, applied research, development and management. A degree in mechanical engineering also frequently forms the base for entering law, medical or business school, as well as for graduate work in engineering.

The objectives of the mechanical engineering program are to produce graduates who are able to compete successfully on the world stage at the professional level; deal with the significant local, regional, national and global issues facing humankind; continue to develop as engineers through lifelong learning; and serve as resources of technical knowledge for the state as well as the nation, especially with respect to northern issues. The Engineering Accreditation Commission of ABET has accredited the B.S. degree program in mechanical engineering since 1980.

Because engineering is based on mathematics, chemistry and physics, students are introduced to the basic principles in these areas during their first two years of study. The third year encompasses courses in the engineering science — extensions to the basic sciences forming the foundation to engineering synthesis and design. The design project course draws on much of the student's previous learning through a simulated industrial design project. Throughout the four-year program, courses in communication, humanities and social sciences are required because mechanical engineers must be able to communicate effectively in written, oral and graphical form.

Students may choose a concentration in mechanical, aerospace or petroleum engineering. Because of UAF's unique location, special emphasis is placed on cold regions engineering problems. This fact is highlighted in the technical elective, Arctic engineering. Candidates for the B.S. degree in mechanical engineering are required to take the State of Alaska Fundamentals of Engineering examination in their general field.

Undergraduate students who plan to pursue graduate studies in engineering may also choose an accelerated degree for a master's in mechanical engineering. This program speeds the process and allows qualified mechanical engineering students to complete both a Bachelor of Science and a Master of Science degree in five years.

Degrees

- B.S., Mechanical Engineering (p. 215)
- B.S./M.S., Mechanical Engineering (p. 216)

B.S., Mechanical Engineering

Minimum Requirements for Degree: 130 credits

Students must earn a C- grade or better in each course.

General University Requirements

Complete the general university requirements. (p. 134)

General Education Requirements

Complete the general education requirements. (p. 137)

As part of the general education requirements, complete:

- MATH F251X Calculus I 4
- CHEM F105X General Chemistry I 4
- CHEM F106X General Chemistry II 4

B.S. Degree Requirements

Complete the B.S. degree requirements. (p. 142)

As part of the B.S. degree requirements, complete:

- MATH F252X Calculus II 4
- PHYS F211X General Physics I 4
- PHYS F212X General Physics II 4

Program Requirements

- ES F101 Introduction to Engineering 3
- ES F201 Computer Techniques 3
- ES F209 Statics 3
- ES F210 Dynamics 3
- ES F301 Engineering Analysis 3
- ES F307 Elements of Electrical Engineering 3
- ES F331 Mechanics of Materials 3
- ES F341 Fluid Mechanics 4
- ES F346 Basic Thermodynamics 3
- ESM F450 Economic Analysis and Operations 3
- MATH F253X Calculus III 4
- MATH F302 Differential Equations 3
- ME F302 Dynamics of Machinery 4
- ME F308 Measurement and Instrumentation 3
- ME F313 Mechanical Engineering Thermodynamics 3
- ME F321 Industrial Processes 3
- ME F334 Elements of Material Science/Engineering 3
- ME F403 Machine Design 3
- ME F408 Mechanical Vibrations 3
- ME F415 Thermal Systems Laboratory 3
- ME F441 Heat and Mass Transfer 3
- ME F486 Senior Design 1 1
- ME F487 Design Project 1,2 3

Fundamentals of Engineering (FE) Examination

Complete the Fundamentals of Engineering (FE) examination administered by the State of Alaska.

Concentrations
Complete one of the following concentrations: 9-12

- Mechanical
- Aerospace
- Petroleum

Total Credits 103-106

1. Design project must be related to area of concentration.
2. Fulfills the baccalaureate capstone requirement.

**Concentrations**

**MECHANICAL**

Mechanical Engineering electives at the F400-level or above 6

Advisor-approved engineering elective at the F400-level or above 3

Total Credits 9

**AEROSPACE**

ME F450 Theory of Flight 3
ME F451 Aerodynamics 3
ME F452 Introduction to Astrodynamics 3
ME F453 Propulsion Systems 3

Total Credits 12

**PETROLEUM**

ME F409 Controls 3
ME F416 Design of Mechanical Equipment for the Petroleum Industry 3
ME F464 Corrosion Engineering 3
PETE F426 Drilling Engineering 3

Total Credits 12

**B.S./M.S., Mechanical Engineering**

Complete the following admission requirements:

a. ME major (junior preferred) or senior standing.
b. GPA 3.25 or above (based on minimum of 24 credits in ME major requirements). Students must maintain a cumulative GPA of 3.0 to remain in the program.
c. Submit GRE (general) scores.
d. Submit a study goal statement.
e. Submit a UAF graduate application for admission.

Minimum Requirements for Both Degree: 151 credits

Students must satisfy the General University Requirements for minimum grades for the respective B.S. or M.S. program (major) requirements.

**General University Requirements**

Complete the general university requirements. (p. 134)

**General Education Requirements**

Complete the general education requirements. (p. 137)

**B.S. Degree Requirements**

Complete the B.S. degree requirements. (p. 142)

As part of the B.S. degree requirements, complete:

MATH F252X Calculus II 4

**PHYS F211X General Physics I** 4
**PHYS F212X General Physics II** 4

**Master's Degree Requirements**

Complete the master's degree requirements. (p. 245)

**B.S. Program Requirements**

ES F101 Introduction to Engineering 3
ES F201 Computer Techniques 3
ES F209 Statics 3
ES F210 Dynamics 3
ES F301 Engineering Analysis 3
ES F307 Elements of Electrical Engineering 3
ES F311 Mechanics of Materials 3
ES F314 Fluid Mechanics 4
ES F346 Basic Thermodynamics 3
ESM F450 Economic Analysis and Operations 3
MATH F253X Calculus III 4
MATH F302 Differential Equations 3
ME F302 Dynamics of Machinery 4
ME F308 Measurement and Instrumentation 3
ME F313 Mechanical Engineering Thermodynamics 3
ME F321 Industrial Processes 3
ME F334 Elements of Material Science/Engineering 3
ME F403 Machine Design 3
ME F408 Mechanical Vibrations 3
ME F415 Thermal Systems Laboratory 3
ME F441 Heat and Mass Transfer 3
ME F486 Senior Design 1
ME F487 Design Project 3

**Fundamentals of Engineering Examination**


**M.S. Program Requirements**

ME F608 Advanced Dynamics 3
ME F631 Advanced Mechanics of Materials 3
ME F634 Advanced Materials Engineering 3
ME F641 Advanced Fluid Mechanics 3
ME F642 Advanced Heat Transfer 3

**Thesis or Non-Thesis Requirements**

Select the Thesis or Non-Thesis option: 15

**Thesis**

- ME F699 Thesis
- Electives 2

**Non-Thesis**

- ME F698 Non-Thesis Research/Project
- Electives 3

Total Credits 112

1. Fulfills the baccalaureate capstone requirement.
2. Electives approved by student’s advisory committee with at least 3 credits at the graduate level.
Electives approved by student’s advisory committee with at least 6 credits at the graduate level

Note: This degree program must be completed in seven years or the student will be disqualified from the program. If a student is disqualified for exceeding the seven-year limit, a mechanical engineering B.S. degree will be awarded if:

1. course work is completed in 10 years, and
2. the student meets all ME B.S. requirements.

Military Science and Leadership

School of Management
Department of Military Science and Leadership
907-474-7501
www.uaf.edu/rotc/ (http://www.uaf.edu/rotc)

Minor Only

The Army Reserve Officers' Training Program (ROTC) is America’s primary program for training military officers. The Nanook Battalion is a cooperative effort agreed to by the Army and UAF as a means of providing junior officer leadership in the interest of national security. The goal of the program is to assist young men and women with leadership potential in obtaining commissions in the Army Reserve, National Guard or Regular Army.

Military science and leadership is an approved minor for the B.A. degree. Army instructors train students in leadership, management and decision-making through academic instruction and practical experience laboratories. These instructors impart qualities necessary for the Army officer and civilian executive.

ROTC is divided into the basic course for freshmen and sophomores and the advanced course for juniors and seniors. Programs and courses can be adjusted to meet specific needs of individual students who desire to enroll but are past their freshman year.

Basic military science courses are open to all students regardless of whether or not they intend to seek an Army commission. There is no military obligation incurred by enrolling in any of the basic courses.

Students who complete the basic course and desire to pursue the program for a commission may apply for enrollment in the advanced course. A special basic camp, two-year program is available for transfer students and others who were unable to take ROTC prior to their last two years in school. This program allows immediate acceleration into the advanced course. Students should consult the professor of military science prior to June 1 annually for information concerning the basic camp. Students with prior military service may also apply for immediate enrollment as an advanced course student. Applicants must be physically qualified and be selected by the professor of military science. The criterion for selection is based on both academic proficiency and leadership potential. Students who wish to enroll in advanced classes but do not desire to earn a commission may do so with the approval of the department head.

There are many activities sponsored by the Nanook Battalion. The ROTC Color Guard team opens UAF hockey, basketball and other sporting and communal events. They provide a recognized trained and dedicated guard for the national colors during the national anthem and opening ceremony. The Ranger Challenge team represents the Nanook Battalion and UAF in an annual military skill-based competition in Hawaii. The Nanook Battalion has a complete set of match grade rifles and pistols for marksmanship training. Army training such as Airborne School, Air Assault School, Northern Warfare Training and Mountaineering School are also offered to students.

At an annual UAF ceremony, awards are presented for outstanding academic, athletic and leadership achievement, as well as excellence in ROTC skills.

Completion of the advanced program will lead to service in the Army as a commissioned officer. Students who compete for a commission are provided a monthly stipend. Advanced course students receive a monthly subsistence allowance during the school year. This allowance is tax free. Students enrolled in military science are furnished uniforms and texts by the department. Army ROTC scholarships are available for tuition and lab fees, and provide a book allowance in addition to the stipend. Scholarships are awarded for two, three or four years on a competitive basis. Interested students should contact the military science department for further details.

Minor

• Minor, Military Science and Leadership (p. 217)

Minor, Military Science Leadership

Minimum Requirements for Minor: 19 credits

<table>
<thead>
<tr>
<th>MILS electives</th>
<th>19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Credits</td>
<td>19</td>
</tr>
</tbody>
</table>

1 Electives must be approved by the department.

Mining Engineering

College of Engineering and Mines
Department of Mining and Geological Engineering
907-474-7388
http://cem.uaf.edu/mingeo/

B.S. Degree

Minimum Requirements for Degree: 132 credits

As the nation’s northernmost accredited mining engineering program, our mission is to advance and disseminate knowledge for exploration, evaluation, development and efficient production of mineral and energy resources with assurance of the health and safety of persons involved and protection of the environment, through creative teaching, research and public service with an emphasis on Alaska, the North and its diverse peoples.

The mining engineering program emphasizes engineering as it applies to the exploration and development of mineral resources and the economics of the business of mining. The program offers specializations in exploration, mining or mineral beneficiation.

Students are prepared for job opportunities with mining and construction companies, consulting and research firms, equipment manufacturers, investment and commodity firms in the private sector, as well as with state and federal agencies.

The mining engineering program educational objectives are to graduate competent engineers who:
Mining engineers may aspire to, and achieve, the highest positions in the industry: operating or engineering management, government agency director or entrepreneur. Starting salaries are among the highest in the engineering profession.

Students may initiate their mining engineering program in Anchorage and transfer to Fairbanks upon completion of their freshman or sophomore year. Anchorage students intending to transfer to Fairbanks should contact faculty of the UAF Mining Engineering Department.

Candidates for the B.S. degree in mining engineering must take the State of Alaska Fundamentals of Engineering examination. The Fundamentals of Engineering examination is a first step toward registration as a professional engineer.

For more information about the mining engineering program mission, goals and educational objectives, visit http://cem.uaf.edu/mingeo/abet/.

### Degree
- **B.S., Mining Engineering** (p. 218)

### Minor
- **Minor, Mining Engineering** (p. 218)

### B.S., Mining Engineering

Minimum Requirements for Degree: 132 credits

Students must earn a C- grade or better in each course.

#### General University Requirements
Complete the general university requirements. (p. 134)

#### General Education Requirements
Complete the general education requirements. (p. 137)

As part of the general education requirements, complete:

- **CHEM F105X** General Chemistry I 4
- **CHEM F106X** General Chemistry II 4
- **LS F101X** Library Information and Research 1
- **MATH F251X** Calculus I 4

#### B.S. Degree Requirements
Complete the B.S. degree requirements. (p. 142)

As part of the B.S. degree requirements, complete:

- **MATH F252X** Calculus II 4
- **PHYS F211X** General Physics I 4
- **PHYS F212X** General Physics II 4

#### Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES F208</td>
<td>Mechanics</td>
<td>4</td>
</tr>
</tbody>
</table>

#### Recommended Technical Electives

Select 3 credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE F603</td>
<td>Arctic Engineering</td>
<td>3</td>
</tr>
<tr>
<td>GE F440</td>
<td>Slope Stability</td>
<td>3</td>
</tr>
<tr>
<td>MIN F401</td>
<td>Mine Site Field Trips</td>
<td>3</td>
</tr>
<tr>
<td>MIN F415</td>
<td>Coal Preparation</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Fundamentals of Engineering (FE) Examination

Complete the Fundamentals of Engineering (FE) examination administered by the State of Alaska.

**Total Credits**: 105

---

1. Fulfills the baccalaureate capstone requirement.
2. Students must plan their elective courses in consultation with their mining engineering faculty advisor. Technical electives are selected from the list of the approved technical electives for mining engineering program and other programs course listing. All elective courses must be approved by the department head.
Minimum Requirements for Minor: 15 credits

Students must earn a C- grade or better in each course.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIN F103</td>
<td>Introduction to Mining Engineering</td>
<td>1</td>
</tr>
<tr>
<td>MIN F104</td>
<td>Mining Safety and Operations Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>MIN F226</td>
<td>Mine Development</td>
<td>2</td>
</tr>
</tbody>
</table>

Complete 11-12 MIN credits from advisor-approved electives at 300 or 400 level

Total Credits 15-16

Music

College of Liberal Arts
Department of Music
907-474-7555
www.uaf.edu/music/ (http://www.uaf.edu/music)

B.A., B.M. Degrees
Minimum Requirements for Degrees: B.A.: 120 credits; B.M.: 122-145 credits

The music curriculum is designed to satisfy cultural and professional objectives. The B.A. degree in music provides a broad, liberal education with a concentration in music. The B.M. degree in music education offers thorough preparation in teacher training with sufficient time to develop excellence in performance areas. The B.M. degree in performance offers intensive specialization for those desiring professional training in music performance.

Recitals and concerts provide students with a variety of musical experiences which expand their regular curriculum.

The Music Department is a full member of the National Association of Schools of Music, the national accrediting organization.

NOTES FOR ALL UNDERGRADUATE MUSIC DEGREES

The various music organizations maintained by the department offer participation for students in all academic divisions of the university. Music majors in the B.A. program will be required to earn a minimum of 4 credits in large ensembles. Music majors in the B.M. program will be required to earn a minimum of 8 credits in large ensembles: MUS F101, MUS F203, MUS F205, MUS F211. Wind and percussion instrumentalists are required to take a minimum of 4 credits in MUS F205. Piano majors may substitute up to 2 credits of MUS F307.

Each student (major or nonmajor) who enrolls in private applied lessons must be currently enrolled in a large ensemble. Requirements for students registered for class lessons vary with disciplines and are at the discretion of the instructor.

Attendance at recitals and concerts provides students with a variety of musical experiences which expand their regular curriculum; therefore, registration for MUS F190 is mandatory until majors have passed eight semesters and minors have passed two. All applied music students enrolled in MUS F261 or higher are required to perform in at least one student recital during each semester of study.

At the end of each semester, all music majors must demonstrate a satisfactory level of proficiency of performance (Performance Juries) in their applied major in order to advance to the next level of study. A student may elect to continue study at the F200 level to prepare to pass requirements for admission to upper-division study. The performance jury at the end of the first semester of study serves as an audition for students wishing to enter a B.M. program in music education or performance. Competency levels required for each degree must be achieved in one performance area.

A piano proficiency jury examination must be successfully completed by the end of the student’s second year in the program. See the Music Department handbook for details.

Students who desire to enroll in music theory or ear training courses will complete a placement examination and be allowed to enter at their appropriate level.

Students must earn a C grade or better in each course of their major concentration. MUS F493 is repeatable up to 6 credits. MUS F307, MUS F313, MUS F317 are repeatable for credit. MUS F161–MUS F162, MUS F261–MUS F262, MUS F361–MUS F362, MUS F461–MUS F462 are repeatable up to 6 credits.

Degrees

• B.A., Music (p. 219)
• B.M., Music (Performance) (p. 221)
• B.M., Music Education (p. 221)

Minor

• Minor, Music (p. 222)

B.A., Music

Concentrations: General, Music Theory, Music History, Music Composition

Minimum Requirements for Degree: 120 credits

Students must earn a C grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)

B.A. Degree Requirements
Complete the B.A. degree requirements. (p. 139)

Audition
Complete an audition on the major instrument.

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS F131</td>
<td>Basic Music Theory I</td>
<td>6</td>
</tr>
<tr>
<td>MUS F132</td>
<td>Basic Music Theory II</td>
<td></td>
</tr>
<tr>
<td>MUS F133</td>
<td>Basic Ear Training I</td>
<td>4</td>
</tr>
<tr>
<td>MUS F134</td>
<td>Basic Ear Training II</td>
<td></td>
</tr>
<tr>
<td>MUS F152</td>
<td>Functional Piano I</td>
<td>3</td>
</tr>
<tr>
<td>MUS F153</td>
<td>Functional Piano II</td>
<td></td>
</tr>
<tr>
<td>MUS F154</td>
<td>Functional Piano III</td>
<td>1</td>
</tr>
<tr>
<td>MUS F161</td>
<td>Private Lessons</td>
<td>8</td>
</tr>
<tr>
<td>MUS F162</td>
<td>Private Lessons</td>
<td></td>
</tr>
<tr>
<td>MUS F261</td>
<td>Private Lessons</td>
<td></td>
</tr>
<tr>
<td>MUS F262</td>
<td>Private Lessons (major area)</td>
<td>2</td>
</tr>
<tr>
<td>MUS F190</td>
<td>Recital Attendance</td>
<td>0</td>
</tr>
</tbody>
</table>
MUS F221 and MUS F222 History of Western Music I and History of Western Music II 6
MUS F223X Alaska Native Music 3
MUS F231 and MUS F232 Advanced Music Theory I and Advanced Music Theory II 4
MUS F233 and MUS F234 Advanced Ear Training I and Advanced Ear Training II 2
MUS F253 Piano Proficiency 1 0
MUS F331 Form and Analysis 3
MUS F476 Senior Project 4 3
Large ensembles 5 4

Concentrations

Complete one of the following concentrations: 21-24

General
Music Theory
Music History
Music Composition

Total Credits 67-70

1 As necessary to complete piano proficiency requirements.
2 Students with voice as their major instrument are also required to complete MUS F245 or MUS F246.
3 Enrollment only following completion of piano proficiency requirements.
4 Fulfills the baccalaureate capstone requirement.
5 Music majors in the B.A. program will be required to earn a minimum of 4 credits in large ensembles: MUS F101, MUS F117, MUS F203, MUS F205, MUS F211. Please work closely with your faculty advisor to determine which large ensemble course will fulfill this requirement.

Concentrations

GENERAL

Select 12 credits from the following: 12

MUS F410 Women in Music History
MUS F421 Music Before 1620
MUS F422 Music in the 17th and 18th Centuries
MUS F423 Music of the 19th Century
MUS F424 Music Since 1900
MUS F431 Counterpoint
MUS F432 Orchestration and Arranging

Select 9 credits from the following: 9

MUS F207 UAF Jazz Band
MUS F307 Chamber Music
MUS F351 Conducting
MUS F361 Private Lessons (major area)
MUS F362 Private Lessons (major area)
MUS F426 Music Literature
MUS F432 Orchestration and Arranging

Total Credits 21

MUSIC THEORY

MUS F431 Counterpoint 3
MUS F432 Orchestration and Arranging 3
MUS F433 Seminar in Musical Composition 3
MUS F434 Advanced Harmonic Analysis 3
Select 6 credits from the following: 6

MUS F410 Women in Music History
MUS F421 Music Before 1620
MUS F422 Music in the 17th and 18th Centuries
MUS F423 Music of the 19th Century
MUS F424 Music Since 1900

Total Credits 24

MUSIC HISTORY

MUS F421 Music Before 1620 3
MUS F422 Music in the 17th and 18th Centuries 3
MUS F423 Music of the 19th Century 3
MUS F424 Music Since 1900 3
Select 6 credits from the following: 6

MUS F410 Women in Music History
MUS F426 Music Literature
MUS F431 Counterpoint
MUS F434 Advanced Harmonic Analysis

Select 6 credits from the following: 6

MUS F207 UAF Jazz Band
MUS F307 Chamber Music
MUS F351 Conducting
MUS F361 Private Lessons (major area)
MUS F362 Private Lessons (major area)
MUS F432 Orchestration and Arranging

Total Credits 24

MUSIC COMPOSITION

MUS F432 Orchestration and Arranging 3
MUS F433 Seminar in Musical Composition 3
MUS F435 Private Lessons in Music Composition 6
Select 6 credits from the following: 6

MUS F410 Women in Music History
MUS F421 Music Before 1620
MUS F422 Music in the 17th and 18th Centuries
MUS F423 Music of the 19th Century
MUS F424 Music Since 1900

Select 6 credits from the following: 6
### B.M., Music Education

Complete the following B.M. degree admission requirement:

1. **Audition on the major instrument**

**Concentrations: Elementary, Secondary, K-12**

Minimum Requirements for Degree: 130-145 credits

Students must earn a C grade or better in each course.

#### General University Requirements

Complete the general university requirements. (p. 134)

#### General Education Requirements

Complete the general education requirements. (p. 137)

#### Degree and Program Requirements

**Large ensembles**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS F101</td>
<td>Chamber Music</td>
<td>3</td>
</tr>
<tr>
<td>MUS F207</td>
<td>UAF Jazz Band</td>
<td>3</td>
</tr>
<tr>
<td>MUS F307</td>
<td>Chamber Music</td>
<td>3</td>
</tr>
<tr>
<td>MUS F322</td>
<td>Introduction to Computer-Based Music Technology</td>
<td>3</td>
</tr>
<tr>
<td>MUS F351</td>
<td>Conducting</td>
<td>3</td>
</tr>
<tr>
<td>MUS F361</td>
<td>Private Lessons (major area)</td>
<td>3</td>
</tr>
<tr>
<td>MUS F362</td>
<td>Private Lessons (major area)</td>
<td>3</td>
</tr>
<tr>
<td>MUS F431</td>
<td>Counterpoint</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits: 24

**Concentrations**

Select one of the following concentrations:

- **Elementary**
  - ED F452 Elementary Internship 3-12
  - MUED F309 Elementary School Music Methods 3
  - Total Credits 6-15

- **Secondary**
  - ED F453 Secondary Internship 3-12
  - MUED F405 Secondary School Music Methods 3
  - Total Credits 6-15

- **K-12**
  - ED F454 Student Teaching K-12 1
  - MUED F309 Elementary School Music Methods 3
  - MUED F405 Secondary School Music Methods 3
  - Total Credits 21

1. Fulfills the baccalaureate capstone requirement.

**B.M., Music Performance**

B.M. degree admission requirement:

1. **Audition on the major instrument**

Minimum Requirements for Degree: 122 credits

Students must earn a C grade or better in each course.

#### General University Requirements

Complete the general university requirements. (p. 134)
General Education Requirements

Complete the general education requirements. (p. 137)

As part of the general education requirements, voice majors must complete:

10 credits foreign language

Degree and Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS F131</td>
<td>Basic Music Theory I</td>
<td>6</td>
</tr>
<tr>
<td>and MUS F132</td>
<td>Basic Music Theory II</td>
<td></td>
</tr>
<tr>
<td>MUS F133</td>
<td>Basic Ear Training I</td>
<td>4</td>
</tr>
<tr>
<td>and MUS F134</td>
<td>Basic Ear Training II</td>
<td></td>
</tr>
<tr>
<td>MUS F152</td>
<td>Functional Piano I</td>
<td>3</td>
</tr>
<tr>
<td>and MUS F153</td>
<td>Functional Piano II</td>
<td></td>
</tr>
<tr>
<td>and MUS F154</td>
<td>Functional Piano III</td>
<td></td>
</tr>
<tr>
<td>MUS F161</td>
<td>Private Lessons</td>
<td>24</td>
</tr>
<tr>
<td>and MUS F162</td>
<td>Private Lessons</td>
<td></td>
</tr>
<tr>
<td>and MUS F261</td>
<td>Private Lessons</td>
<td></td>
</tr>
<tr>
<td>and MUS F262</td>
<td>Private Lessons</td>
<td></td>
</tr>
<tr>
<td>and MUS F361</td>
<td>Private Lessons</td>
<td></td>
</tr>
<tr>
<td>and MUS F362</td>
<td>Private Lessons</td>
<td></td>
</tr>
<tr>
<td>MUS F461</td>
<td>Private Lessons</td>
<td></td>
</tr>
<tr>
<td>MUS F462</td>
<td>Private Lessons</td>
<td></td>
</tr>
<tr>
<td>MUS F307</td>
<td>Chamber Music</td>
<td></td>
</tr>
<tr>
<td>MUS F313</td>
<td>Opera Workshop</td>
<td></td>
</tr>
<tr>
<td>MUS F317</td>
<td>Arctic Chamber Orchestra</td>
<td></td>
</tr>
<tr>
<td>MUS F332</td>
<td>Introduction to Computer-Based Music Technology</td>
<td></td>
</tr>
<tr>
<td>MUS F426</td>
<td>Music Literature</td>
<td></td>
</tr>
<tr>
<td>MUS F493</td>
<td>Special Topics</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits: 87

1. Selection of the language will be made in consultation with the voice advisor.
2. Students with voice as their major instrument are also required to complete MUS F245 or MUS F246.
3. Music majors in the B.M. program will be required to earn a minimum of 8 credits in large ensembles: MUS F101, MUS F117, MUS F203, MUS F205, MUS F211. Please work closely with your faculty advisor to determine which large ensemble course will fulfill this requirement.
4. Fulfills the baccalaureate capstone requirement.
5. Courses listed that are not already applied to program requirements may also meet this requirement.

Minor, Music

Minimum Requirements for Minor: 18 credits

Students must earn a C grade or better in each course.

Students must select from one of the options below:

**OPTION A (NONPERFORMANCE EMPHASIS)**

**Minor Requirements**

Select 12 credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS F103X</td>
<td>Music Fundamentals</td>
</tr>
<tr>
<td>MUS F122</td>
<td>History of Popular Music</td>
</tr>
<tr>
<td>MUS F124</td>
<td>Music in World Cultures</td>
</tr>
<tr>
<td>MUS F131</td>
<td>Basic Music Theory I</td>
</tr>
<tr>
<td>MUS F132</td>
<td>Basic Music Theory II</td>
</tr>
<tr>
<td>MUS F133</td>
<td>Basic Ear Training I</td>
</tr>
<tr>
<td>MUS F134</td>
<td>Basic Ear Training II</td>
</tr>
<tr>
<td>MUS F221</td>
<td>History of Western Music I</td>
</tr>
<tr>
<td>MUS F222</td>
<td>History of Western Music II</td>
</tr>
<tr>
<td>MUS F223X</td>
<td>Alaska Native Music</td>
</tr>
<tr>
<td>MUS F313</td>
<td>Advanced Music Theory I</td>
</tr>
<tr>
<td>MUS F317</td>
<td>Advanced Music Theory II</td>
</tr>
<tr>
<td>MUS F390</td>
<td>Junior Recital</td>
</tr>
<tr>
<td>MUS F410</td>
<td>Women in Music History</td>
</tr>
<tr>
<td>MUS F421</td>
<td>Music Before 1620</td>
</tr>
<tr>
<td>MUS F422</td>
<td>Music in the 17th and 18th Centuries</td>
</tr>
<tr>
<td>MUS F423</td>
<td>Music of the 19th Century</td>
</tr>
<tr>
<td>MUS F424</td>
<td>Music Since 1900</td>
</tr>
<tr>
<td>MUS F161</td>
<td>Recital Attendance</td>
</tr>
<tr>
<td>MUS F162</td>
<td>Private Lessons</td>
</tr>
<tr>
<td>MUS F261</td>
<td>Private Lessons</td>
</tr>
<tr>
<td>MUS F262</td>
<td>Private Lessons</td>
</tr>
<tr>
<td>MUS F361</td>
<td>Private Lessons</td>
</tr>
<tr>
<td>MUS F362</td>
<td>Private Lessons</td>
</tr>
</tbody>
</table>

Select 2 credits from the following large ensemble courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS F101</td>
<td>University Chorus</td>
</tr>
<tr>
<td>MUS F117</td>
<td>Northern Lights String Orchestra</td>
</tr>
</tbody>
</table>

Select 6 credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS F431</td>
<td>Counterpoint</td>
</tr>
<tr>
<td>MUS F432</td>
<td>Orchestration and Arranging</td>
</tr>
<tr>
<td>MUS F433</td>
<td>Seminar in Musical Composition</td>
</tr>
<tr>
<td>MUS F434</td>
<td>Advanced Harmonic Analysis</td>
</tr>
<tr>
<td>MUS F435</td>
<td>Private Lessons in Music Composition</td>
</tr>
</tbody>
</table>

Select 6 credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS F410</td>
<td>Women in Music History</td>
</tr>
<tr>
<td>MUS F421</td>
<td>Music Before 1620</td>
</tr>
<tr>
<td>MUS F422</td>
<td>Music in the 17th and 18th Centuries</td>
</tr>
<tr>
<td>MUS F423</td>
<td>Music of the 19th Century</td>
</tr>
<tr>
<td>MUS F424</td>
<td>Music Since 1900</td>
</tr>
</tbody>
</table>

Select 9 credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS F161</td>
<td>Private Lessons</td>
</tr>
<tr>
<td>MUS F162</td>
<td>Private Lessons</td>
</tr>
<tr>
<td>MUS F261</td>
<td>Private Lessons</td>
</tr>
<tr>
<td>MUS F262</td>
<td>Private Lessons</td>
</tr>
<tr>
<td>MUS F361</td>
<td>Private Lessons</td>
</tr>
<tr>
<td>MUS F362</td>
<td>Private Lessons</td>
</tr>
</tbody>
</table>

Select 2 credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS F101</td>
<td>University Chorus</td>
</tr>
<tr>
<td>MUS F117</td>
<td>Northern Lights String Orchestra</td>
</tr>
</tbody>
</table>

Select 6 credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS F431</td>
<td>Counterpoint</td>
</tr>
<tr>
<td>MUS F432</td>
<td>Orchestration and Arranging</td>
</tr>
<tr>
<td>MUS F433</td>
<td>Seminar in Musical Composition</td>
</tr>
<tr>
<td>MUS F434</td>
<td>Advanced Harmonic Analysis</td>
</tr>
<tr>
<td>MUS F435</td>
<td>Private Lessons in Music Composition</td>
</tr>
</tbody>
</table>

Select 6 credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS F410</td>
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</tr>
<tr>
<td>MUS F421</td>
<td>Music Before 1620</td>
</tr>
<tr>
<td>MUS F422</td>
<td>Music in the 17th and 18th Centuries</td>
</tr>
<tr>
<td>MUS F423</td>
<td>Music of the 19th Century</td>
</tr>
<tr>
<td>MUS F424</td>
<td>Music Since 1900</td>
</tr>
</tbody>
</table>

Select 9 credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS F161</td>
<td>Private Lessons</td>
</tr>
<tr>
<td>MUS F162</td>
<td>Private Lessons</td>
</tr>
<tr>
<td>MUS F261</td>
<td>Private Lessons</td>
</tr>
<tr>
<td>MUS F262</td>
<td>Private Lessons</td>
</tr>
<tr>
<td>MUS F361</td>
<td>Private Lessons</td>
</tr>
<tr>
<td>MUS F362</td>
<td>Private Lessons</td>
</tr>
</tbody>
</table>

Select 2 credits from the following large ensemble courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS F101</td>
<td>University Chorus</td>
</tr>
<tr>
<td>MUS F117</td>
<td>Northern Lights String Orchestra</td>
</tr>
</tbody>
</table>
Select 4 credits from the following courses in lessons or ensemble:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS F151</td>
<td>Class Lesson</td>
</tr>
<tr>
<td>MUS F161</td>
<td>Private Lessons</td>
</tr>
<tr>
<td>MUS F162</td>
<td>Private Lessons</td>
</tr>
<tr>
<td>MUS F261</td>
<td>Private Lessons</td>
</tr>
<tr>
<td>MUS F262</td>
<td>Private Lessons</td>
</tr>
<tr>
<td>MUS F361</td>
<td>Private Lessons</td>
</tr>
<tr>
<td>MUS F362</td>
<td>Private Lessons</td>
</tr>
<tr>
<td>MUS F461</td>
<td>Private Lessons</td>
</tr>
<tr>
<td>MUS F462</td>
<td>Private Lessons</td>
</tr>
<tr>
<td>MUS F207</td>
<td>UAF Jazz Band</td>
</tr>
<tr>
<td>MUS F190</td>
<td>Recital Attendance (two semesters)</td>
</tr>
</tbody>
</table>

Total Credits: 18

**Note:** No substitutions are permitted between options. It is recommended that students contact the Music Department for program advising before registering for music classes. All performance courses are subject to course enrollment and studio space limitations. Large ensemble courses are available subject to current vacancies for particular instrumental areas. Private lessons and large ensemble courses may require that students pass a performance audition. Prerequisite requirements apply.

**Natural Resources Management**

School of Natural Resources and Extension  
907-474-7083  
www.uaf.edu/snre/ (http://www.uaf.edu/snre)

**B.S. Degree**

Minimum Requirements for Degree: 120 credits

The complexity and interrelatedness of society and the environment require an interdisciplinary approach to making and implementing sustainable natural resource decisions. The natural resources management degree integrates knowledge in natural science, policy, economics and human values to advance the sustainable management of natural resources and agricultural systems. Students learn through a variety of approaches, including classroom instruction, hands-on laboratory experiences, and opportunities for internships and independent research under the guidance of a faculty mentor. Successful graduates will be qualified for employment in a broad range of private enterprise, government agencies and nonprofit organizations in the various natural resources fields, and will be well-equipped for graduate studies.

**Degree**

- B.S., Natural Resources Management (p. 223)

**Minor**

- Minor, Natural Resource Management (p. 224)
- Minor, Forest Management (p. 224)

**B.S., Natural Resources Management**

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

**General University Requirements**

Complete the general university requirements. (p. 134)

**General Education Requirements**

Complete the general education requirements. (p. 137)

As part of the general education requirements, complete:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM F105X</td>
<td>General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>NRM F303X</td>
<td>Environmental Ethics and Actions</td>
<td>3</td>
</tr>
<tr>
<td>MATH</td>
<td>Calculus course</td>
<td></td>
</tr>
</tbody>
</table>

**B.S. Degree Requirements**
Complete the B.S. degree requirements. (p. 142)
As part of the B.S. degree requirements, complete:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL F115X</td>
<td>Fundamentals of Biology I</td>
<td>4</td>
</tr>
<tr>
<td>BIOL F116X</td>
<td>Fundamentals of Biology II</td>
<td>4</td>
</tr>
<tr>
<td>STAT F200X</td>
<td>Elementary Probability and Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

**Program Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRM F101</td>
<td>Natural Resources Conservation and Policy</td>
<td>3</td>
</tr>
<tr>
<td>NRM F111</td>
<td>Introduction to Sustainability Science</td>
<td>3</td>
</tr>
<tr>
<td>NRM F240</td>
<td>Natural Resources Measurement and Inventory</td>
<td>3</td>
</tr>
<tr>
<td>NRM F210</td>
<td>Principles of Sustainable Agriculture</td>
<td>3</td>
</tr>
<tr>
<td>ECON F235X</td>
<td>Introduction to Natural Resource Economics</td>
<td>3</td>
</tr>
<tr>
<td>NRM F277</td>
<td>Introduction to Conservation Biology</td>
<td>3</td>
</tr>
<tr>
<td>NRM F290</td>
<td>Resource Management Issues at High Latitudes</td>
<td>2</td>
</tr>
<tr>
<td>NRM F366</td>
<td>Survey Research in Natural Resources Management</td>
<td>3</td>
</tr>
<tr>
<td>NRM F370</td>
<td>Introduction to Watershed Management</td>
<td>3</td>
</tr>
<tr>
<td>NRM F375</td>
<td>Natural Resource Ecology</td>
<td>3</td>
</tr>
<tr>
<td>NRM F380</td>
<td>Soils and the Environment</td>
<td>3</td>
</tr>
<tr>
<td>NRM F403</td>
<td>Environmental Decision-Making</td>
<td>3</td>
</tr>
<tr>
<td>NRM F430</td>
<td>Resource Management Planning</td>
<td>3</td>
</tr>
<tr>
<td>NRM/GEOG F483</td>
<td>Research Design, Writing and Presentation Methods</td>
<td>3</td>
</tr>
</tbody>
</table>

**GIS Courses**

Select one from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRM F338</td>
<td>Introduction to Geographic Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>NRM F369</td>
<td>GIS and Remote Sensing for Natural Resources</td>
<td></td>
</tr>
<tr>
<td>NRM F435</td>
<td>GIS Analysis</td>
<td></td>
</tr>
</tbody>
</table>

**Policy/Law Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRM F204</td>
<td>Public Lands Law and Policy</td>
<td>3</td>
</tr>
<tr>
<td>or NRM F407</td>
<td>Environmental Law</td>
<td></td>
</tr>
</tbody>
</table>

**Minor, Pre-vet, Support Field**

Select a minor, pre-vet, or 15 credits in a support field

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

**Total Credits**

77

Minor, Forest Management

Minimum Requirements for Minor: 16 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRM F251</td>
<td>Silvics and Dendrology</td>
<td>4</td>
</tr>
<tr>
<td>NRM F375</td>
<td>Natural Resource Ecology</td>
<td>3</td>
</tr>
<tr>
<td>or BIOL F371</td>
<td>Principles of Ecology</td>
<td></td>
</tr>
</tbody>
</table>

Select at least 6 credits from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRM F370</td>
<td>Introduction to Watershed Management</td>
<td></td>
</tr>
<tr>
<td>NRM F440</td>
<td>Silviculture</td>
<td></td>
</tr>
<tr>
<td>NRM F450</td>
<td>Forest Management</td>
<td></td>
</tr>
<tr>
<td>NRM F452</td>
<td>Forest Health and Protection</td>
<td></td>
</tr>
<tr>
<td>NRM F453</td>
<td>Harvesting and Utilization of Forest Products</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credits**

16

Note: Students must complete at least 16 credits dedicated to the minor. If the student has taken courses to complete major requirements, the credits must be made up from additional minor-specific courses.

Minor, Natural Resource Management

Minimum Requirements for Minor: 18 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRM F403</td>
<td>Natural Resources Measurement and Inventory</td>
<td></td>
</tr>
</tbody>
</table>

**Minor electives**

15

**Total Credits**

18

1 At least 6 credits must be upper-division. The minor program must be approved by an NRM advisor.

Northern Studies

College of Liberal Arts
907-474-7126
www.uaf.edu/northern/ (http://www.uaf.edu/northern)

B.A. Degree

Minimum Requirements for Degree: 120 credits

The northern studies program offers an interdisciplinary study of northern problems and policy issues. The purpose of the northern studies program is to give interested students a broader study of the northern region — its environment, peoples and problems.
The geographic location of UAF is outstanding for the study of northern issues. Students examine the countries and regions throughout the circumpolar North and their distinctive problems, such as the survival of indigenous populations, environmental and wilderness issues, high rates of alcoholism and suicide, fragile environments, adaptation to extreme cold and cycles of light and darkness, and adult development in small frontier societies.

The northern studies curriculum is centered around an interdisciplinary course (NORS F484), which is taken in the senior year.

For information on studying at McGill University, Montreal, Canada; the University of Copenhagen, Denmark; or opportunities for study in Russia and the Commonwealth of Independent States, see Exchange Programs and Study Abroad Programs (p. 75).

**Degree**

- B.A., Northern Studies (p. 225)

**Minor**

- Minor, Northern Studies (p. 225)

---

### B.A., Northern Studies

**Minimum Requirements for Degree:** 120 credits

Students must earn a C- grade or better in each course.

**General University Requirements**

Complete the general university requirements. (p. 134)

**General Education Requirements**

Complete the general education requirements. (p. 137)

**B.A. Degree Requirements**

Complete the B.A. degree requirements. (p. 139)

**Program Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANS F242X</td>
<td>Native Cultures of Alaska</td>
<td>3</td>
</tr>
<tr>
<td>BIOL F104X</td>
<td>Natural History of Alaska</td>
<td>4</td>
</tr>
<tr>
<td>GEOG F427</td>
<td>Polar Geography</td>
<td>3</td>
</tr>
<tr>
<td>HIST F483</td>
<td>20th-Century Circumpolar History</td>
<td>3</td>
</tr>
<tr>
<td>NORS F201</td>
<td>The Circumpolar North: An Introductory Overview</td>
<td>3</td>
</tr>
<tr>
<td>NORS F484</td>
<td>Seminar in Northern Studies</td>
<td>3</td>
</tr>
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</table>

Select one from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL/ANS F349</td>
<td>Narrative Art of Alaska Native Peoples (in English Translation)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL F449</td>
<td>Northern and Environmental Literature</td>
<td></td>
</tr>
<tr>
<td>NORS/ART F425</td>
<td>Visual Images of the North</td>
<td></td>
</tr>
</tbody>
</table>

Select one from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS F263</td>
<td>Alaska Native Politics</td>
<td></td>
</tr>
<tr>
<td>PS F462</td>
<td>Alaska Government and Politics</td>
<td></td>
</tr>
<tr>
<td>PS F460</td>
<td>Government and Politics of Canada</td>
<td></td>
</tr>
<tr>
<td>PS F468</td>
<td>Government and Politics of Russia</td>
<td></td>
</tr>
</tbody>
</table>

**Electives**

Select 15 credits from two of the following groups: 2

<table>
<thead>
<tr>
<th>Group</th>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology</td>
<td>ANTH F302</td>
<td>Siberia: Past, Present, Future</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ANTH F309</td>
<td>Circumpolar Archaeology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ANS/ANTH F320</td>
<td>Language and Culture in Alaska</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ANTH F383</td>
<td>Athabascan Peoples of Alaska and Adjacent Canada</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ANTH F472</td>
<td>Culture and History in the North Atlantic</td>
<td></td>
</tr>
<tr>
<td>Geography</td>
<td>GEOG F302</td>
<td>Geography of Alaska</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GEOG F303</td>
<td>Geography of United States and Canada</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GEOG F306</td>
<td>Geography of Russia</td>
<td></td>
</tr>
<tr>
<td>History</td>
<td>HIST F404</td>
<td>Modern Scandinavia</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HIST F461</td>
<td>History of Alaska</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HIST F463</td>
<td>Imperial Russia, 1700-1917</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HIST F464</td>
<td>Soviet and Post-Soviet Russia</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HIST F481</td>
<td>Polar Exploration and its Literature</td>
<td></td>
</tr>
<tr>
<td>Political Science</td>
<td>PS/ANS F325</td>
<td>Native Self-Government</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PS/ANS F450</td>
<td>Comparative Indigenous Rights and Policies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PS F452</td>
<td>International Relations of the North</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PS F454</td>
<td>International Law and the Environment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PS F460</td>
<td>Government and Politics of Canada</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PS F468</td>
<td>Government and Politics of Russia</td>
<td></td>
</tr>
<tr>
<td>Humanities 3</td>
<td>ANS/ENGL F349</td>
<td>Narrative Art of Alaska Native Peoples (in English Translation)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ENGL F449</td>
<td>Northern and Environmental Literature</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credits** 40

1. Fulfills the baccalaureate capstone requirement.
2. Students may not double count these major requirements to fulfill a minor.
3. Students may not double count the fulfillment of the humanities of government requirements in major requirements section with government or humanities courses in electives section.
4. Two semesters of a northern language, such as Eskimo or Russian. By choosing the northern language option you may have to take additional upper-division credits to meet the minimum general university requirement of 39 upper-division credits.

---

### Minor, Northern Studies

**Minimum Requirements for Minor:** 19 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NORS F201</td>
<td>The Circumpolar North: An Introductory Overview</td>
<td>3</td>
</tr>
<tr>
<td>ANS F242X/ANTH F242 or SOC F301</td>
<td>Native Cultures of Alaska</td>
<td>3</td>
</tr>
<tr>
<td>ENGL F349</td>
<td>Narrative Art of Alaska Native Peoples (in English Translation)</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NORS/ART F425</td>
<td>Visual Images of the North</td>
<td></td>
</tr>
<tr>
<td>ENGL F449</td>
<td>Northern and Environmental Literature</td>
<td></td>
</tr>
</tbody>
</table>

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**Anthropology**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH F302</td>
<td>Siberia: Past, Present, Future</td>
<td></td>
</tr>
<tr>
<td>ANTH F309</td>
<td>Circumpolar Archaeology</td>
<td></td>
</tr>
<tr>
<td>ANS/ANTH F320</td>
<td>Language and Culture in Alaska</td>
<td></td>
</tr>
</tbody>
</table>
**Petroleum Engineering**

College of Engineering and Mines  
Department of Petroleum Engineering  
907-474-7734  
http://cem.uaf.edu/pete/

**B.S. Degree**

Minimum Requirements for Degree: 133 credits

The mission of the petroleum engineering program is to provide its students with quality education and training in the field of petroleum engineering through effective teaching, research and public service, with emphasis on Alaska petroleum resources.

Petroleum engineering offers a unique look at the challenging problems confronting the petroleum industry. This program requires an understanding of many disciplines including mathematics, physics, chemistry, geology and engineering science. Courses in petroleum engineering deal with drilling, formation evaluation, production, reservoir engineering, computer simulation and enhanced oil recovery. The curriculum prepares graduates to meet the demands of modern technology while emphasizing, whenever possible, the special problems encountered in Alaska. Located in one of the largest oil-producing states in the nation, the UAF petroleum engineering department offers one of the most modern and challenging degree programs available.

The petroleum engineering program educational objectives are:

1. Our graduates will possess the technical knowledge and skills required to analyze real world petroleum engineering problems, and develop innovative solutions that meet the needs of multiple stakeholders.
2. Our graduates will recognize the value of continuing professional development throughout their careers. This may take the form of advanced degrees, industry courses, and formal mentoring and coaching.
3. Our graduates will compete effectively in the global petroleum engineering profession and they will exhibit the behaviors necessary to become leaders in the Alaska petroleum industry and beyond.

For more information about the petroleum engineering program mission, goals and educational objectives, visit http://cem.uaf.edu/pete/abet/.

**Degree**

- B.S., Petroleum Engineering (p. 226)

**B.S., Petroleum Engineering**

Minimum Requirements for Degree: 133 credits

Students must earn a C- grade or better in each course.

**General University Requirements**

Complete the general university requirements. (p. 137)

As part of the general university requirements, complete:

- CHEM F105X General Chemistry I 4
- CHEM F106X General Chemistry II 4
- LS F101X Library Information and Research 1
- MATH F251X Calculus I 4

**B.S. Degree Requirements**

Complete the B.S. degree requirements. (p. 142)

As part of the B.S. degree requirements, complete:

- MATH F252X Calculus II 4
- PHYS F211X General Physics I 4
- PHYS F212X General Physics II 4

**Program Requirements**

- ES F201 Computer Techniques 3
- ES F208 Mechanics 4
- ES F331 Mechanics of Materials 3
- ES F341 Fluid Mechanics 4
- ES F346 Basic Thermodynamics 3
- GE F261 General Geology for Engineers 3-4  
  or GEOS F101X The Dynamic Earth
- GEOS F370
- PETE F101 Fundamentals of Petroleum, Drilling and Production 3
- PETE F301 Reservoir Rock and Fluid Properties 4
- PETE F302 Well Logging 3
- PETE F303 Reservoir Rock and Fluid Properties Laboratory 1
- PETE F407 Petroleum Production Engineering 3
- PETE F411 Drilling Fluids Laboratory 1
- PETE F421 Reservoir Characterization 3
- PETE F426 Drilling Engineering 3
- PETE F431 Natural Gas Engineering 2
- PETE F456 Petroleum Evaluation and Economic Decisions 3
- PETE F466 Petroleum Recovery Methods 3
- PETE F476 Petroleum Reservoir Engineering 3
- PETE F478 Well Test Analysis 2
- PETE F481 Well Completions and Stimulation Design 3
- PETE F487A Petroleum Project Design 1,2 1
- PETE F487B Petroleum Project Design 1 1
- PETE F489 Reservoir Simulation 2
- Engineering elective 3 3
- Technical elective 4 3

**Program Requirements**

- MATH F253X Calculus III 4
- MATH F302 Differential Equations 3
- MATH F310 Numerical Analysis 3
  or ES F301 Engineering Analysis

Fundamentals of Engineering (FE) Examination
Complete the Fundamentals of Engineering (FE) examination administered by the State of Alaska.

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PETE F487A</td>
<td>is prerequisite for PETE F487B. Must take both courses to meet the oral communication and writing-intensive requirements.</td>
<td></td>
</tr>
<tr>
<td>F487B</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fulfills the baccalaureate capstone requirement.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>As approved by advisor (e.g. ME F416 or ES F307).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>As approved by advisor (e.g. CE F603).</td>
<td></td>
</tr>
</tbody>
</table>

**Philosophy**

College of Liberal Arts
Department of Philosophy and Humanities
907-474-7343
www.uaf.edu/philo/ (http://www.uaf.edu/philo)

**Minor Only**

The courses in philosophy are designed to confront students with fundamental problems of both Western and non-Western philosophical heritages and to introduce students to independent reflection on them, thus broadening their perspectives for various areas of specialization in science, the social sciences and humanities.

**Minor**

- Minor, Philosophy (p. 227)

**Minor, Philosophy**

Minimum Requirements for Minor: 18 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL F102X</td>
<td>Introduction to Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHIL F351</td>
<td>History of Ancient Greek Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHIL F352</td>
<td>History of Modern Philosophy: Descartes to Kant</td>
<td>3</td>
</tr>
<tr>
<td>PHIL elective at the F400 level</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Select two from the following:</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>PHIL F104X</td>
<td>Logic and Reasoning</td>
<td></td>
</tr>
<tr>
<td>PHIL F108</td>
<td>Critical Thinking</td>
<td></td>
</tr>
<tr>
<td>PHIL F110</td>
<td>Introduction to Political Philosophy</td>
<td></td>
</tr>
<tr>
<td>PHIL F202</td>
<td>Introduction to Eastern Philosophy</td>
<td></td>
</tr>
<tr>
<td>PHIL F322X</td>
<td>Ethics</td>
<td></td>
</tr>
<tr>
<td>PHIL F341</td>
<td>Theories of Knowledge</td>
<td></td>
</tr>
<tr>
<td>PHIL F342</td>
<td>Theories of Reality</td>
<td></td>
</tr>
<tr>
<td>PHIL F353</td>
<td>Survey of Buddhist Thought</td>
<td></td>
</tr>
<tr>
<td>PHIL F356</td>
<td>Philosophy in Literature</td>
<td></td>
</tr>
<tr>
<td>PHIL F381</td>
<td>Topics in Logics</td>
<td></td>
</tr>
<tr>
<td>PHIL F402</td>
<td>Biomedical and Research Ethics</td>
<td></td>
</tr>
<tr>
<td>PHIL/PS F411</td>
<td>Classical Political Theory</td>
<td></td>
</tr>
<tr>
<td>PHIL/PS F412</td>
<td>Modern Political Theory</td>
<td></td>
</tr>
<tr>
<td>PHIL F421</td>
<td>Aesthetics</td>
<td></td>
</tr>
<tr>
<td>PHIL F472</td>
<td>Ethics in International Affairs</td>
<td></td>
</tr>
<tr>
<td>PHIL F481</td>
<td>Philosophy of Science</td>
<td></td>
</tr>
<tr>
<td>PHIL F482</td>
<td>Comparative Philosophy and Religions</td>
<td></td>
</tr>
<tr>
<td>PHIL F485</td>
<td>Topics in Comparative Philosophies</td>
<td></td>
</tr>
</tbody>
</table>

**Physics**

College of Natural Science and Mathematics
Department of Physics
907-474-7339
www.uaf.edu/physics/ (http://www.uaf.edu/physics)

**B.S. Degree**

Minimum Requirements for Degree: 120 credits

Physics, together with mathematics and chemistry, provides the foundation for work in all fields of the physical sciences and engineering, and contributes greatly to other disciplines such as the biosciences and medicine.

The undergraduate curriculum provides a solid foundation in classical and modern physics, with emphasis on both its experimental and theoretical aspects. A student completing this curriculum can be well-prepared for advanced study in physics and related sciences, and for other careers in industry, government or the private sector that require refined abilities in problem-solving.

The **physics** concentration represents the classical undergraduate physics curriculum, while the **applied physics** concentration provides a solid foundation in general physics with the flexibility to include applied or interdisciplinary course work, aimed at e.g., engineering physics, biophysics or oceanography.

The **atmospheric physics** concentration is a solid foundation at the interface of physics, climate sciences and meteorology. The **computational physics** concentration is relevant for students seeking careers in any areas that require expertise in computational modeling and simulation of physical systems.

The **technical management** concentration provides an opportunity to combine basic knowledge of physics with an aptitude for leadership in business. Declared physics majors in good standing with appropriate grades, department mentoring and approval for some courses are, upon graduation, welcome to apply to the MBA program in UAF’s School of Management.

**Degree**

- B.S., Physics (p. 227)

**Minor**

- Minor, Physics (p. 229)

**B.S., Physics**

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

**General University Requirements**

Complete the general university requirements. (p. 134)

**General Education Requirements**
Complete the general education requirements. (p. 137)
As part of the general education requirements, complete:

**B.S. Degree Requirements**
Complete the B.S. degree requirements. (p. 142)
As part of the B.S. degree requirements, complete:

**Program Requirements**

**Concentrations**

Complete one from the following concentrations: 31-40
- Physics
- Applied Physics
  - Atmospheric Physics
- Computational Physics
- Technical Management

Total Credits 71-80

1 Fulfills the baccalaureate capstone requirement. The capstone project can be done either as individual undergraduate research with a faculty member (PHYS F488) or as an independent study with a faculty member within any F300 or F400-level physics course (PHYS F497) or as participation in the international University Physics Competition. Credits required to fulfill the capstone experience do not count towards credits required to complete the concentration.

**Concentrations**

**PHYSICS**

**Program Requirements**

**APPLIED PHYSICS**

**Program Requirements**

1 Recommended courses include MATH F314, MATH F421 and MATH F422.
The credits must be in a chosen subject area and approved before the beginning of the student’s final semester by the head of the physics department.

ATMOSPHERIC PHYSICS

Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH electives at the F300 level or above</td>
<td>6</td>
</tr>
<tr>
<td>Physics credits at the F300 level or above</td>
<td>9</td>
</tr>
<tr>
<td>ATM F401 Introduction to Atmospheric Sciences</td>
<td>3</td>
</tr>
<tr>
<td>ATM F413 Atmospheric Radiation</td>
<td>3</td>
</tr>
<tr>
<td>ATM F445 Atmospheric Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>Other relevant upper-division courses</td>
<td>8</td>
</tr>
<tr>
<td>Total Credits</td>
<td>32</td>
</tr>
</tbody>
</table>

1 Recommended courses include MATH F314, MATH F421 and MATH F422.
2 The credits must be in a chosen subject area and approved before the beginning of the student’s final semester by the head of the physics department.

COMPUTATIONAL PHYSICS

Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH electives at the F300 level or above</td>
<td>6</td>
</tr>
<tr>
<td>Physics credits at the F300 level or above</td>
<td>9</td>
</tr>
<tr>
<td>MATH F310 Numerical Analysis</td>
<td>3</td>
</tr>
<tr>
<td>CS F201 Computer Science I</td>
<td>3</td>
</tr>
<tr>
<td>CS F202 Computer Science II</td>
<td>3</td>
</tr>
<tr>
<td>Other relevant upper-division courses</td>
<td>8</td>
</tr>
<tr>
<td>Total Credits</td>
<td>32</td>
</tr>
</tbody>
</table>

1 Recommended courses include MATH F314, MATH F421 and MATH F422.
2 The credits must be in a chosen subject area and approved before the beginning of the student’s final semester by the head of the physics department.

TECHNICAL MANAGEMENT

Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH electives at the F300 level or above</td>
<td>3</td>
</tr>
<tr>
<td>STAT F200X Elementary Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>Physics credits at the F300 level or above</td>
<td>12</td>
</tr>
<tr>
<td>ACCT F261X Principles of Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT F262 Principles of Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>School of Management Courses</td>
<td></td>
</tr>
<tr>
<td>BA F325 Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>BA F330 The Legal Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>BA F343 Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>BA F360 Operations Management</td>
<td>3</td>
</tr>
<tr>
<td>BA F390 Organizational Theory and Behavior</td>
<td>3</td>
</tr>
<tr>
<td>Total Credits</td>
<td>40</td>
</tr>
</tbody>
</table>

1 Recommended courses include MATH F314, MATH F421 and MATH F422.
### B.A. Degree

Minimum Requirements for Degree: 120 credits

The Department of Political Science offers a B.A. degree as well as minors in law and society, environmental politics and political science. Graduate-level courses in political science are available through the northern studies concentration in environmental politics and policy. Doctoral study in political science is available through the interdisciplinary studies program of the Graduate School.

The study of political science provides education for citizenship in a changing nation and world. Political science provides a sound preparation in the social sciences. As the study of power, political science explains who gets what, when, where and how. It examines the struggles over claims to authority that shape our lives and our world. As the study of values, it examines why citizens obey or rebel, the nature of just societies, and the ways individuals reconcile personal liberty with political authority. As the science of political behavior, it analyzes the actions of interest groups, political parties and public officials. Politics is an omnipresent force, not only in governments but in families, social organizations, schools and decision-making bodies of all types — from student councils to international institutions. A solid understanding of local, national and international politics will benefit any student throughout his or her career.

Courses are offered in the traditional fields of international and comparative politics, American government, political theory, public policy and public law. The department also offers classes in environmental policy and politics, Native American studies, the politics of science and women’s studies. In addition to course offerings and faculty expertise, the department presents real world opportunities for political science students to apply their learning. Those include numerous internship and scholarship opportunities in Alaska and the rest of the United States. Students can participate in model United Nations simulations, join the political science honor society Pi Sigma Alpha, aid faculty as research assistants and take part in numerous other department projects such as bringing speakers to campus or hosting roundtables on important issues. Graduate students may also serve as teaching assistants.

The political science B.A. has led students to graduate work in the social sciences; employment in the media and public relations; teaching at high school and university levels; and careers in business corporations and non-profits at the state and national levels. Political science provides a broad understanding of the formation, application and change of the law, as well as research techniques and standards of argumentation essential to legal practice. The study of political science also prepares students for work in various fields of government. Alaska offers job prospects for political science graduates as managers in state and local governments and as legislators and legislative staff members. Graduates are also qualified to work outside of Alaska in numerous public and private sector jobs.

### Degree

- **B.A., Political Science** (p. 230)

### Minor

- **Minor, Political Science** (p. 231)

### B.A., Political Science

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

#### General University Requirements

Complete the general university requirements. (p. 134)

#### General Education Requirements

Complete the general education requirements. (p. 137)

As part of the general education requirements, complete:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HIST F100X</td>
<td>Modern World History</td>
<td>3</td>
</tr>
<tr>
<td>PS F100X</td>
<td>Political Economy</td>
<td>3</td>
</tr>
<tr>
<td>PS F300X</td>
<td>Ethics and Society</td>
<td>3</td>
</tr>
</tbody>
</table>

#### B.A. Degree Requirements

Complete the B.A. degree requirements. (p. 139)

#### Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS F101</td>
<td>Introduction to American Government and Politics</td>
<td>3</td>
</tr>
<tr>
<td>PS F222</td>
<td>Political Science Research Methods</td>
<td>3</td>
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Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PS F475</td>
<td>Internship in Public Affairs</td>
<td>3</td>
</tr>
<tr>
<td>PS F499</td>
<td>Senior Thesis</td>
<td></td>
</tr>
<tr>
<td>Other approved internship earning at least 3 transferable upper-division credits</td>
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</tbody>
</table>

#### Political Science

Select 24 credits from the following (at least one course from four of the following sub-disciplinary groups):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS F212</td>
<td>Introduction to Public Administration</td>
<td></td>
</tr>
<tr>
<td>PS F301</td>
<td>American Presidency</td>
<td></td>
</tr>
<tr>
<td>PS F302</td>
<td>Congress and Public Policy</td>
<td></td>
</tr>
<tr>
<td>PS F401</td>
<td>Political Behavior</td>
<td></td>
</tr>
<tr>
<td>PS F403</td>
<td>Public Policy</td>
<td></td>
</tr>
<tr>
<td>PS F462</td>
<td>Alaska Government and Politics</td>
<td></td>
</tr>
<tr>
<td>PS F303</td>
<td>Politics and the Judicial Process</td>
<td></td>
</tr>
<tr>
<td>PS F435</td>
<td>Constitutional Law I: Federalism</td>
<td></td>
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<tr>
<td>PS F436</td>
<td>Constitutional Law II: Civil Rights and Liberties</td>
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</table>

#### Comparative Politics

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PS F201X</td>
<td>Comparative Politics</td>
<td></td>
</tr>
<tr>
<td>PS F202</td>
<td>Democracy and Global Society</td>
<td></td>
</tr>
<tr>
<td>PS F460</td>
<td>Government and Politics of Canada</td>
<td></td>
</tr>
<tr>
<td>PS F464</td>
<td>East Asian Governments and Politics</td>
<td></td>
</tr>
<tr>
<td>PS/HIST F467</td>
<td>Political Development in Latin America and the Caribbean</td>
<td></td>
</tr>
<tr>
<td>PS F468</td>
<td>Government and Politics of Russia</td>
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</table>

#### International Politics

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PS F321</td>
<td>International Politics</td>
<td></td>
</tr>
<tr>
<td>PS F322</td>
<td>International Law and Organization</td>
<td></td>
</tr>
<tr>
<td>PS F323</td>
<td>International Political Economy</td>
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</tr>
<tr>
<td>PS F437</td>
<td>United States Foreign Policy</td>
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</tbody>
</table>

#### Political Theory

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PS F314</td>
<td>Political Ideologies</td>
<td></td>
</tr>
<tr>
<td>PS F315</td>
<td>American Political Thought</td>
<td></td>
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</tbody>
</table>
Minor, Political Science

Minimum Requirements for Minor: 15 credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS F101</td>
<td>Introduction to American Government</td>
<td>3</td>
</tr>
<tr>
<td>F300 or F400</td>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>

Total Credits 15

Psychology

College of Liberal Arts
Department of Psychology
907-474-7007
www.uaf.edu/psych/ (http://www.uaf.edu/psych)

B.A., B.S. Degrees

Minimum Requirements for Degrees: 120 credits

The Department of Psychology offers B.A. and B.S. degrees in psychology. The department’s focus is to provide breadth and depth in the science and profession of psychology with a commitment to honoring diversity and promoting human welfare. The curriculum develops cross-cultural knowledge, critical thinking, imagination, creativity, ethical principles and concern for social justice, as well as respect for and knowledge of diverse points of view that include feminist, multicultural, indigenous, and gay and lesbian perspectives.

In addition to active engagement in the classroom, students can participate in research and community service. Programs in psychology facilitate an understanding of the human experience as an interaction of biological, psychological, social and cultural processes.

Graduates of the undergraduate program in psychology have been successful in gaining entrance to graduate school in a variety of fields including psychology, medicine, business and law. Graduation with an undergraduate psychology degree has allowed students to become employed in a variety of entry-level human services and business positions.

The Alaska Natives into Psychology program helps train Alaska Natives and American Indians as psychologists or other behavioral health professionals to address the significant shortage of these professionals in Alaska, particularly rural Alaska. The program strives to attract Native high school and undergraduate students seeking a degree in psychology.

Degree
- B.A. or B.S., Psychology (p. 231)

Minor
- Minor, Psychology (p. 232)

B.A. or B.S., Psychology

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)

B.A. or B.S. Degree Requirements
Complete the B.A. degree requirements. (p. 139)
Complete the B.S. degree requirements. (p. 142)

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY F101X</td>
<td>Introduction to Psychology</td>
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<tr>
<td>PSY/SOC F250</td>
<td>Introductory Statistics for Social</td>
<td>3</td>
</tr>
<tr>
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<td>Sciences</td>
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<tr>
<td>PSY F275</td>
<td>Introduction to Social Science</td>
<td>3</td>
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<tr>
<td></td>
<td>Research Methods</td>
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<tr>
<td>PSY F301</td>
<td>Culture and Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY F475</td>
<td>Research Design and Analysis in</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Psychology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>or PSY F485</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Senior Seminar</td>
<td></td>
</tr>
<tr>
<td></td>
<td>or PSY F499</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Thesis</td>
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<tr>
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<td>Select 6 credits from the following:</td>
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<tr>
<td>PSY F240</td>
<td>Psychology of Development</td>
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</tr>
<tr>
<td>PSY F304</td>
<td>Personality</td>
<td></td>
</tr>
<tr>
<td>PSY F320</td>
<td>History and Systems of Psychology</td>
<td></td>
</tr>
<tr>
<td>PSY/SOC F330</td>
<td>Social Psychology</td>
<td></td>
</tr>
<tr>
<td>PSY/SOC F333/WGS F332</td>
<td>Human Sexualities Across Cultures</td>
<td></td>
</tr>
<tr>
<td>PSY F335</td>
<td>Brain and Behavior</td>
<td></td>
</tr>
<tr>
<td>PSY F345</td>
<td>Abnormal Psychology</td>
<td></td>
</tr>
<tr>
<td>PSY/SOC F360</td>
<td>Psychology of Women Across Cultures</td>
<td></td>
</tr>
<tr>
<td>PSY F360</td>
<td>Drugs and Behavior</td>
<td></td>
</tr>
<tr>
<td>PSY F440</td>
<td>Learning and Cognition</td>
<td></td>
</tr>
<tr>
<td>PSY F470</td>
<td>Sensation and Perception</td>
<td></td>
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<tr>
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<td>Select 6 credits from the following:</td>
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</tr>
<tr>
<td>PSY F337</td>
<td>Sport Psychology</td>
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<tr>
<td>PSY F390</td>
<td>Industrial and Organizational</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Psychology</td>
<td></td>
</tr>
<tr>
<td>PSY F445</td>
<td>Community Psychology</td>
<td></td>
</tr>
<tr>
<td>PSY F455</td>
<td>Clinical Psychology</td>
<td></td>
</tr>
<tr>
<td>PSY F469</td>
<td>Health Psychology</td>
<td></td>
</tr>
<tr>
<td>PSY F475</td>
<td>Research Design and Analysis in</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Psychology</td>
<td></td>
</tr>
<tr>
<td>PSY/SOC F480</td>
<td>Qualitative Social Science Research</td>
<td></td>
</tr>
<tr>
<td>PSY F485</td>
<td>Senior Seminar 1</td>
<td></td>
</tr>
<tr>
<td>PSY F488</td>
<td>Practicum in Psychology</td>
<td></td>
</tr>
<tr>
<td>PSY F498</td>
<td>Research</td>
<td></td>
</tr>
<tr>
<td>PSY F499</td>
<td>Thesis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Complete 9 additional psychology</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>credits selected from the catalog or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>from electives approved by psychology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>faculty</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits 36

1 PSY F485 fulfills the baccalaureate capstone requirement.
Note: No course may count in more than one area (e.g. PSY F475 may NOT count toward both foundation and applied courses).

Note: Students may not count more than 6 credits of any combination of PSY F497 and PSY F498 toward the major.

Note: Students may apply an unlimited number of PSY F392/PSY F492 and PSY F393/PSY F493 credits toward the degree provided the topics are different for each course.

Note: Students should work closely with an advisor to ensure completion of 39 upper-division credits for graduation.

**Minor, Psychology**

Minimum Requirements for Minor: 15 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY F101X Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY electives</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

**Rural Development**

College of Rural and Community Development
Department of Alaska Native Studies and Rural Development
907-474-6528 Toll-free 888-574-6528
www.uaf.edu/danrd/ (http://www.uaf.edu/danrd)

**B.A. Degree**

Minimum Requirements for Degree: 120 credits

Rural development degree programs are designed to educate a new generation of community leaders for rural Alaska. The B.A. degree can be earned either on the Fairbanks campus or through distance delivery. Special application requirements and deadlines apply for distance B.A. degree programs. Students applying for acceptance into the Rural Development program need to complete two department-specific requirements in addition to general university admission: an oral interview with faculty and a written questionnaire. Findings from this process will be used to support the department advising process and assist students in connecting with faculty and mentors. The questionnaire and instructions for the oral interview are found on the DANSRD website under “How to Apply.”

Students in the rural development program gain a broad understanding of Alaska’s relationship to the global economy and an appreciation for sustainable development strategies. Students also learn specific tools essential for community leadership, including business plan and grant proposal writing, community visioning and planning processes, computer business applications, project management, and evaluation techniques. Graduates typically take positions with tribal and municipal governments, fisheries, tourism and other private businesses, Native corporations, regional health corporations or nonprofits, and state/federal agencies.

Within the B.A. degree program, students will select and develop a concentration in one of five areas:

- The **community health and wellness** concentration is for students with a strong interest in health and wellness. Students focus on the various facets of a healthy rural community. Going beyond the basics of health care, they explore different aspects of wellness within a community and develop tools to attain community wellness goals. Students blend and apply both contemporary and traditional health and wellness tools. Graduates may find employment with tribal governments, health consortia, clinics and schools.

- The **community research and indigenous knowledge** concentration is for students with interests in applied research involving Alaska Native communities, cultures, languages, ceremonial performances and histories. Students learn principles of ethical research, explore issues of intellectual and cultural property rights, and acquire skills to do ethnographies, oral histories, community surveys and needs assessments, and archival research. Graduates may find employment with museums, ANCSA corporations, tribal governments, and state and federal agencies.

- The concentration in **indigenous organization management** is designed for students interested in development and operations of indigenous organizations in rural Alaska. Students develop an understanding of the history and constitutional basis for tribal governance, basics of federal Indian law, principles and practices of self-determination, and the mandates of the Alaska Native Claims Settlement Act. They develop skills in planning, budgeting and human resources management. Students can pursue a special interest, such as management of health programs, tribal governance programs or Alaska Native corporations, and tailor the concentration to these specifications through choice of related courses and electives. Graduates may find employment with tribal and municipal governments and organizations, ANCSA corporations, and state and federal agencies.

- The **natural resource development** concentration is designed for students with an interest in land and resources development, co-management and conservation. Students learn about traditional ecological knowledge, principles of natural resources management and policy, adaptive management, conservation and ecotourism, and skills for effective public/private/tribal collaboration in resource management. Management strategies for addressing climate change are explored. Graduates may find employment with ANCSA corporations, regional and tribal entities, or state and federal agencies.

- The concentration in **rural community business and economic development planning** is for students interested in creating sustainable economies in rural and indigenous communities, with a focus on small business development. Students learn to develop business and marketing plans, economic development planning, and basic principles of financial and human resources management for rural enterprises. Graduates find employment in ANCSA corporations, regional development organizations, economic development agencies and as local entrepreneurs.

For more information contact the department toll-free at 888-574-6528 or visit our website: www.uaf.edu/danrd/ (http://www.uaf.edu/danrd).

**Degree**

- **B.A., Rural Development** (p. 232)

**Minor**

- **Minor, Rural Development** (p. 235)

**B.A., Rural Development**

Concentrations: Community Health and Wellness; Community Research and Indigenous Knowledge; Indigenous Organization Management; Natural Resource Development; Rural Community Business and Economic Development Planning
Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)

B.A. Degree Requirements
Complete the B.A. degree requirements. (p. 139)

Including 39 upper division credits

Program Requirements
RD F300 Rural Development in a Global Perspective 3
RD F325 Community Development Strategies 3
RD F350 Community Research in Indigenous Contexts 3
RD F351 Strategic Planning for Rural Communities 3
RD F352 Rural Business Planning and Proposal Development 3
RD F400 Rural Development Internship 3
RD F450 Managing Rural Projects and Programs 3
RD F475 Rural Development Senior Project 2 3
RD elective 3
RD, ANS, TM or ED electives 6

Concentrations

Community Health and Wellness

Recommended courses. Course substitutions relevant to the concentration area may be made with approval of the rural development faculty advisor.

COMMUNITY HEALTH AND WELLNESS

Program Requirements

Select 21 credits from the following: 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANL F242X</td>
<td>Native Cultures of Alaska</td>
</tr>
<tr>
<td>ANS F275</td>
<td>Yup’ik Practices in Spirituality and Philosophy</td>
</tr>
<tr>
<td>ANS F330</td>
<td>Yup’ik Parenting and Child Development (Kuskokwim Campus only)</td>
</tr>
<tr>
<td>ANS F348</td>
<td>Native North American Women</td>
</tr>
<tr>
<td>ANS F350</td>
<td>Cross-Cultural Communication: Alaska Perspectives</td>
</tr>
<tr>
<td>ANS/ED F420</td>
<td>Alaska Native Education</td>
</tr>
<tr>
<td>ANS F461</td>
<td>Native Ways of Knowing</td>
</tr>
<tr>
<td>ED F370</td>
<td>Issues in Alaska Bilingual and Multicultural Education</td>
</tr>
<tr>
<td>EBOT F100</td>
<td>Introduction to Ethnobotany</td>
</tr>
<tr>
<td>HUMS F260</td>
<td>History of Alcohol in Alaska</td>
</tr>
<tr>
<td>HUMS F263</td>
<td>Fetal Alcohol Spectrum Disorder (FASD)</td>
</tr>
<tr>
<td>HUMS F264</td>
<td>Culture, Chemical Dependency and Alaska Natives</td>
</tr>
<tr>
<td>HUMS F265</td>
<td>Substance Abuse and the Family</td>
</tr>
<tr>
<td>HUMS F280</td>
<td>Prevention and Community Development</td>
</tr>
<tr>
<td>RD F401</td>
<td>Cultural Knowledge of Native Elders</td>
</tr>
<tr>
<td>RD F462</td>
<td>Rural Health and Human Service Systems</td>
</tr>
<tr>
<td>RD F465</td>
<td>Community Healing and Wellness</td>
</tr>
<tr>
<td>RD F470/F670</td>
<td>The Alaska Native Claims Settlement Act: Pre-1971 to Present</td>
</tr>
<tr>
<td>RD F492</td>
<td>Rural Development Seminar</td>
</tr>
<tr>
<td>RHS</td>
<td>Any advisor-approved courses (credit varies)</td>
</tr>
<tr>
<td>RNS F120</td>
<td>Alaska Native Food Systems</td>
</tr>
<tr>
<td>TM F114</td>
<td>Tribal Justice Responses to Community and Domestic Violence</td>
</tr>
<tr>
<td>TM F116</td>
<td>Juvenile Justice in Tribal Court</td>
</tr>
<tr>
<td>TM F117</td>
<td>Tribal Court Enforcement of Decisions</td>
</tr>
<tr>
<td>TM F118</td>
<td>Tribal Community and Restorative Justice</td>
</tr>
</tbody>
</table>

Total Credits 54

1 Students outside the Fairbanks area should verify that their chosen minor can be completed via distance delivery before declaring.

COMMUNITY RESEARCH AND INDIGENOUS KNOWLEDGE

Program Requirements
Select 21 credits from the following: 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANL F256</td>
<td>Introduction to Alaska Native Languages: History, Status and Maintenance</td>
</tr>
<tr>
<td>ANL F287</td>
<td>Teaching Methods for Alaska Native Languages</td>
</tr>
<tr>
<td>ANL F315</td>
<td>Alaska Native Languages: Eskimo-Aleut</td>
</tr>
<tr>
<td>ANL F316</td>
<td>Alaska Native Languages: Indian Languages</td>
</tr>
<tr>
<td>ANS F202X</td>
<td>Aesthetic Appreciation of Alaska Native Performance</td>
</tr>
<tr>
<td>ANS F242X</td>
<td>Native Cultures of Alaska</td>
</tr>
<tr>
<td>ANS F275</td>
<td>Yup’ik Practices in Spirituality and Philosophy</td>
</tr>
<tr>
<td>ANS/ANTH F320</td>
<td>Language and Culture in Alaska</td>
</tr>
<tr>
<td>EBOT F200</td>
<td>Seminar in Ethnobotany</td>
</tr>
<tr>
<td>HIST F446</td>
<td>American Indian History</td>
</tr>
<tr>
<td>HIST F490</td>
<td>Researching and Writing Northern History</td>
</tr>
</tbody>
</table>

Total Credits 21

1 Recommended courses. Course substitutions relevant to the concentration area may be made with approval of the rural development faculty advisor.
### INDIGENOUS ORGANIZATION MANAGEMENT

**Program Requirements**

Select 21 credits from the following: 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABUS F232</td>
<td>Contemporary Management Issues</td>
</tr>
<tr>
<td>ABUS F263</td>
<td>Public Relations</td>
</tr>
<tr>
<td>ABUS F273</td>
<td>Managing a Small Business</td>
</tr>
<tr>
<td>ANS F310</td>
<td>Indigenous Land Settlements</td>
</tr>
<tr>
<td>ANS F325</td>
<td>Native Self-Government</td>
</tr>
<tr>
<td>ANS/PS F425</td>
<td>Federal Indian Law and Alaska Natives</td>
</tr>
<tr>
<td>ANS F450</td>
<td>Comparative Indigenous Rights and Policies</td>
</tr>
<tr>
<td>BA F307</td>
<td>Introductory Human Resources Management</td>
</tr>
<tr>
<td>BA F317</td>
<td>Employment Law</td>
</tr>
<tr>
<td>BA F457</td>
<td>Training and Management Development</td>
</tr>
<tr>
<td>NORS/PS F205</td>
<td>Leadership, Citizenship and Choice</td>
</tr>
<tr>
<td>NRM F101</td>
<td>Natural Resources Conservation and Policy</td>
</tr>
<tr>
<td>NRM F464</td>
<td>Wilderness Management</td>
</tr>
<tr>
<td>RD F280</td>
<td>Resource Management Research Techniques</td>
</tr>
<tr>
<td>RD F401</td>
<td>Cultural Knowledge of Native Elders</td>
</tr>
<tr>
<td>RD F427</td>
<td>Tribal Contracting and Compacting</td>
</tr>
<tr>
<td>RD F430</td>
<td>Indigenous Economic Development and Entrepreneurship</td>
</tr>
<tr>
<td>RD F451</td>
<td>Human Resource Management for Indigenous Communities</td>
</tr>
<tr>
<td>RD F460</td>
<td>Women and Development</td>
</tr>
<tr>
<td>RD F492</td>
<td>Rural Development Seminar (may earn up to six credits)</td>
</tr>
<tr>
<td>TM F101</td>
<td>Introduction to Tribal Government in Alaska</td>
</tr>
</tbody>
</table>

1 Recommended courses. Course substitutions relevant to the concentration area may be made with approval of the rural development faculty advisor.

### NATURAL RESOURCE DEVELOPMENT

**Program Requirements**

Select 21 credits from the following: 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABUS F158</td>
<td>Introduction to Tourism</td>
</tr>
<tr>
<td>AMIT F101</td>
<td>Introduction to Mining</td>
</tr>
<tr>
<td>EBOT F100</td>
<td>Introduction to Ethnobotany</td>
</tr>
<tr>
<td>EBOT F200</td>
<td>Seminar in Ethnobotany</td>
</tr>
<tr>
<td>ENVI F101</td>
<td>Introduction to Environmental Science</td>
</tr>
<tr>
<td>FISH F101</td>
<td>Introduction to Fisheries</td>
</tr>
<tr>
<td>FISH F261</td>
<td>Introduction to Fisheries Utilization</td>
</tr>
<tr>
<td>HLRM F120</td>
<td>History of Domesticated Alaskan Ungulates</td>
</tr>
<tr>
<td>HLRM F140</td>
<td>High Latitude Range Management</td>
</tr>
<tr>
<td>NRM F101</td>
<td>Natural Resources Conservation and Policy</td>
</tr>
<tr>
<td>NRM F453</td>
<td>Harvesting and Utilization of Forest Products</td>
</tr>
<tr>
<td>NRM F461</td>
<td>Interpretive Services</td>
</tr>
<tr>
<td>NRM F464</td>
<td>Wilderness Management</td>
</tr>
<tr>
<td>RD F245</td>
<td>Fisheries and Marine Wildlife Development in Rural Alaska</td>
</tr>
<tr>
<td>RD F255</td>
<td>Rural Alaska Land Issues</td>
</tr>
<tr>
<td>RD F265</td>
<td>Perspectives on Subsistence in Alaska</td>
</tr>
<tr>
<td>RD F268</td>
<td>Rural Tourism: Planning and Principles</td>
</tr>
<tr>
<td>RD F280</td>
<td>Resource Management Research Techniques</td>
</tr>
<tr>
<td>RD F425</td>
<td>Cultural Resource Issues</td>
</tr>
<tr>
<td>RD F430</td>
<td>Indigenous Economic Development and Entrepreneurship</td>
</tr>
<tr>
<td>RD F492</td>
<td>Rural Development Seminar (may earn up to six credits)</td>
</tr>
<tr>
<td>TM F120</td>
<td>Introduction to Tribal Natural Resource Management</td>
</tr>
<tr>
<td>TM F170</td>
<td>Fundamentals of Rural Transportation</td>
</tr>
<tr>
<td>TM F225</td>
<td>Cross Connections: Adapting and Integrating Principles of Management and Conservation</td>
</tr>
</tbody>
</table>

Total Credits: 21

*1 Recommended courses. Course substitutions relevant to the concentration area may be made with approval of the rural development faculty advisor.*
### RURAL COMMUNITY BUSINESS AND ECONOMIC DEVELOPMENT PLANNING

#### Program Requirements

Select 21 credits from the following: ¹  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABUS F101</td>
<td>Principles of Accounting I</td>
<td></td>
</tr>
<tr>
<td>ABUS F151</td>
<td>Village-Based Entrepreneurship</td>
<td></td>
</tr>
<tr>
<td>ABUS F154</td>
<td>Human Relations</td>
<td></td>
</tr>
<tr>
<td>ABUS F155</td>
<td>Business Math</td>
<td></td>
</tr>
<tr>
<td>ABUS F161</td>
<td>Personal and Business Finance</td>
<td></td>
</tr>
<tr>
<td>ABUS F272</td>
<td>Small-Business Planning</td>
<td></td>
</tr>
<tr>
<td>AMIT F101</td>
<td>Introduction to Mining</td>
<td></td>
</tr>
<tr>
<td>ANS/RD F315</td>
<td>Tribal People and Development</td>
<td></td>
</tr>
<tr>
<td>ANS F325</td>
<td>Native Self-Government</td>
<td></td>
</tr>
<tr>
<td>ANS/PS F450</td>
<td>Comparative Indigenous Rights and Policies</td>
<td></td>
</tr>
<tr>
<td>CM F201</td>
<td>Construction Project Management</td>
<td></td>
</tr>
<tr>
<td>CM F202</td>
<td>Project Planning and Scheduling</td>
<td></td>
</tr>
<tr>
<td>NRM F101</td>
<td>Natural Resources Conservation and Policy</td>
<td></td>
</tr>
<tr>
<td>RD F110</td>
<td>Alaska Native Claims Settlement Act: Land Claims in the 21st Century</td>
<td></td>
</tr>
<tr>
<td>RD F250</td>
<td>Grant Writing for Community Development</td>
<td></td>
</tr>
<tr>
<td>RD F268</td>
<td>Rural Tourism: Planning and Principles</td>
<td></td>
</tr>
<tr>
<td>RD F427</td>
<td>Tribal Contracting and Compacting</td>
<td></td>
</tr>
<tr>
<td>RD F460</td>
<td>Women and Development</td>
<td></td>
</tr>
<tr>
<td>RD F470/F670</td>
<td>The Alaska Native Claims Settlement Act: Pre-1971 to Present</td>
<td></td>
</tr>
<tr>
<td>RD F492</td>
<td>Rural Development Seminar (may earn up to six credits)</td>
<td></td>
</tr>
<tr>
<td>TM F170</td>
<td>Introduction to the Indian Reservation Roads Program</td>
<td></td>
</tr>
<tr>
<td>TM F171</td>
<td>Introduction to the Indian Reservation Roads Program</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits: 21

¹ Recommended courses. Course substitutions relevant to the concentration area may be made with approval of the rural development faculty advisor.

Concentration area and elective credits may also fulfill the humanities, social science or mathematics general requirements for the B.A. degree. Prerequisites are required for many of these courses; however, prerequisites do not apply to the credit requirement.

### Minor, Rural Development

Minimum Requirements for Minor: 15 credits

Any three-credit RD course at the 300 level or above ³

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>RD electives at the F200 level or above</td>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>

Total Credits: 15

### Russian Studies

#### College of Liberal Arts

Department of Foreign Languages and Literatures  
907-474-7396  
[http://www.uaf.edu/language/](http://www.uaf.edu/language/)

### B.A. Degree

**THIS PROGRAM IS CURRENTLY SUSPENDED.**

Minimum Requirements for Degree: 120 credits

Students majoring in Russian studies are encouraged to spend one or two semesters on an exchange program in Russia.

### Degree

- B.A., Russian Studies (p. 235) — This program is currently suspended.

### Minor

- Minor (p. 236) — This program is currently suspended.

### B.A., Russian Studies

**THIS PROGRAM IS CURRENTLY SUSPENDED.**

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or higher in all courses required for the degree (major, minor, core and degree requirements).

#### General University Requirements

Complete the general university requirements. (p. 134)

#### General Education Requirements

Complete the general education requirements. (p. 137)

#### B.A. Degree and Major Requirements

Complete the B.A. degree requirements. (p. 139)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>RUSS F201</td>
<td>Intermediate Russian I</td>
<td>4</td>
</tr>
<tr>
<td>RUSS F202</td>
<td>Intermediate Russian II</td>
<td>4</td>
</tr>
<tr>
<td>RUSS F301</td>
<td>Advanced Russian</td>
<td>3</td>
</tr>
<tr>
<td>RUSS F302</td>
<td>Advanced Russian</td>
<td>3</td>
</tr>
<tr>
<td>RUSS F432</td>
<td>Studies of Russian Literature</td>
<td>3</td>
</tr>
<tr>
<td>RUSS F431</td>
<td>Studies in Russian Culture</td>
<td></td>
</tr>
<tr>
<td>RUSS F482</td>
<td>Selected Topics in Russian Literature</td>
<td></td>
</tr>
<tr>
<td>RUSS F484</td>
<td>Russian and Soviet Cinema</td>
<td></td>
</tr>
</tbody>
</table>

#### Russian Studies Electives

Select three of the following: ⁹

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH F302</td>
<td>Siberia: Past, Present, Future</td>
<td></td>
</tr>
<tr>
<td>BA F460</td>
<td>International Business</td>
<td></td>
</tr>
<tr>
<td>ECON F463</td>
<td>International Economics</td>
<td></td>
</tr>
<tr>
<td>GEOG F306</td>
<td>Geography of Russia</td>
<td></td>
</tr>
<tr>
<td>HIST F315</td>
<td>Europe: 1900–1945</td>
<td></td>
</tr>
<tr>
<td>HIST F461</td>
<td>History of Alaska</td>
<td></td>
</tr>
<tr>
<td>HIST F463</td>
<td>Imperial Russia, 1700-1917</td>
<td></td>
</tr>
</tbody>
</table>

¹ Recommended courses. Course substitutions relevant to the concentration area may be made with approval of the rural development faculty advisor.
Minor, Russian Studies

Minimum Requirements for Minor: 15 credits

Select 15 credits from the Russian studies core or an advisor-approved combination from the Russian studies core and Russian studies electives

Total Credits 15

Social Work

College of Liberal Arts
Department of Social Work
907-474-7240
www.uaf.edu/socwork/

B.A. Degree

Minimum Requirements for Degree: 120 credits

We educate generalist social work practitioners to promote the health and well-being of individuals, families and communities, emphasizing the diversity and uniqueness of rural Alaska.

We create a community of critical thinkers dedicated to becoming competent, culturally sensitive professionals engaged in lifelong learning. We prepare students for generalist social work practice with individuals, families, groups, organizations and communities; to integrate the values and ethics of the social work profession into generalist practice; to apply critical thinking to inform and communicate professional judgments; to engage diversity in generalist practice to advance human rights and advocate for social and economic justice; and to understand bio-psycho-social, spiritual, and cultural functioning and apply it to all client systems.

Graduates in social work qualify for beginning practice positions in child welfare, mental health, services for the aged, family agencies, youth programs, health services, Native corporations and other social agencies. Social work applies knowledge in the behavioral sciences to deal with the emotional and social problems of individuals, families and communities.

The curriculum includes a liberal arts base, foundation requirements in the behavioral sciences, and sequences in social policy and services, practice methods and field instruction. A major emphasis is the preparation of the student for beginning social work practice with rural and Alaska Native populations.

Students learn to engage people on a personal level and are placed in a social service agency as part of their course work during the senior year. Students must apply to participate in a social field placement and are required to complete a minimum of 400 hours over the course of two semesters in a social service agency practicing the skills learned in the program.
Minor, Social Work

Minimum Requirements for Minor: 15 credits

SWK F103X Introduction to Social Work 3
SWK F220 Ethics, Values and Social Work Practice 3
Select three SWK designated courses, excluding SWK F460, SWK F461, SWK F463 and SWK F464 9

Total Credits 15

Sociology

College of Liberal Arts
Department of Sociology
907-474-5494
www.uaf.edu/sociology/ (http://www.uaf.edu/sociology)

B.A. Degree
Admissions to this program are currently suspended.

Minimum Requirements for Degrees: 120 credits

Sociology is a scientific discipline that teaches us about ourselves and the groups of which we are a part. The sociological perspective equips the graduate with critical thinking and analytical problem-solving skills necessary for a variety of careers. A person with a sociology undergraduate degree can apply sociology in any work environment, including human services, government, business, community activism and public health agencies. The sociology department also prepares individuals to pursue graduate studies in sociology or professional programs for careers in law, medicine, business, education and social policy.

Degree

• B.A., Sociology (p. 237) — This program is currently suspended.
Minor, Sociology

Minimum Requirements for Minor: 18 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC F201X</td>
<td>Social Problems</td>
<td>3</td>
</tr>
<tr>
<td>SOC electives</td>
<td></td>
<td>15</td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

1. Fulfills the baccalaureate capstone requirement.
2. Courses from this group not used toward the major may be applied toward B.A. general degree requirements where applicable.

Statistics

College of Natural Science and Mathematics
Department of Mathematics and Statistics
907-474-7332
www.uaf.edu/dms/

Minor Only

Statistics is a collection of methods and theories for making decisions or estimating unknown quantities from incomplete information. Statistical techniques are useful, for example, in estimating plant, animal and mineral abundances; forecasting social, political and economic trends; planning field plot experiments in agriculture; performing clinical trials in medical research; and maintaining quality control in industry. Employment opportunities are excellent for statisticians in many of these areas of application.

Minor, Statistics

Minimum Requirements for Minor: 16 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F371</td>
<td>Probability</td>
<td>3</td>
</tr>
<tr>
<td>MATH F408</td>
<td>Mathematical Statistics</td>
<td>3</td>
</tr>
<tr>
<td>STAT F200X</td>
<td>Elementary Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>or STAT F300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAT F401</td>
<td>Regression and Analysis of Variance</td>
<td>4</td>
</tr>
<tr>
<td>MATH, STAT or STAT related course work</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

1. MATH F371 requires MATH F251X, MATH F252X and MATH F253X as prerequisites.
2. e.g., BA F360, GEOS F430, ANTH F424, MATH F460, etc.

Note: Courses completed to satisfy this minor can be used to simultaneously satisfy other major or general distribution requirements.

Teaching English to Speakers of Other Languages

College of Liberal Arts
Department of Linguistics
907-474-6585
www.uaf.edu/linguist/

Minor Only

The minor in teaching English to speakers of other languages will provide students with a theoretical and practical foundation for the teaching of English as a second language in the United States or as a foreign language in other countries. The curriculum will benefit students in foreign languages, linguistics, English, education and other fields of study who are interested in short- or long-term employment in the TESOL field.

Minor, Teaching English to Speakers of Other Languages

Minimum Requirements for Minor: 18 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON F235X</td>
<td>Introduction to Natural Resource Economics</td>
<td>3</td>
</tr>
<tr>
<td>NRM F101</td>
<td>Natural Resources Conservation and Policy</td>
<td>3</td>
</tr>
<tr>
<td>NRM F210</td>
<td>Principles of Sustainable Agriculture</td>
<td>3</td>
</tr>
<tr>
<td><strong>Select three from the following:</strong></td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>NRM F211</td>
<td>Introduction to Applied Plant Science</td>
<td></td>
</tr>
<tr>
<td>NRM F220</td>
<td>Introduction to Animal Science</td>
<td></td>
</tr>
<tr>
<td>NRM F380</td>
<td>Soils and the Environment</td>
<td></td>
</tr>
<tr>
<td>NRM F303X</td>
<td>Environmental Ethics and Actions</td>
<td></td>
</tr>
<tr>
<td>NRM F403</td>
<td>Environmental Decision-Making</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

Note: Students majoring in natural resources management are not eligible for the sustainable agriculture minor.
Minor, Teaching English to Speakers of Other Languages

Minimum Requirements for Minor: 16 credits

Students must earn a C- grade or better in each course except LING F200, which is graded on a pass/fail basis.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LING F101X</td>
<td>Nature of Language</td>
<td>3</td>
</tr>
<tr>
<td>LING F200</td>
<td>The Field of Teaching English to</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Speakers of Other Languages</td>
<td></td>
</tr>
<tr>
<td>LING F302</td>
<td>Second Language Acquisition</td>
<td>3</td>
</tr>
<tr>
<td>LING F315</td>
<td>English Language for Second Language</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Teaching</td>
<td></td>
</tr>
<tr>
<td>LING F410</td>
<td>Theory and Methods of Second Language</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Teaching</td>
<td></td>
</tr>
<tr>
<td>LING F451</td>
<td>English Second Language Teaching Practicum</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits 16

Note: F400-level courses require junior standing or instructor permission.

Wildlife Biology and Conservation

College of Natural Science and Mathematics
Department of Biology and Wildlife
907-474-7671
www.bw.uaf.edu (http://www.bw.uaf.edu)

B.S. Degree

Minimum Requirements for Degree: 120 credits

The undergraduate wildlife program provides basic education and training. This degree is designed for students whose objective is to accomplish the research needed to provide additional information on wild animal populations, their habitat and habitat-animal relationships. This degree is also for students whose primary interests involve interpreting, applying or disseminating research findings, rather than their acquisition. A wildlife B.S. degree is appropriate for students contemplating careers in wildlife agency administration, in developing and implementing wildlife management plans and in public information and education. The curriculum provides a solid foundation for graduate study and meets requirement for certification by The Wildlife Society.

The geographic location of the university is particularly advantageous for the study of wildlife biology. Spruce forest, aspen-birch forest, alpine tundra, bogs and several types of aquatic habitats are within easy reach. Studies can be made in many other habitats ranging from the dense forests of southeastern Alaska to Arctic tundra.

Adequate study collections of plants and animals are available, and a 2,000-acre study area is near the campus. Wildlife biology students have ample opportunity for close association with the personnel of the Alaska Cooperative Fish and Wildlife Research Unit, Institute of Arctic Biology and several local offices of the federal and state conservation agencies. These agencies often provide support for graduate student projects, and program faculty usually hire a number of students for summer fieldwork. Thus, an unusually good opportunity is available for students to gain experience and to make job connections.
Select three from the following: 9

- BIOL F425 Mammalogy
- BIOL F426 Ornithology
- WLF F425 Ecology and Management of Birds
- WLF F421 Ecology and Management of Large Mammals

Select two from the following: 6

- ECON F235X Introduction to Natural Resource Economics
- HIST F411 Environmental History
- NRM F204 Public Lands Law and Policy
- NRM F403 Environmental Decision-Making
- NRM F407 Environmental Law
- PS F447 U.S. Environmental Politics

Select at least two additional courses at the F300 level or higher (3 or 4 credits) in biology, wildlife biology, fisheries or natural resources management

Complete the baccalaureate capstone requirement as determined by the program.

Total Credits 64.5-67.5

**Note:** B.S. degree candidates are strongly urged to obtain work experience in wildlife-related positions with public resource agencies or private firms. Faculty members can help students contact potential employers.

### Requirements for biology teachers (grades 7-12)

We strongly recommend that prospective secondary science teachers seek advising from the UAF School of Education early in your undergraduate degree program so that you can be appropriately advised of the State of Alaska requirements for teacher licensure. You will apply for admission to the UAF School of Education’s postbaccalaureate teacher preparation program, a one-year intensive program, during your senior year. The above requirements apply to all candidates who apply to the UAF School of Education for licensure in biology.

Complete all the requirements of the wildlife biology B.S. degree.

**All prospective biology teachers must complete the following:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL F342</td>
<td>Microbiology 4</td>
</tr>
<tr>
<td>BIOL F481</td>
<td>Principles of Evolution 4</td>
</tr>
<tr>
<td>CHEM F321</td>
<td>Organic Chemistry I 4</td>
</tr>
<tr>
<td>and CHEM F325</td>
<td>and Organic Chemistry II 4</td>
</tr>
</tbody>
</table>

**All prospective science teachers must complete the following:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL F481</td>
<td>Philosophy of Science 3</td>
</tr>
</tbody>
</table>

Total Credits 19

### Minor, Wildlife Biology and Conservation

Minimum Requirements for Minor: 15 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>WLF F301</td>
<td>Design of Wildlife Studies 3</td>
</tr>
</tbody>
</table>

### WLF F322 Principles and Techniques of Wildlife Management 3

### WLF F410 Wildlife Populations and Their Management 3

Approved BIOL and WLF electives 6

Total Credits 15

1 Only biology or wildlife electives that are not required for the student’s major.

**Note:** Prerequisites for required courses include BIOL F115X, BIOL F116X, BIOL F371, BIOL F310 and STAT F200X or STAT F300. Depending upon a student’s major, some of these prerequisites may satisfy the 6 elective credits in biology and wildlife required for this minor.

### Women, Gender and Sexuality Studies

College of Liberal Arts
907-474-6249
www.uaf.edu/women/ (http://www.uaf.edu/women)

#### Minor Only

Women, gender and sexuality studies offers an interdisciplinary minor focusing on women, gender and sexuality in historical and contemporary experiences. In addition, the minor offers students the opportunity to study multiple issues related to gender, such as masculinities, femininities and sexualities. In addition to an introductory course and a theory course focusing on women’s studies, the minor draws from a variety of other disciplines, including Alaska Native studies, anthropology, communication, education, English, foreign languages, history, journalism, justice, linguistics, literature, music, philosophy, political science, psychology, social work and sociology. The particular strength of the program lies in being interdisciplinary, with diverse course offerings and inquiry into gender and sexuality issues. The multiple voices and perspectives provide broad understanding of issues related to women, gender and sexuality. The minor helps students prepare for a variety of personal and career pursuits, as gender issues and women are involved in every aspect of human experience.

#### Minor

- Minor, Women, Gender and Sexuality Studies (p. 240)

### Minor, Women's and Gender Studies

Minimum Requirements for Minor: 15 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>WGS F201X</td>
<td>Introduction to Women’s and Gender Studies 3</td>
</tr>
</tbody>
</table>

Select at least 12 additional credits 12

Total Credits 15

1 Additional credits from courses cross-listed with WGS [and that are from two or more disciplines] subject to the approval of a women, gender and sexuality studies advisor.

### Yup’ik Language and Culture

College of Liberal Arts
Department of Alaska Native Languages
B.A. Degree
Minimum Requirements for Degree: 120 credits

The Yup’ik language and culture, or Yupiit Nakmiin Qaneryaraat Piciryaraat-llu, program strives to reinforce a Yup’ik identity that is centrally dependent on the language and culture, prepares the student for success in the world, and leads to acceptance at home. The program is based on the philosophy that a strong command of the Yup’ik language leads to a complete understanding of the Yup’ik way of life, the world around us, and our place in it.

Depending on interest, students in the program are encouraged to complete a minor in education or Alaska Native and rural development.

Degree
- B.A., Yup’ik Language and Culture (p. 241)

B.A., Yup’ik Language and Culture
Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

Pre-Professional Opportunities

UAF students may develop a program of study that prepares them for a variety of professional or graduate programs. Pre-professional advising provides information about groundwork for admission to a specific graduate program or professional school. Most professional schools do not require a specific major for admission to their program. However, many courses may be required before admittance into the program, so a student must research admissions requirements carefully.

The Academic Advising Center (907-474-6396, uaf.advising@alaska.edu) provides academic advising for all pre-professional areas (http://www.uaf.edu/advising/student-resources/#preprof). The Biology and Wildlife Department and the Chemistry Department provide additional academic advising for the medical, dental, pharmacy, veterinary and allied health pre-professional programs. The Justice Department provides academic advising for law pre-professional programs.

General University Requirements
Complete the general university requirements. (p. 134)

General Education Requirements
Complete the general education requirements. (p. 137)

B.A. Degree Requirements
Complete the B.A. degree requirements. (p. 139)

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANS F401</td>
<td>Cultural Knowledge of Native Elders</td>
<td>3</td>
</tr>
<tr>
<td>or ANS F461</td>
<td>Native Ways of Knowing</td>
<td></td>
</tr>
<tr>
<td>ESK F130</td>
<td>Beginning Yup’ik Grammar</td>
<td>3</td>
</tr>
<tr>
<td>ESK F131</td>
<td>Beginning Yup’ik Grammar II</td>
<td>3</td>
</tr>
<tr>
<td>ESK F203</td>
<td>Conversational Central Yup’ik III</td>
<td>3</td>
</tr>
<tr>
<td>ESK F204</td>
<td>Conversational Central Yup’ik IV</td>
<td>3</td>
</tr>
<tr>
<td>ESK F205</td>
<td>Regaining Fluency in Yup’ik</td>
<td>3</td>
</tr>
<tr>
<td>ESK F206</td>
<td>Regaining Fluency in Yup’ik II</td>
<td>3</td>
</tr>
<tr>
<td>ESK F208</td>
<td>Yup’ik Composition</td>
<td>3</td>
</tr>
<tr>
<td>ESK F240</td>
<td>Introduction to Reading and Writing Yup’ik</td>
<td>3</td>
</tr>
<tr>
<td>ESK F301</td>
<td>Advanced Central Yup’ik</td>
<td>3</td>
</tr>
<tr>
<td>ESK F330</td>
<td>Yup’ik Literature/Yupiit Quliraitnek Igaryaraq</td>
<td>3</td>
</tr>
<tr>
<td>ESK F375</td>
<td>Yup’ik Philosophy/Umyarteqsaq (Umyarteqsaq)</td>
<td>3</td>
</tr>
<tr>
<td>ESK F488</td>
<td>Documenting Yup’ik Traditions/Caliarkaq (Caliarkaq)</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits: 39

1. Fulfills the baccalaureate capstone requirement.
GRADUATE DEGREES

General university and specific degree requirements for UAF graduate programs are described in this section of the catalog, along with requirements for each graduate program. You'll find instructions for applying for admission on Applying for Admission: Graduate Degree Programs (p. 27) section.

Academics, Policies and Regulations

Many academic policies and regulations apply to both graduate and undergraduate students. These guidelines are relevant to your academic experience at UAF and important for you to read and understand. Topics include definitions and requirements for official university communications, full- and part-time student status, academic progress, academic dismissal, grading system and policies, FERPA and the student code of conduct. See UAF academics, policies and regulations (p. 45).

General University Requirements

- **Catalog and Time Limit**
  You may elect to graduate under the degree requirements in effect the first semester of your enrollment in your graduate degree program or under the catalog in effect when you graduate. However, if you do not meet continuous registration requirements, you waive the right to use the catalog in effect when you first entered your graduate program; you will use either the catalog in effect during the semester of your re-entry or the catalog in effect when you graduate. All non-academic policies and regulations listed in the current catalog apply, regardless of the catalog you are using for your degree requirements. You must satisfactorily complete all course work listed on your Advancement to Candidacy form and all other degree requirements within seven years for a master's degree and 10 years for a Ph.D.

- **Grades and Grade Point Average**
  You must have a cumulative GPA of 3.0 in the courses identified on your Advancement to Candidacy form to remain in good standing and to graduate. In addition, for the purpose of satisfying degree requirements, you must earn a B (3.0) or better (no P grades) in each F400-level course and a C grade (2.0) or better in each F600-level course. NOTE: A B- is less than a 3.0 and, if obtained in a F400-level course, will not count for meeting degree requirements; likewise, a C- is less than a 2.0 and, if obtained in a F600-level course, will not count for meeting degree requirements.

- **Registration Requirement**
  Graduate students must be registered for at least 6 credits per year (fall, spring, summer), at the graduate or F400-level in courses relevant to the graduate degree, while actively working toward a degree. Those who wish to temporarily suspend their studies should obtain an approved leave of absence. Additionally you must be registered in both the semester that you defend and the semester in which you receive your degree as per the requirements under Graduation (p. 244).

- **Temporary Leave of Absence**
  If you need to temporarily suspend studies while earning a graduate degree, you must obtain an approved leave of absence. If you fail to register for at least 6 graduate or F400-level credits in a school year (fall, spring or summer semester) or to obtain a leave of absence, you will be dropped from graduate study and will have to be reinstated before resuming graduate studies. Contact the Graduate School for information at 907-474-7464.

- **Transfer Credit**
  Up to one-half of all graduate degree credits approved for a graduate program may be transferred from UAA and UAS. No more than one-third of approved program credits may be transferred from other accredited institutions outside the UA system. Transferred credits may not be used from previously earned undergraduate degrees. A minimum B grade (3.0) is required in all graduate courses presented for transfer. A P grade (pass) is not acceptable for transfer credit.

- **Credits Earned While Nondegree Seeking**
  A student who earned post-baccalaureate degree credits while studying as a nondegree student at UAF may, with approval of the graduate advisory committee, apply those credits toward a graduate degree. However, no more than one-half of all credits used to meet the requirements of a graduate degree may be credits earned as a nondegree student.

- **Course Restrictions**
  You may not use credit by examination, audited courses, F100-, F200-, F300-, and F500-level courses, or courses taken under the credit/no credit option to fulfill the basic course requirements of any course program. No more than 12 credits of special topics courses (F693 or F695) or individual study (F697) may be used toward a graduate degree. The dean of the Graduate School must approve requests for exceptions to the limit.

- **Deficiencies**
  Your advisory committee may require that you remedy certain deficiencies in your program. Your committee will determine early in the program both how to remedy the deficiencies and the minimum level of performance required of you. Graded undergraduate courses taken to remedy a deficiency must receive a grade of B (3.0) or better. Deficiency courses are not listed on the Advancement to Candidacy form.

- **English Proficiency**
  You must be proficient in written and oral English. Your advisory committee will determine requirements to remove any such deficiencies. These requirements may not be used to fulfill the language/research tool requirement of some departments.

- **Cooperative Programs**
  Some students may develop cooperative programs using specific courses from other universities before being admitted to graduate study at UAF. As part of the application process, the cooperative program must be included in an approved Graduate Study Plan. The student must complete a minimum of 12 semester credits in residence at UAF, in addition to thesis and research. The following guidelines are for collaborative Ph.D. graduate studies across all UA academic units. Some individual degree programs have additional requirements which are included in specific program descriptions in the graduate degree program (p. 247) section. The guidelines described here apply only to programs that have not established different requirements.

1. At least four faculty members shall serve on the graduate advisory committee for each Ph.D. student. At least two committee members shall be UAF faculty. One of the UAF committee members must be on a tenure-track appointment in a Ph.D.-granting department. The committee shall be chaired or co-chaired by a UAF faculty member.
2. The graduate advisory committee and its chair and/or co-chairs must be approved by the program director and the dean of the Graduate School.
3. UAF rules and regulations on graduate studies shall apply to all UAF graduate students, including those concurrently enrolled at UAA and UAS.

4. The graduate advisory committee must meet at least once a year to update the Graduate Study Plan and to review the student’s progress toward the degree. The annual progress report must be signed by all committee members and submitted to the dean of the Graduate School.

5. A comprehensive exam committee composed of the student’s advisory committee will administer the Ph.D. comprehensive exam for each student.

6. The Ph.D. thesis defense is to be conducted on the UAF campus.

GRADUATE ADVISORY COMMITTEE

A graduate advisory committee is normally appointed within the first semester of study to guide students in developing and completing their degree programs. Committee members for graduate degrees are approved by the appropriate dean, usually upon recommendation of the department head, and by the dean of the Graduate School. Advisory committees for interdisciplinary students are approved by the dean of the Graduate School. Each interdisciplinary student follows procedures through the department of his or her advisory committee chair. The committee chair’s department will be the “home” of the interdisciplinary student for academic purposes.

The graduate advisory committee's major responsibilities are to formulate a Graduate Study Plan, in consultation with the student, by the end of the student’s second semester in the graduate program; to develop a tentative timetable for completion of all requirements for the degree program; to monitor the student’s progress in course work and research; to provide advice and feedback to the student on that progress; to file an Annual Report of Graduate Student Advisory Committee with the Graduate School; to approve, where appropriate, a research topic; to supervise the preparation of the research thesis or project when one is required; to uphold the standards of the college/school and the university; to inform the dean, in writing, if a student’s performance is inadequate and provide relevant recommendations; and to formulate and conduct the comprehensive examination and other exams as required by the department. The student’s advisor (major professor, advisory committee chair) acts as head of the graduate advisory committee and takes the lead in fulfilling these responsibilities.

- **Master’s Degree**
  The core advisory committee of master’s degree students must consist of three approved UAF faculty members. Participating faculty above this number are considered additional committee members. Committee membership must be approved by the home department, unit dean and the dean of the Graduate School. Retired or emeritus UAF faculty who have an association with the home department may serve on doctoral advisory committees, upon expressed approval by the home department. Faculty from other universities and other professionals who are not employed by UAF may serve as either core or additional committee members on doctoral advisory committees (all must have a Ph.D. or equivalent), upon expressed approval by the home department. They may not serve as the chair of an advisory committee, but may serve as co-chair.

- **Doctoral Degree**
  The core advisory committee of doctoral degree students must consist of four approved UAF faculty members (all must have a Ph.D. or equivalent). For interdisciplinary students, one advisory committee member must be from a Ph.D.-granting department or be approved as the graduate school representative by the graduate school dean, based on prior experience advising Ph.D. students. Participating faculty above this number are considered additional committee members. Committee membership must be approved by the home department, unit dean and the dean of the Graduate School. Retired or emeritus UAF faculty who have an association with the home department may serve on doctoral advisory committees, upon expressed approval by the home department. Faculty from other universities and other professionals who are not employed by UAF may serve as either core or additional committee members on doctoral advisory committees (all must have a Ph.D. or equivalent), upon expressed approval by the home department. They may not serve as the chair of an advisory committee, but may serve as co-chair.

GRADUATE STUDY PLAN

Graduate students must file a Graduate Study Plan with the Graduate School before the end of their second semester in a UAF graduate degree program. The GSP outlines the curriculum of study and a timetable the student must follow in meeting graduate degree requirements. The GSP is prepared by the advisory committee in consultation with the student. It is an agreement of mutual expectations between the student and the faculty committee. The GSP not only contains the specific degree requirements but also indicates the mechanism for fulfilling these requirements (e.g., via course work, examinations, readings, internships or other supervised experience) and a projected timetable.

CHANGING PROGRAMS

Graduate students may change their program only when the areas of emphasis or the degree are within the same department (e.g., from an M.A. in anthropology to a Ph.D. in anthropology, or from a Ph.D. in Biochemistry and molecular biology to a Ph.D. in environmental chemistry). If the change meets those requirements, you may change programs by completing a change of major form, available from the Graduate School’s website. Regardless of when you submit the form, a change of program doesn’t become effective until the beginning of the upcoming fall or spring semester. If, however, you want to change to a program in a different department, school or college (e.g., from an M.S. in civil engineering to an M.S. in biology), you must submit a new application for admission so faculty in the new degree program may fully review your credentials. For more information, contact the Graduate School at 907-474-7464.

ADVANCEMENT TO CANDIDACY

Advancement to candidacy formally establishes your specific degree requirements and should be done as soon as possible after qualifying. You are required to submit your application for advancement to candidacy one semester before you are awarded your degree.

The finalized Graduate Study Plan should be the basis for completing the Advancement to Candidacy form. Students must have a cumulative GPA of 3.0 in the courses identified on the Advancement to Candidacy form. For the purpose of satisfying degree requirements students must earn a B (3.0) or better (no P grades) in each F400-level course and a C grade (2.0) or better in each 600 level course. A B- is less than a 3.0 and, if obtained in a F400 course, will not count for meeting degree requirements; likewise a C- is less than a 2.0, and if obtained in a F600-level course, will not count for meeting degree requirements.
Admission to graduate study does not imply advancement to candidacy for a degree. The graduate advisory committee has the option of refusing to recommend a student to candidacy.

- **Master’s Degree**
  You may apply for advancement to candidacy for a specific master’s degree if you are in good standing and you have:
  1. Satisfactorily completed at least 9 semester credits of graduate study at UAF (study after admission to a specific degree program).
  2. Received approval of a provisional thesis or project topic, if applicable.
  3. Received approval of the finalized Graduate Study Plan, including specific course work to be completed and any other requirements.

- **Doctoral Degree**
  You may apply for advancement to candidacy for the Ph.D. degree if you are in good standing and you have:
  1. Completed the full time equivalent of two academic years of graduate study.
  2. Completed at least 9 UAF credits.
  3. Received approval of the Graduate Study Plan.
  4. Obtained approval of the advisory committee for the title and synopsis of the thesis.
  5. Passed a written comprehensive examination.

**EXAMINATIONS**

Examinations are given in both written and oral form, depending upon the policy of the program unit, the decision of the advisory committee and the specific examination being taken.

- **Placement Examinations**
  Some programs have formalized placement exams designed to pinpoint a student’s strengths and weaknesses as an aid in developing the Graduate Study Plan. This evaluation is carried out during the student’s first semester at the university, preferably in the first month, and may be written, oral or both.

- **Qualifying Examinations**
  A few master’s degree programs require the student to complete a written and/or oral qualifying examination before advancement to candidacy. This examination is an interim evaluation of academic progress; the student may pass unconditionally or conditionally. A conditional pass indicates specific weaknesses that the student must remedy before degree requirements are completed. The Graduate Study Plan and later the Advancement to Candidacy form should include mechanisms for addressing these weaknesses.

- **Comprehensive Examination**
  The comprehensive examination is given to determine whether the student has integrated knowledge and understanding of the principles and concepts underlying major and related fields. It may be oral or written or a combination of both. Ph.D. degree students normally take a written comprehensive examination within two academic years of entering the program, but no later than two academic years before the expected completion of the degree (whichever is earliest). The Ph.D. student’s advisory committee may choose to give an oral examination to supplement the written comprehensive examination. Each Ph.D. student must pass the comprehensive examination prior to advancement to candidacy.

- **Defense of Project**

- **Defense of Thesis or Dissertation Examination**
  Graduate students who are required to complete a thesis in partial fulfillment of degree requirements must pass an oral defense of project examination. The defense will consist of a presentation followed by questions on the research, analysis and written presentation. All committee members must participate in the project defense.

- **Examination Committee**
  In most cases, the student’s graduate advisory committee prepares and gives the examinations under guidelines formulated by the faculty of the department in which the degree is being taken. In a few programs, examinations are replaced or supplemented by departmental or school examinations and administered by an established examining committee.

- **Outside Examiner**
  An outside examiner representing and appointed by the dean of the Graduate School is required at all Ph.D. oral examinations (except the placement examination). The examiner must be from a different department than the student and the chair of the advisory committee. The outside examiner is present to determine that a stringent, unbiased examination is fairly administered and evaluated.

- **Language/Research Tool Requirement**
  Proficiency in a second language or a research tool is not a university requirement, but some departments or programs may make this requirement. An advisory committee may specify a language or research tool if its requirements exceed those of the program. The specific language or research tool is determined by the advisory committee, guided by policies of the administrative unit in which the degree is offered. Generally, competency in a second language is required. However, upon approval of the department or program head, the committee may substitute computer languages, statistics, mathematics, or study in areas such as history or philosophy of science, business, administration, law, or economics. In all instances, topics selected must support the student’s degree program.

**GRADUATION**

- **Responsibility**
  You are responsible for meeting all requirements for graduation. You must be registered for a minimum of 3 graduate credits within your discipline and maintain enrollment in the semester that you successfully defend your thesis, and you must be registered for a minimum of 1 graduate credit within your discipline and maintain enrollment during the semester that you graduate. Your Advancement to Candidacy must be received by the Graduate School the semester before you intend to graduate.

- **Application for Graduation**
  You must file an application for graduation and a non-refundable fee with the Office of Admissions and the Registrar. We encourage you to work with your advisor/committee chair before applying for graduation to meet any departmental deadlines. Applications for graduation filed after the published deadline will be processed for graduation the following semester. You need not have all
requirements met before you apply for graduation. The application is an indication that you are planning to finish all degree requirements during the intended graduation semester. Students who apply for graduation and who do not complete degree requirements by the end of the semester must reapply for graduation and pay the fee again.

- Diplomas and Commencement
  UAF issues diplomas to graduates three times each year: in September, January and June. All students who complete degree requirements during the academic year are invited to participate in the annual commencement ceremony at the end of spring semester. Names of students receiving degrees appear in the commencement program and are released to the media unless the student has a confidential hold on file with the Office of the Admissions and the Registrar. Students who do not want their names to be released may so indicate on the application for graduation form. Graduates are responsible for ordering caps and gowns through the UAF bookstore in early spring.

**Graduate Assistantships**

Graduate assistants receive stipends for either a semester or the academic year. Graduate assistants can be paid for a maximum of 20 hours per week while school is in session. Students with assistantships must be registered for at least 9 credits during both the fall and spring semesters (audited credits are not eligible).

Any exceptions to the 20-hour per week rule must be approved by the student’s committee chair, department head, college dean and dean of the Graduate School. Complete a Student Employee Waiver Form (available at http://www.alaska.edu/hr/forms/int_personnelforms/) to request approval of more than 20 student work hours per week. Foreign nationals on temporary student visas are not permitted to work more than 20 hours a week while classes are in session and are not eligible for an overload waiver.

Teaching assistantships include a tuition payment by the university for no more than 10 credits each semester if the workload is 15 to 20 hours per week. If the workload is 10 to 14 hours per week, no more than 5 credits will be included. No tuition will be included if the workload is less than 10 hours per week.

Research assistantships include a tuition payment by grants/contracts for no more than 10 credits during each semester if the workload is 15 to 20 hours per week. If the workload is 10 to 14 hours per week, no more than 5 credits will be included. No tuition will be included if the workload is less than 10 hours per week.

Tuition payments must be used for courses directly related to the student’s degree program. All fees are the responsibility of the student unless the department or institute makes other arrangements with the UAF Graduate School prior to registration.

A graduate student with a GPA of less than 3.0 for one semester will be allowed to petition to continue as a graduate assistant for the next semester, but only once. The petition by the student must be approved by the student’s advisory committee chair, department head, college dean and dean of the Graduate School.

**Graduate Certificates**

Graduate certificate programs are designed to provide education past the baccalaureate level and/or to meet clearly defined educational needs of students who have already completed a master’s degree. Completion of a graduate certificate should prepare students to better accomplish their goals or meet employment criteria.

These programs typically require between 12 and 15 credits and provide the student with formal recognition of mastery of a clearly defined academic topic. The credit hours may be applied to other graduate programs where applicable.

**Requirements for Graduate Certificates**

In order to earn a graduate certificate, students must be admitted to the program and complete the requirements listed in the program section of this chapter. Most graduate certificates are between 12-18 credits. You must have a cumulative GPA of at least 3.0 in all course work and be registered in the semester you plan to graduate.

Students may elect to complete their program under the requirements of the catalog in effect at the time of formal acceptance to a graduate certificate program or the catalog in effect at the time of graduation. Students may earn more than one graduate certificate by completing all requirements for each additional program.

**Requirements for Graduate Degrees**

**Master’s Degrees**

UAF offers research-oriented (thesis or project) and practice-oriented (non-thesis) master’s degrees. Research-oriented programs are designed to direct graduate students toward scholarly activity that leads to the acquisition of new knowledge. Practice-oriented programs prepare graduate students for professional practice and direct them toward application or transmission of existing knowledge. All degree requirements must be completed within a seven-year period. UAF tenured faculty, tenure track faculty and research faculty are not eligible to become candidates for a graduate degree within the discipline in which they teach.

The minimum requirements for a master’s degree at UAF are as follows (individual departments may have additional requirements):

- **Steps Required for All Master’s Degrees**
  1. Formulate a unified degree program, in cooperation with your graduate advisory committee. Degree programs must be composed of courses in the discipline or clearly related to and/or supportive of that discipline. All courses to be applied toward the degree must be approved by the advisory committee and follow the requirements set forth by the department that sponsors the degree.
  2. Specifically, master’s degree students must:
     a. Meet all requirements set forth in the General University Requirements (p. 242) section.
     b. Submit an Appointment of Committee form by the end of the first semester of study.
     c. Submit a Graduate Study Plan by the end of the second semester of study.
     d. Submit a Report of Advisory Committee form by May 15 of every year.
     e. Pass a written and/or oral comprehensive examination which may be combined with a project or thesis defense. Some programs (e.g., the MBA degree program) may substitute a capstone course or synthesizing paper for the comprehensive examination. This includes demonstration of the ability to synthesize information in the field at a level appropriate for a master’s degree.
• **Credit Requirements**

1. Successfully complete a minimum of 30 semester credits, of which 21 semester credits must be at the graduate level, including thesis and research. Remaining credits may be applied from courses at the F400-level.

2. No F100-, F200-, F300-, or F500-level credits or audited courses may be applied toward master’s degree requirements.

3. For programs requiring a thesis, a maximum of 12 credits of thesis (699)/research (698) (with a minimum of 6 credits of thesis) may be applied toward degree requirements. For programs requiring a project, a maximum of 6 research (698) credits may be applied toward degree requirements. A student may enroll in as many thesis and/or research credits as needed to remain in good standing.

• **Second Master’s Degree Programs**

At the discretion of your advisory committee, admitting department and dean, you may transfer up to 20 percent of the minimum number of credits required for a UAF master’s degree from a previously earned master’s degree. Transferred credit may not be research, project or thesis credit. The transferred credit must be for completed graduate-level courses and not portions of a course. For a 30-credit master’s degree, for example, up to 6 graduate credits may be transferred; for a 45-credit master’s degree, up to 9 graduate credits may be transferred. The following requirements apply to students who wish to pursue a second master’s degree:

1. Submit a new application, including application processing fee, updated transcripts and three new reference letters.

2. Acceptable GRE scores submitted previously may be applied to a second master’s degree.

3. Fulfill all general university requirements for the second master’s degree, including taking a comprehensive exam (if required), completing a minimum of 30 semester credits (including thesis, research and transfer credits), and passing a defense of thesis or project.

4. All work used to fulfill degree requirements for a second master’s degree must be completed within seven years.

### DOCTOR OF PHILOSOPHY DEGREE

The Doctor of Philosophy degree is granted in recognition of scholarly attainment and proven ability. UAF tenured faculty, tenure track faculty and research faculty are not eligible to become candidates for a graduate degree within the discipline in which they teach at UAF.

• **Steps Required for all Doctoral Degrees**

1. The Ph.D. degree requires at least three full years of study beyond the baccalaureate degree. (See transfer credit (p. 30).)

2. In addition to satisfactory completion of a plan of study developed in accordance with requirement listed above, the Ph.D. candidate must:

   a. Meet all requirements set forth in the General University Requirements (p. 242) section.

   b. Submit an Appointment of Committee form by the end of the first semester of study.

   c. Submit a Graduate Study Plan by the end of the second semester.

   d. Submit a Report of Advisory Committee form by May 15 of every year.

   e. Pass a written comprehensive exam.

   f. Submit an Advancement to Candidacy form to the Graduate School. Once submitted, this form supplants the GSP and formally establishes specific degree requirements.

   g. Satisfactorily complete a dissertation that is a substantial contribution to the body of knowledge in the area studied.

   h. Pass an oral defense of the dissertation (an outside examiner is required). The oral defense of the dissertation must be conducted on the UAF campus.

   i. Apply for graduation and be registered for a minimum of 3 graduate credits within your discipline and maintain enrollment in the semester that you successfully defend your thesis and you must be registered for a minimum of 1 graduate credit within your discipline and maintain enrollment during the semester that you graduate.

   j. Complete all degree requirements within the 10-year time limit.

   k. Archive dissertation in the UAF Rasmuson Library.

### Exceptions to Degree Requirements

 Deviations from academic requirements and regulations for graduate students must be approved by academic petition using the form available on the Graduate School website. Petitions must be approved by the student’s graduate advisory committee, the department chair of the student’s program, the dean of the school or college and the dean of the Graduate School.

### Types of Master’s Degrees

#### MASTER OF ARTS — WITH THESIS

1. Successfully complete at least 30 credits of course work including at least 6 credits of thesis (F699). No more than 12 thesis/research (F699/F698) credits may be counted toward the minimum degree credits. At least 21 credits, including those earned for thesis and research/project, must be at the F600-level.

2. Pass a written and/or oral comprehensive examination (may be combined with the thesis defense).

3. Present and defend the thesis.

4. Submit a completed and signed thesis defense form to the Graduate School.

5. Archive the thesis in the UAF Rasmuson Library.

#### MASTER OF ARTS — WITH PROJECT

1. Successfully complete at least 30 credits of course work including at least 6 credits of project work (F698), unless the degree requirements of a particular program specify that a 3-credit project is permitted. No more than 6 research (F698) credits may be counted toward the
minimum degree credits. At least 21 credits, including those earned for thesis and research/project, must be at the F600-level.
2. Pass a written and/or oral comprehensive examination (may be combined with the project defense).
3. Present and defend the project.
4. Submit a completed and signed project defense form to the Graduate School.
5. Archive the project in the UAF Rasmuson Library.

MASTER OF SCIENCE — WITH PROJECT
1. Successfully complete at least 30 credits of course work including at least 6 credits of project work (F698), unless the degree requirements of a particular program specify that a 3-credit project is permitted. No more than 6 research (F698) credits may be counted toward the minimum degree credits. At least 21 credits, including those earned for thesis and research/project, must be at the F600-level.
2. Pass a written and/or oral comprehensive examination (may be combined with the project defense).
3. Present and defend the project.
4. Submit a completed and signed project defense form to the Graduate School.
5. Archive the project in the UAF Rasmuson Library.

MASTER OF SCIENCE — WITH THESIS
1. Successfully complete at least 30 credits of course work including at least 6 credits of thesis (F699). No more than 12 thesis/research (F699/F698) credits may be counted toward the minimum degree credits. At least 21 credits, including those earned for thesis and research/project, must be at the F600-level.
2. Pass a written and/or oral comprehensive examination (may be combined with the thesis defense).
3. Present and defend the thesis.
4. Submit a completed and signed thesis defense form to the Graduate School.
5. Archive the thesis in the UAF Rasmuson Library.

MASTER OF BUSINESS ADMINISTRATION
1. Complete at least 30 credits of course work. At least 24 credits must be at the F600-level (6 at the F400-level).
2. Successful completion of a capstone course that includes demonstration of the ability to synthesize information in the field at a level appropriate for a master’s degree.

MASTER OF CIVIL ENGINEERING
1. Complete at least 30 credits of course work. At least 21 credits, including those earned for thesis and research/project, must be at the F600-level.
2. Complete a comprehensive exam or capstone course that includes demonstration of the ability to synthesize information in the field at a level appropriate for a master’s degree.
3. Archive the thesis or project in the UAF Rasmuson Library.

MASTER OF EDUCATION
A general description is available in education (p. 263).

MASTER OF ELECTRICAL ENGINEERING
1. Complete at least 32 credits of course work. At least 26 credits, including those earned for thesis and research/project, must be at the F600-level.
2. Complete a comprehensive exam or capstone course that includes demonstration of the ability to synthesize information in the field at a level appropriate for a master’s degree.
3. Archive the thesis or project in the UAF Rasmuson Library.

MASTER OF FINE ARTS
A general description is available in creative writing (see English (p. 278)) and art (p. 250).

MASTER OF NATURAL RESOURCES MANAGEMENT
A general description is available in the graduate degree programs (p. 293) listing.

SPECIALIZED PROGRAMS
The master’s programs in northern studies, administration of justice and rural development at UAF have been selected as unique or specialized graduate programs by the Western Regional Graduate Program of the Western Interstate Commission for Higher Education. This designation means that residents of Arizona, Colorado, Hawai’i, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, Utah, Washington and Wyoming who major in any of these specialized programs at UAF pay resident tuition.

PEACE CORPS MASTER’S INTERNATIONAL PROGRAM
UAF and the U.S. Peace Corps participate in a cooperative master’s degree program. This program provides an opportunity to integrate graduate study in rural development or natural resources management with international development practice through Peace Corps field experience.

To complete the program, two semesters of course work for the master’s degree in rural development or natural resources management must be taken on the campus. This year of course work is followed by a two-year Peace Corps Volunteer assignment. On completion of the volunteer assignment, students return to the UAF campus to finish the master’s degree requirements.

Students completing the program will be awarded a Master of Arts degree in rural development in the College of Rural and Community Development or a Master of Science degree in natural resources management in the School of Natural Resources and Extension.

Additional information is available by email at uaf-grad-school@alaska.edu or by calling 907-474-7464.

Graduate Degree Programs
Anthropology
College of Liberal Arts
Department of Anthropology
907-474-7288
www.uaf.edu/anthro/ (http://www.uaf.edu/anthro)
M.A., Ph.D. Degrees
Minimum Requirements for Degrees: M.A.: 30-36 credits; Ph.D.: 18 thesis credits

The anthropology program offers a balanced and flexible program of academic courses and research opportunities in cultural anthropology, linguistic anthropology, archaeology and biological anthropology. Anthropology contributes to an understanding of the complex problems of human behavior, biology, language, cultural and social organization, and the relationship of humans to their environments. Research carried out in the field, laboratory and library emphasizes past and present modes of living and the origins and distribution of peoples and cultures throughout the world, with special attention to the circumpolar North.

The graduate program emphasizes general preparation in the field of anthropology. Such preparation enables graduates of the master’s program to pursue more advanced training leading to the Ph.D. in anthropology, prepares them to teach anthropology within secondary education and/or undergraduate levels of higher education or prepares students for career positions with various levels of government in which some anthropological background and/or expertise is beneficial. Field research in Alaska is a common experience for graduate students in anthropology. All students must have fieldwork and laboratory experience appropriate to the discipline or subdiscipline.

The primary focus of the Ph.D. program is on the circumpolar North, although graduate students and faculty also conduct research elsewhere, in particular Africa and North America. The Ph.D. is available with an emphasis in any of the four subfields of anthropology.

Degrees
- M.A., Anthropology (p. 248)
- Ph.D., Anthropology (p. 248)

M.A., Anthropology
- Complete the admission process including the following:
  1. Submit GRE scores.

Minimum Requirements for Degree: 30-36 credits

General University Requirements
Complete the general university requirements. (p. 242)

Master’s Degree Requirements
Complete the master’s degree requirements. (p. 245)

Program Requirements
ANTH F629 Structures of Anthropological Argument 3
ANTH F652 Research Design and Professional Development Seminar 3
ANTH F698 Non-Thesis Research/Project or ANTH F699 Thesis 6

Complete four semesters of a foreign language or proficiency in a research tool. 1
Select 18 credits established by the advisory committee 18

Total Credits 30

1 Students wanting a linguistic anthropology emphasis must complete the foreign language option as well as taking ANTH F631 and ANTH F632 as part of their 18 credits.

Note: At least 24 credits must be regular course work (not research or thesis) with 21 of these credits at the F600 level.

Ph.D., Anthropology
- Complete the admission process including the following:
  1. Submit GRE scores.

Minimum Requirements for Degree: 18 credits

General University Requirements
Complete the general university requirements. (p. 242)

Ph.D. Degree Requirements
Complete the Ph.D. degree requirements. (p. 246)

Program Requirements
Complete course work in anthropology and related disciplines as determined by the advisory committee.

Complete one foreign language and a research tool, or two foreign languages.

Arctic and Northern Studies
College of Liberal Arts
907-474-7126
Interdisciplinary
www.uaf.edu/northern/ (http://www.uaf.edu/northern)

M.A. Degree
Minimum Requirements for Degree: 30 credits

The Arctic northern studies program offers an interdisciplinary study of Arctic and northern problems and policy issues. The purpose of the Arctic and northern studies program is to give interested students a broader study of the circumpolar region — its environment, peoples and challenges.

The geographic location of UAF is outstanding for the study of Arctic and northern issues. Students examine the countries and regions throughout the circumpolar North, and their distinctive challenges, such as the survival of indigenous populations, environmental and wilderness issues, high rates of alcoholism and suicide, fragile environments, adaptation to extreme cold and cycles of light and darkness, and adult development in small frontier societies.

The M.A. program is designed especially for students who live and work in the North and who want to expand their knowledge of the history, economics, politics, psychology and anthropology of Arctic and northern regions. Many Arctic and northern studies students are seeking employment with northern agencies and want to develop a broad perspective on Arctic and northern issues. Some students plan to pursue doctoral work in a discipline such as history or anthropology and seek a master’s degree with a broad approach. Other students are employed as teachers, military personnel or agency staff and want a rich, interdisciplinary program. The program is suitable for any of these goals, and is designed to be compatible with either full- or part-time graduate study.
The M.A. program offers four concentrations: northern history; Arctic policy; environmental politics and policy; and individualized study. Students of northern history benefit from the availability of the Alaska and circumpolar collections of the Rasmuson Library, UA Museum of the North and the Polar Regions Collection. The Arctic policy concentration addresses international, national and subnational policy structures and processes, as well as the aims of policies developed to address challenges in the Arctic region. The environmental politics and policy concentration focuses on political, social and psychological responses to environmental change. The individualized study concentration allows students to create a concentration with the guidance of their graduate advisory committee.

The program offers a thesis or nonthesis option. The choice of option is guided by the student’s interests and goals, the graduate advisory committee, and the requirements of the university. Faculty in the program are drawn from such disciplines as Alaska Native studies, art, anthropology, economics, English, geography, history, library science, political science and psychology.

For information on studying at McGill University, Montreal, Canada; the University of Copenhagen, Denmark; or opportunities for study in Russia and the Commonwealth of Independent States, see Study Abroad and International Exchange Programs (p. 75).

**Degree**

- M.A., Arctic and Northern Studies (p. 249)

**M.A., Arctic and Northern Studies**

Concentrations: Individualized Study, Environmental Politics and Policy, Northern History, Arctic Policy

Minimum Requirements for Degree: 30 credits

<table>
<thead>
<tr>
<th>General University Requirements</th>
<th>Complete the general university requirements. (p. 242)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master’s Degree Requirements</td>
<td>Complete the master’s degree requirements. (p. 245)</td>
</tr>
<tr>
<td>Program Requirements</td>
<td></td>
</tr>
<tr>
<td>NORS F600 Perspectives on the North</td>
<td>3</td>
</tr>
<tr>
<td>NORS F601 Research Methods and Sources in the North</td>
<td>3</td>
</tr>
<tr>
<td>Select two elective courses at the F400 or F600 level</td>
<td>6</td>
</tr>
<tr>
<td>NORS F698 Non-Thesis Research/Project or NORS F699 Thesis</td>
<td>6-12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concentrations</th>
<th>Select one of the following concentrations: 12-21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individualized Study</td>
<td></td>
</tr>
<tr>
<td>Environmental Politics and Policy</td>
<td></td>
</tr>
<tr>
<td>Northern History</td>
<td></td>
</tr>
<tr>
<td>Arctic Policy</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits 30-45

**Concentrations**

**INDIVIDUALIZED STUDY**

The individualized study concentration may be used as a basis for a M.A. thesis/project typically under the direction of a faculty member in the most relevant department.

Select 12 credits of the following:

- Course offerings selected from the relevant department and/or 1
- Courses offered within the Northern Studies program, including those in the other concentrations and/or
- Select any from the following:
  - NORS F640 Ethics and Reporting in the Far North
  - NORS F652 International Relations of the North
  - NORS F660 Government and Politics of Canada
  - NORS F662 Alaska Government and Politics
  - NORS F668 Government and Politics of Russia

Total Credits 12

1 Some students may, with the consent of their graduate committee, develop an individualized program with an emphasis on Alaska Native studies, northern art, northern sociology, northern policy studies, or another northern field or discipline.

**ENVIRONMENTAL POLITICS AND POLICY**

The environmental politics and policy concentration may be used as a basis for the M.A. thesis/project.

Select 12 credits from the following:

- NORS/PS F603 Public Policy
- NORS/PS F647 U.S. Environmental Politics
- NORS F648 Environmental Politics of the Circumpolar North
- NORS/PS F654 International Law and the Environment
- NORS/PS F655 Political Economy of the Global Environment
- NORS/PS F656 Science, Technology, and Politics
- NORS/PS F658 Comparative Environmental Politics
- NORS F613 Wilderness and Environmental Psychology

Total Credits 12

Note: The environmental politics and policy concentration is a clear track toward interdisciplinary doctoral programs.

**NORTHERN HISTORY**

The northern history concentration may be used for the M.A. thesis/project.

Select 9 credits from the following:

- NORS F690 Researching and Writing Northern History 3
- or HIST F490 Researching and Writing Northern History
- HIST F470 Seminar in Alaskan History
- NORS F661/ HIST F662 History of Alaska
- NORS/HIST F663 Imperial Russia, 1700-1917
M.F.A., Art

- Complete the following admission requirements:
  a. Submit a separate portfolio of work (about 20 slides or the appropriate equivalent depending on field of study).
  b. Complete a B.F.A. degree from a university other than UAF, or complete one consecutive year of classes from an accredited M.F.A. program other than UAF. In cases where an exceptional portfolio is submitted, students with a B.A. in art, or other undergraduate degree, will be accepted provisionally and with the condition that they make up any deficiencies as determined by their graduate committee. The same requirements are observed with the determination of previous schooling from a university other than UAF.

Concentrations: Ceramics, Computer Art, Drawing, Native Arts, Painting, Photography, Printmaking, Sculpture

Minimum Requirements for Degree: 60 credits

Master’s Degree Requirements
Complete the master’s degree requirements. (p. 245)

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART F661</td>
<td>Mentored Teaching in Art</td>
<td>1</td>
</tr>
<tr>
<td>ART F663</td>
<td>Seminar in Art History</td>
<td>3</td>
</tr>
<tr>
<td>ART F690</td>
<td>Current Problems</td>
<td>3</td>
</tr>
<tr>
<td>ART F698</td>
<td>M.F.A. Project</td>
<td>5</td>
</tr>
<tr>
<td>or ART F699</td>
<td>M.F.A. Thesis Project</td>
<td></td>
</tr>
</tbody>
</table>

Electives in art history, humanities or philosophy: 2 credits

Courses may be chosen from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART F601</td>
<td>Ceramics</td>
</tr>
<tr>
<td>ART F603</td>
<td>Graduate Photography</td>
</tr>
<tr>
<td>ART F605</td>
<td>Drawing</td>
</tr>
<tr>
<td>ART F607</td>
<td>Printmaking</td>
</tr>
<tr>
<td>ART F609</td>
<td>Metalsmithing</td>
</tr>
<tr>
<td>ART F611</td>
<td>Sculpture</td>
</tr>
<tr>
<td>ART F613</td>
<td>Painting</td>
</tr>
<tr>
<td>ART F619</td>
<td>Life Drawing</td>
</tr>
<tr>
<td>ART F633</td>
<td>Graduate Field Painting</td>
</tr>
<tr>
<td>ART F648</td>
<td>Native Arts</td>
</tr>
<tr>
<td>ART F671</td>
<td>Two- and Three-Dimensional Computer Design</td>
</tr>
<tr>
<td>ART F672</td>
<td>Advanced Computer Visualization in Art</td>
</tr>
<tr>
<td>ART F684</td>
<td>Multimedia Theory and Practice</td>
</tr>
<tr>
<td>JRN F605</td>
<td>Advanced Photography Seminar</td>
</tr>
</tbody>
</table>

Total Credits 57

Degrees

- M.F.A., Art (p. 250)
The F400-level classes in these areas can be taken with additional requirements.

Note: Graduate students are required to be enrolled in a mentored teaching section while teaching.

**Atmospheric Sciences**

College of Natural Science and Mathematics  
Department of Atmospheric Sciences  
907-474-7368  
www.uaf.edu/asp/  
(Mhttp://www.uaf.edu/asp

**M.S., Ph.D. Degrees**

Minimum Requirements for Degrees: M.S.: 30 credits; Ph.D.: 18 thesis credits

The field of atmospheric science covers a wide variety of disciplines involving the physical and chemical properties and processes of the atmosphere. Emerging trends in atmospheric science stress the interactions of the atmosphere with other components (i.e. land, sea ice, ocean) in the total earth system.

The UAF Geophysical Institute, the International Arctic Research Center and other university research institutes support active research programs in high-latitude atmospheric science that include faculty from the biology, chemistry, physics and other departments. Current research by atmospheric sciences focuses on: atmospheric chemistry/biogeochemistry, climate modeling, cloud and aerosol physics, mesoscale modeling, numerical weather prediction and aviation weather. In addition, scientists affiliated with the research institutes conduct research on ocean-atmosphere interactions, dynamic meteorology, microclimatology, polar meteorology, radiative transfer, cryosphere-atmosphere interactions and remote sensing.

Graduate students are an integral component of this research, both in the laboratory and the field. Research institutes provide excellent environments for research in atmospheric science as well as interdisciplinary research with scientists in other research areas.

**Degrees**

- M.S., Atmospheric Sciences (p. 251)
- Ph.D., Atmospheric Sciences (p. 251)

**M.S., Atmospheric Sciences**

Minimum Requirements for Degree: 30 credits

**General University Requirements**

Complete the general university requirements. (p. 242)

**Master’s Degree Requirements**

Complete the master's degree requirements. (p. 245)

**Program Requirements**

Select four from the following basic courses in atmospheric sciences:  

- ATM F601 Introduction to Atmospheric Sciences
- ATM F606 Atmospheric Chemistry
- ATM F613 Atmospheric Radiation
- ATM F615 Cloud Physics
- ATM F645 Atmospheric Dynamics

Select additional approved F600-level courses 6-12

ATM F699 Thesis 6-12

Total Credits 24-36

**Ph.D., Atmospheric Sciences**

Minimum Requirements for Degree: 45 credits

**General University Requirements**

Complete the general university requirements. (p. 242)

**Ph.D. Degree Requirements**

Complete the Ph.D. degree requirements. (p. 246)

**Program Requirements**

Complete the following basic courses in atmospheric sciences:  

- ATM F601 Introduction to Atmospheric Sciences
- ATM F606 Atmospheric Chemistry
- ATM F613 Atmospheric Radiation
- ATM F615 Cloud Physics
- ATM F645 Atmospheric Dynamics

Complete 12 additional approved credits, 6 of which should be ATM courses

Complete minimum of 18 thesis credits 18

Total Credits 45

**Biochemistry and Neuroscience**

College of Natural Science and Mathematics  
Department of Chemistry and Biochemistry  
907-474-5510  
www.uaf.edu/chem/  
(Mhttp://www.uaf.edu/chem

**Ph.D. Degree**

Minimum Requirements for Degree: 18 thesis credits

Biochemistry and neuroscience is an interdepartmental program administered by the Department of Chemistry and Biochemistry with research support through the Institute of Arctic Biology. A broad range of biomedical research experiences are available, including molecular and cellular neuroscience, proteomics, protein structure-function and molecular toxicology. The Arctic environment provides additional research opportunities in environmental biochemistry, adaptations and molecular genetics. Students seeking a M.S. degree in these research areas should see the M.S. chemistry with concentration in biochemistry and neuroscience degree.

UAF faculty and affiliate faculty at collaborating institutions provide a rich academic environment encompassing both research and comprehensive course offerings. Students with career interests in biotechnology, pharmaceutical sciences, environmental health, genetics and biomedicine are encouraged to apply. Students are normally accepted with financial support (fellowships, research assistantships and/or teaching assistantships) along with tuition waivers.

**Degrees**

- Ph.D., Biochemistry and Neuroscience with Biochemistry Concentration (p. 252)
Ph.D., Biochemistry and Neuroscience with Neuroscience Concentration

- Complete the following admission requirements:
  a. Submit GRE General Test scores
  b. If English is not your native language, submit scores from both the Test of Spoken English and the Test of Written English, as well as TOEFL scores. Requests, including justification, for exceptions to this requirement should be made to the chair of the department.

Minimum Requirements for Degree (including core courses): 38 credits

General University Requirements
Complete the general university requirements. (p. 242)

Ph.D. Degree Requirements
Complete the Ph.D. degree requirements. (p. 246)

Program Requirements
Select three from the following:
CHEM F654 Protein Structure and Function
CHEM F657 Molecular Foundations of Gene Expression
CHEM F674 Membrane Biochemistry and Biophysics
CHEM F670 Cellular and Molecular Neuroscience
CHEM F675 Cellular Signaling

Select three electives
Complete Ph.D. dissertation
Complete two seminar series (CHEM F692)

Total Credits
9

See Chemistry B.A., B.S. (p. 162) and M.S. (p. 254) programs.

See Environmental Chemistry (p. 280).

Biological Sciences
College of Natural Science and Mathematics
Department of Biology and Wildlife
907-474-7671
www.bw.uaf.edu (http://www.bw.uaf.edu)

M.S., Ph.D. Degrees
Minimum Requirements for Degrees: M.S.: 30 credits; Ph.D.: 18 thesis credits

UAF biological sciences graduate students have extraordinary opportunities to conduct independent biological research in controlled-experiment or field settings, taking advantage of Arctic, alpine and boreal environments near campus or at remote locations.

The department has close connections with the National Science Foundation taiga Long Term Ecological Research site, located about 20 miles from campus. Our students also have access to the tundra LTER site at Toolik Lake, where the UAF Institute of Arctic Biology runs a field station.

Facilities available to graduate students on the Fairbanks campus include small mammal colonies, the Large Animal Research Station, both electron and light microscope laboratories, an imaging laboratory and a greenhouse facility. Students and faculty work on systematic collections in the UA Museum of the North using a variety of approaches from traditional morphology to molecular biology.

The program has strong research emphases in Arctic plant ecophysiology, plant-animal coevolution, insect ecology (terrestrial and aquatic), bird and mammal physiological ecology, vertebrate population dynamics, biology of seabirds, molecular evolution and systematics, pollution ecology, wetland ecology, population genetics, ungulate biology and wildlife management.

Advanced degree recipients gain significant teaching experience conducting labs, and a few take primary responsibility for instruction in a course at the undergraduate level. Our graduates have pursued careers in education at the university, community college and secondary
levels. Many find professional positions with state and federal resource agencies, with whom the department faculty maintain close contact.

The Department of Biology and Wildlife has approximately 100 graduate students. The atmosphere is informal and students and faculty interact frequently, not only in small-enrollment classes, but also on field trips and in community and social settings.

Research assistantships are available on a competitive basis. Teaching assistantships in department courses provide excellent experience. Competitive fellowships are available through the UAF Graduate School. Applicants interested in graduate assistantships should contact the department for assistantship application forms.

Degrees

- M.S., Biological Sciences (p. 253)
- Ph.D., Biological Sciences (p. 253)

M.S., Biological Sciences

- Complete the admission process including the following:
  a. Submit scores from both the GRE General Test (required) and the GRE Subject Test in Biology (highly recommended).
  b. If English is not your native language, submit scores from both the Test of Spoken English and the Test of Written English, as well as TOEFL scores. Requests, including justification, for exceptions to this requirement should be made to the chair of the department.

Minimum Requirements for Degree: 30 credits

General University Requirements

Complete the general university requirements. (p. 242)

Master's (with Thesis) Degree Requirements

Complete the master's degree requirements. (p. 245)

Complete and pass the departmental written and oral master's comprehensive examination

Ph.D., Biological Sciences

Complete the admission process including the following:

a. Submit scores from both the GRE General Test (required) and the GRE Subject Test in Biology (required for applicants holding only a bachelor’s degree; highly recommended for applicants who have already earned a master’s degree).

b. If English is not your native language, submit scores from both the Test of Spoken English and the Test of Written English, as well as TOEFL scores. Requests, including justification, for exceptions to this requirement should be made to the chair of the department.

Minimum Requirements for Degree: 18 credits

General University Requirements

Complete the general university requirements. (p. 242)

Ph.D. Degree Requirements

Complete the Ph.D. degree requirements. (p. 246)

If entering with only a bachelor’s degree, complete and pass the departmental written and oral Ph.D. qualifying examination

Complete and pass a written and oral comprehensive examination by the graduate advisory committee

In this program or in previous postbaccalaureate programs, complete course work at least equivalent to that required for the M.S. degree

For optional concentration see Wildlife Biology and Conservation (p. 304).

Business Administration

School of Management
907-474-4622
www.uaf.edu/som/degrees/graduate/mba/ (http://www.uaf.edu/som/degrees/graduate/mba)

MBA Degree

Minimum Requirements for Degree: 30 credits

The School of Management offers professional education applicable to the fields of management, finance, human resource management, international business, marketing and travel industry management to individuals interested in entering industry or government.

The program prepares graduates to meet the complex problems of the technical, economic and social environment and to enable them to provide imaginative and responsible leadership to industry and government.

The UAF program recognizes that competence in the practice of management necessitates education with both breadth and depth. The graduate program is accredited by the Association to Advance Collegiate Schools of Business.

All applications will be reviewed to determine if applicant has the required body of knowledge to begin MBA courses. Those deficient may be required to complete prerequisite modules prior to admission or prior to enrolling in specific courses.

Degree

- M.B.A., Business Administration (p. 253)

M.B.A., Business Administration

- Complete the admission process including the following:
  a. Applications will be reviewed on a continuous basis
  b. Students with a graduate degree from an accredited institution may be admitted without taking the GMAT or GRE exam.
  c. UAF B.B.A. graduates with an overall GPA of 3.25 or above may be admitted without taking the GMAT or GRE exam. Those with GPA’s between 3.25 and 2.75 must submit results of the Watson-Glaser Critical Thinking exam. Those with GPA’s below 2.75 must submit results from the GMAT or GRE.
  d. Non-UAF applicants with a bachelor’s degree in business from an AACSB-accredited institution and an overall GPA of 3.25 or above may be admitted without taking the GMAT or GRE. Those with GPA’s between 3.25 and 2.75 must submit results of the
Watson-Glaser Critical Thinking exam. Those with GPA’s below 2.75 must submit results from the GMAT or GRE.

e. Applicants with non-business degrees and GPA’s from 4.00 to 2.75 must submit results of the Watson-Glaser Critical Thinking exam. Those with GPA’s below 2.75 must submit results from the GMAT or GRE.

Concentrations: Capital Markets, General Management

Minimum Requirements for Degree: 30 credits

General University Requirements
Complete the general university requirements. (p. 242)

Master’s Degree Requirements
Complete the master’s degree requirements. (p. 245)

MBA Core Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBA F617</td>
<td>Organizational Theory for Managers</td>
<td>3</td>
</tr>
<tr>
<td>MBA F643</td>
<td>Marketing Management</td>
<td>3</td>
</tr>
<tr>
<td>MBA F675</td>
<td>Quantitative Methods for Managers</td>
<td>3</td>
</tr>
<tr>
<td>MBA F680</td>
<td>Financial Markets and Strategy</td>
<td>3</td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

Select the following capstone course:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBA F690</td>
<td>Corporate Strategy</td>
</tr>
</tbody>
</table>

Concentrations

Select one of the following concentrations:

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Courses</th>
</tr>
</thead>
</table>
| Capital Markets| MBA F605 (Contemporary Topics in Accounting)  
|               | MBA F624 (Controllership)                                               |
| General Management | MBA F607 (Human Resources Management)  
|                  | MBA F627 (Business Law and Ethics)                                      |
|                  | MBA F632 (Project Management)                                           |
|                  | MBA F642 (Economics of Environmental and Business Sustainability)      |
|                  | MBA F665 (Strategic Collaboration)                                     |
|                  | MBA F673 (Innovation Management)                                        |
|                  | MBA F674 (New Venture Development)                                      |
|                  | MBA F682 (Financial Statement Analysis)                                 |
|                  | MBA F683 (Advanced Topics in Marketing)                                 |
|                  | MBA F691 (Advanced Topics in Business)                                  |
| Total Credits    | 15                                                                       |

If a student earns grades of two Cs, one D, or one F in courses that are part of his/her MBA program, the student will no longer be in good standing in the MBA program even if his/her cumulative GPA remains at or above 3.0. MBA students who are not in good standing will be subject to review and may be dismissed by the MBA committee. Students may not use more than two F600-level courses with C grades on their Advancement to Candidacy application. An A or B grade must be earned in F400-level courses.

Students with no prior course work in business subjects may be required to complete up to seven self-study modules prior to beginning courses. Contact the SOM MBA program for more information. These are not UAF courses and will not count toward the 30 required program credits.

Concentrations

CAPITAL MARKETS

This concentration may only be completed on the Fairbanks campus.

Select three of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBA F605</td>
<td>Contemporary Topics in Accounting</td>
</tr>
<tr>
<td>MBA F620</td>
<td>Portfolio Theory and Asset Pricing</td>
</tr>
<tr>
<td>MBA F624</td>
<td>Controllership</td>
</tr>
<tr>
<td>MBA F630</td>
<td>Derivative Securities</td>
</tr>
<tr>
<td>MBA F681</td>
<td>Fixed Income Securities and Markets</td>
</tr>
<tr>
<td>Total Credits</td>
<td>9</td>
</tr>
</tbody>
</table>
Degrees
• M.S., Chemistry (p. 255)

M.S. Degree

M.S. Degree
• Complete the following admission requirements:
  a. Submit GRE General Test scores.
  b. If English is not your native language, submit scores from both the Test of Spoken English and the Test of Written English, as well as TOEFL scores. Requests, including justification, for exceptions to this requirement should be made to the chair of the department.

M.S. Degree — Biochemistry and Neuroscience Concentration
• Complete the following admission requirements:
  a. Submit GRE General Test scores.
  b. If English is not your native language, submit scores from both the Test of Spoken English and the Test of Written English, as well as TOEFL scores. Requests, including justification, for exceptions to this requirement should be made to the chair of the department.

M.S. Degree — Environmental Chemistry concentration
• Complete the following admission requirements:
  a. Submit GRE General Test scores.
  b. If English is not your native language, submit scores from both the Test of Spoken English and the Test of Written English, as well as TOEFL scores. Requests, including justification, for exceptions to this requirement should be made to the chair of the department.

Minimum Requirements for Degree: 30 credits

General University Requirements
Complete the general university requirements. (p. 242)

Master’s Degree Requirements
Complete the master’s degree requirements. (p. 245)

Program Requirements
Select three from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM F654</td>
<td>Protein Structure and Function</td>
</tr>
<tr>
<td>CHEM F657</td>
<td>Molecular Foundations of Gene Expression</td>
</tr>
<tr>
<td>CHEM F674</td>
<td>Membrane Biochemistry and Biophysics</td>
</tr>
<tr>
<td>CHEM F670</td>
<td>Cellular and Molecular Neuroscience</td>
</tr>
<tr>
<td>CHEM F675</td>
<td>Cellular Signaling</td>
</tr>
</tbody>
</table>

Complete a research thesis.
Total Credits 9

M.S. DEGREE — ENVIRONMENTAL CHEMISTRY CONCENTRATION

Minimum Requirements for Degree: 30 credits

General University Requirements
Complete the general university requirements. (p. 242)

Master’s Degree Requirements
Complete the master’s degree requirements. (p. 245)

Program Requirements
Select two from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM F605</td>
<td>Aquatic Chemistry</td>
</tr>
<tr>
<td>CHEM F606</td>
<td>Atmospheric Chemistry</td>
</tr>
<tr>
<td>CHEM F631</td>
<td>Environmental Fate and Transport</td>
</tr>
<tr>
<td>CHEM F655</td>
<td>Environmental Toxicology</td>
</tr>
<tr>
<td>CHEM F691</td>
<td>Research Presentation Techniques</td>
</tr>
<tr>
<td>CHEM F692</td>
<td>Seminar</td>
</tr>
</tbody>
</table>

Complete approved electives 3-6
Complete a research thesis 12
Total Credits 23-26

1 Approved electives are specified by the student’s committee. The following tracks are defined as a guide. Within these tracks students will be expected to complete as part of the core and electives:
   i Atmospheric Chemistry: CHEM F601, CHEM F605, CHEM F606 and CHEM F631
   ii Aqueous/Environmental Geochemistry: CHEM F605, CHEM F606 or CHEM F631, OEOS F618 and CHEM F609/GEOS F633.
   iii Environmental Toxicology and Contaminant Fate: CHEM F605 or CHEM F606, CHEM F631 and CHEM F655

A customized focus area may be developed based on an appropriate sequence of core and elective courses, subject to approval by the student’s advisory committee.

See Biochemistry and Neuroscience (p. 251).

See Environmental Chemistry (p. 280).

Civil Engineering

College of Engineering and Mines
Department of Civil and Environmental Engineering
907-474-7241
M.S. Degree

THE M.C.E. DEGREE IS CURRENTLY SUSPENDED.

Minimum Requirements for Degrees: 30 credits

Civil engineers plan, design and supervise the construction of facilities essential to modern life in both the public and private sectors. These facilities vary widely in nature, size and scope: space launching facilities, offshore structures, bridges, buildings, tunnels, highways, transit systems, dams, airports, irrigation projects, treatment and distribution facilities for water and collection and treatment facilities for wastewater.

Civil engineers use sophisticated technology and employ computer-aided engineering during project phases of design, construction, project scheduling and cost control. Civil engineers are problem solvers involved in community development and improvement. They meet the challenges of pollution, deteriorating infrastructure, traffic congestion, energy needs, floods, earthquakes, urban redevelopment and community planning. The opportunity for creativity is unlimited.

The civil engineering program at UAF began in 1922, had its first graduate in 1931 and since has graduated more than 800 men and women. Many of these graduates work in Alaska’s cities, towns and villages in a wide range of responsible positions. More than 60 percent of Alaska’s professional engineers practice in civil engineering. The UAF civil engineering program has been accredited since 1940 by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology. All engineering programs in the department give special attention to problems of northern regions.

In addition to general civil engineering courses, specialties are available in Arctic, transportation, geotechnical, structures, water resources, hydrology and environmental studies. Many courses emphasize principles of analysis, planning and engineering design in northern regions.

A master’s degree program can include courses in environmental engineering (ENVE), engineering management (ESM) and other areas. An advanced degree in water and environmental science, administered within the civil engineering department, is available.

Degrees

• M.S., Civil Engineering (p. 256)
• M.C.E., Civil Engineering (p. 256) — This program is currently suspended.

M.C.E., Civil Engineering

THIS PROGRAM IS CURRENTLY SUSPENDED.

• Complete the following admission requirements:
  a. Complete a bachelor’s degree in civil engineering.
  b. International students must complete the TOEFL with a score of 575 or better.

Minimum Requirements for Degree: 30 credits

General Education Requirements
Complete the general university requirements. (p. 242)

Master’s Degree Requirements
Complete the master’s degree requirements. (p. 245)

M.S., Civil Engineering

• Complete the following admission requirements:
  a. Complete a bachelor’s degree in engineering or natural sciences.¹
  b. Submit GRE scores.
  c. International students must complete the TOEFL with a score of 575 or better.

¹ If applying with a non-engineering degree, submit a Graduate Study Plan, including required deficiency courses, to be approved by a committee.

DEFICIENCY REQUIREMENTS

Fundamentals of Engineering Exam
MATH F251X Calculus I 4
MATH F252X Calculus II 4
MATH F253X Calculus III 4
MATH F302 Differential Equations 3
Two approved science courses 8
Three F200-level or above engineering courses
Four F400-level CE courses ³

² If taken before, these courses can be credited as deficiency courses as approved by the CEE department chair.
³ Two must be design classes in different fields of civil engineering.


Minimum Requirements for Degree: 30 credits

General University Requirements
Complete the general university requirements. (p. 242)

Master’s Degree Requirements
Complete the master’s degree requirements. (p. 245)

Program Requirements
Complete a thesis or project 3-9
Complete comprehensive exam
Complete one from the following concentrations 21-27
Arctic Engineering
Environmental Engineering
Engineering Design and Construction
Geotechnical Engineering
Structural Engineering
Transportation Engineering
Water Resources Engineering

Total Credits 24-36
### ARCTIC ENGINEERING

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE F603</td>
<td>Arctic Engineering</td>
<td>3</td>
</tr>
<tr>
<td>CE F624</td>
<td>Frozen Ground Engineering</td>
<td>3</td>
</tr>
<tr>
<td>CE F628</td>
<td>Ice Engineering</td>
<td>3</td>
</tr>
<tr>
<td>or GEOS F615</td>
<td>Sea Ice</td>
<td></td>
</tr>
<tr>
<td>CE F682</td>
<td>Arctic Hydrology and Hydraulic Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ME F685</td>
<td>Arctic Heat and Mass Transfer</td>
<td>3</td>
</tr>
<tr>
<td>or ME F642</td>
<td>Advanced Heat Transfer</td>
<td></td>
</tr>
</tbody>
</table>

Approved electives (6 credits for thesis; 12 credits for project) 6-12

Total Credits 21-27

1. Recommended electives include: CE F422, CE F601, CE F625, CE F628, CE F635, CE F684, CE F685, MATH F460 and MATH F615.

### ENVIRONMENTAL ENGINEERING

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE F601</td>
<td>Engineering Research Communication</td>
<td>3</td>
</tr>
<tr>
<td>ENVE F641</td>
<td>Aquatic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>or CHEM F605</td>
<td>Aquatic Chemistry</td>
<td></td>
</tr>
<tr>
<td>ENVE F645</td>
<td>Unit Processes: Chemical and Physical</td>
<td>3</td>
</tr>
<tr>
<td>ENVE F647</td>
<td>Biotechnology</td>
<td>3</td>
</tr>
</tbody>
</table>

Approved electives (9 credits for thesis; 15 credits for project) 9-15

Total Credits 21-27


### ENGINEERING DESIGN AND CONSTRUCTION

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE F601</td>
<td>Engineering Research Communication</td>
<td>3</td>
</tr>
<tr>
<td>ENVE F641</td>
<td>Aquatic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>or CHEM F605</td>
<td>Aquatic Chemistry</td>
<td></td>
</tr>
<tr>
<td>ENVE F645</td>
<td>Unit Processes: Chemical and Physical</td>
<td>3</td>
</tr>
<tr>
<td>ENVE F647</td>
<td>Biotechnology</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits 21-27

1. Recommended electives include: CE F601, CE F659A, ESM F601, MBA F607 and MBA F617.

### GEOTECHNICAL ENGINEERING

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE F605</td>
<td>Pavement Design</td>
<td>3</td>
</tr>
<tr>
<td>CE F622</td>
<td>Foundations and Retaining Structures</td>
<td>3</td>
</tr>
<tr>
<td>CE F624</td>
<td>Frozen Ground Engineering</td>
<td>3</td>
</tr>
</tbody>
</table>

### WATER RESOURCES ENGINEERING

Select 12 credits from the following: 12

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE F661</td>
<td>Advanced Water Resources Engineering</td>
<td></td>
</tr>
<tr>
<td>CE F662</td>
<td>Open Channel and River Engineering</td>
<td></td>
</tr>
<tr>
<td>CE F663</td>
<td>Groundwater Dynamics</td>
<td></td>
</tr>
<tr>
<td>CE F664</td>
<td>Sediment Transport</td>
<td></td>
</tr>
<tr>
<td>CE F683</td>
<td>Arctic Hydrology and Hydraulic Engineering</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits 21-27

1. Recommended engineering electives include: CE F601, CE F603, CE F605, CE F624, CE F682, ESM F621, ESM F622 and ME F631.

2. At least 3 credits must be in advanced mathematics or statistical methods. Recommended electives include: MATH F408, MATH F661, STAT F402, STAT F461, STAT F602, STAT F605 and STAT F611.

### STRUCTURAL ENGINEERING

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE F601</td>
<td>Engineering Research Communication</td>
<td>3</td>
</tr>
<tr>
<td>CE F622</td>
<td>Foundations and Retaining Structures</td>
<td>3</td>
</tr>
<tr>
<td>CE F630</td>
<td>Advanced Structural Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>CE F633</td>
<td>Theory of Elastic Stability</td>
<td>3</td>
</tr>
<tr>
<td>CE F634</td>
<td>Structural Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>CE F635</td>
<td>Numerical Methods for Geomechanics and Soil-Structure Interaction</td>
<td>3</td>
</tr>
</tbody>
</table>

Additional approved electives (6 credits for thesis; 12 credits for project) 6-12

Total Credits 24-30

1. Recommended electives include: CE F631, CE F637, CE F640, CE F646 and CE F650.

### TRANSPORTATION ENGINEERING

Approved engineering electives (9 credits for thesis; 15 credits for project) 9-15

Additional approved electives 2

Total Credits 21-27

1. Recommended engineering electives include: CE F601, CE F603, CE F605, CE F624, CE F682, ESM F621, ESM F622 and ME F631.

2. At least 3 credits must be in advanced mathematics or statistical methods. Recommended electives include: MATH F408, MATH F661, STAT F402, STAT F461, STAT F602, STAT F605 and STAT F611.
Recommended electives include: CE F445, CE F601, CE F603, CE F665, GEOS F616, GEOS F617, GEOS F694, NRM F435 and NRM F670.

See Engineering (p. 278) for Ph.D. program.

See Water and Environmental Science (p. 303).

Communication, Professional

College of Liberal Arts
Department of Communication
907-474-6591
www.uaf.edu/comm/ (http://www.uaf.edu/comm)

M.A. Degree

Minimum Requirements for Degree: 30-34 credits

The communication program prepares students to handle the challenges of communicating effectively and ethically in a rapidly changing world characterized by diversity in gender, cultural background and belief.

The M.A. in professional communication provides advanced education for individuals in or pursuing communication related careers in public/nonprofit organizations, media organizations, health care organizations or in higher education. Students take courses that focus on organizational communication theory and practices.

The program is both theoretically and pragmatically oriented to prepare students for the professional workplace or for doctoral study in organizations.

Degree

• M.A., Communication, Professional (p. 258)

M.A., Communication, Professional

• Complete the following additional admission requirement:
  Submit academic writing sample.

Minimum Requirements for Degree: 30-34 credits

General University Requirements

Complete the general university requirements. (p. 242)

Master's Degree Requirements

Complete the master's degree requirements. (p. 245)

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM F600</td>
<td>Introduction to Professional Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM F601</td>
<td>Communication Research Methodologies: Social Science</td>
<td>3</td>
</tr>
<tr>
<td>COMM F602</td>
<td>Communication Research Methodologies: Human Science</td>
<td>3</td>
</tr>
<tr>
<td>COMM F625</td>
<td>Communication Theory</td>
<td>3</td>
</tr>
<tr>
<td>COMM F675</td>
<td>Training and Development Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM F680</td>
<td>Communication and Diversity in the Professional World</td>
<td>3</td>
</tr>
<tr>
<td>COMM F699</td>
<td>Thesis</td>
<td>6</td>
</tr>
<tr>
<td>or COMM F698</td>
<td>Non-Thesis Research/Project</td>
<td></td>
</tr>
</tbody>
</table>

Electives

Select two from the following: 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM F622</td>
<td>Interpersonal Interaction</td>
</tr>
<tr>
<td>COMM F631</td>
<td>Teambuilding</td>
</tr>
<tr>
<td>COMM F635</td>
<td>Organizational Culture and Communication</td>
</tr>
<tr>
<td>COMM F642</td>
<td>Health Communication</td>
</tr>
<tr>
<td>COMM F682</td>
<td>Seminar in Communication</td>
</tr>
</tbody>
</table>

Teaching assistants complete the following: 2

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM F661</td>
<td>Mentored Teaching in Communication</td>
</tr>
</tbody>
</table>

Total Credits: 31-34

1 Students may take F400- and F600-level courses in art, education, English, journalism, communication, marketing, business administration and northern studies as well as graduate-level independent studies to fulfill 6 credits of the elective requirement, if approved by the student's committee. Students will also be able to apply up to 6 credits of appropriate graduate-level course work from other universities in the elective area if approved by the student's committee.

2 This 1-credit course may be taken up to four times.

Note: A maximum of 6 credits of approved F400-level courses may be included in the 30-34 credit requirement.

Note: The comprehensive examination is to be taken no later than the student's fourth semester of work.

Computer Science

College of Engineering and Mines
Department of Computer Science
907-474-2777
www.cs.uaf.edu (http://www.cs.uaf.edu)

M.S. Degree

Minimum Requirements for Degree: 30 credits

Computer science is the study of information handling and its application to the problems of the world. Computing is widely used in support of activities in science, engineering, business, law, medicine, education and the social sciences.

The M.S. degree follows the recommendations of the Association for Computing Machinery and the Institute for Electrical and Electronic Engineers. The program provides breadth and depth in course work and culminates with a major unifying project. This program is available to students who have completed a B.S. degree in computer science at most institutions. Students from other universities who have completed a substantial portion of a bachelor's level computer science program may be admitted to the M.S. program. In such cases, undergraduate courses may be required to remedy deficiencies.

For admission to the M.S. computer science program, the GRE general and computer science subject exam is required.

Degree

• M.S., Computer Science (p. 258)

M.S., Computer Science
Complete the UAF admission process including the following:

1. Submit GRE general and computer science subject exam scores.
2. For teaching assistantship consideration, foreign applicants whose native language is not English must submit a TOEFL score of at least 600.
3. The department gives preference to applicants who also submit results of the Test of Spoken English.

Minimum Requirements for Degree: 30 credits

**General University Requirements**

Complete the general university requirements. (p. 242)

**Master's Degree Requirements**

Complete the master's degree requirements. (p. 245)

**Program Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS F600</td>
<td>Professional Software Development</td>
<td>4</td>
</tr>
<tr>
<td>CS F601</td>
<td>Algorithms, Architecture and Languages</td>
<td>4</td>
</tr>
<tr>
<td>CS F690</td>
<td>Graduate Seminar and Project</td>
<td>3</td>
</tr>
<tr>
<td>CS F691</td>
<td>Graduate Seminar and Project</td>
<td>3</td>
</tr>
<tr>
<td>Approved electives</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Total Credits</td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

**Counseling**

School of Education  
907-474-7341  
www.uaf.edu/educ/graduate/ (http://www.uaf.edu/educ/graduate)

**M.Ed. Degree**

Minimum Requirements for Degree: 48-60 credits  
School Counselor certification: 39 or 45 credits

The University of Alaska graduate counseling program prepares students to become culturally responsive, effective practitioners through course work and supervised internship experiences that emphasize an ecological perspective. Students who complete the counseling track, a 48-credit-hour program, are eligible to be licensed as professional school counselors in Alaska. Students who complete the clinical mental health counseling track, a 60-credit-hour program, are eligible for licensure as mental health counselors, with additional post-degree requirements. Students who complete this track are eligible to work in community/mental health agencies or as private clinicians once licensed.

Students who complete either program track through distance education must complete COUN F634 and COUN F674 on the Fairbanks campus. These courses are offered in alternating summers.

Candidates for all School of Education programs are required to have a laptop computer and iPad. This computer may be of any type but must enable candidates to meet School of Education requirements. Laptop and iPad requirements and purchase information can be viewed on the UAF School of Education website. If you have questions about how a laptop or iPad purchase can fit into your current financial aid package, please contact the UAF Financial Aid Office.

**Certification**

- School Counselor Certification Program (p. 260)

**M.Ed., Counseling**

Complete the following admission requirements:

1. Application deadline: March 1 for admission to the following fall semester, Oct. 1 for admission to the following spring semester.
2. Admission requires a bachelor's degree in a human service area such as education, social work, psychology, human services, etc. Suitability of other degrees will be considered on an individual basis by counseling faculty.
3. Applicants must have a GPA of 3.0 or higher in their undergraduate degree or take the Graduate Record Exam.
4. Statement of academic goals addressing applicant's motivations, personal characteristics, experience, education and intentions for earning the counseling degree.
5. Professional resume including education, work, volunteer or life experience relevant to the field of counseling.
6. Three letters of reference from professional, academic or character sources.
7. All applicants will be required to interview with the counseling faculty as part of the admissions process.

Additional requirements:

1. Submit a disclosure statement upon admission to the program. Resubmit annually.
3. Complete internship placements appropriate to the student's declared area of interest.
4. Complete background check procedure required by the school or community internship placement. The procedure varies depending on placement.
5. Pass the Counselor Preparation Comprehensive Exam (CPCE).

**Note:** The FBI criminal background check process takes up to three months.

Minimum Requirements for Degree: 48-60 credits

**General University Requirements**

Complete the general university requirements. (p. 242)

**Master's Degree Requirements**

Complete the master's degree requirements. (p. 245)

**Program Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUN F615</td>
<td>Foundations of Counseling</td>
<td>3</td>
</tr>
<tr>
<td>COUN F623</td>
<td>Counseling Theories and Applications I</td>
<td>3</td>
</tr>
<tr>
<td>COUN F627</td>
<td>Developmental Interventions 1</td>
<td>3</td>
</tr>
<tr>
<td>or COUN F629</td>
<td>Counseling Interventions for Adults</td>
<td>3</td>
</tr>
<tr>
<td>COUN F628</td>
<td>Child and Adolescent Development</td>
<td>3</td>
</tr>
<tr>
<td>COUN F632</td>
<td>Career Development</td>
<td>3</td>
</tr>
<tr>
<td>COUN F630</td>
<td>Appraisal for Counselors</td>
<td>3</td>
</tr>
<tr>
<td>COUN F634</td>
<td>Practicum in Individual Counseling</td>
<td>3</td>
</tr>
</tbody>
</table>
School Counselor Certification Program

COUN F636 Internship I 3
COUN F647 Professional Ethics 3
COUN F660 Cross-Cultural Counseling 3
COUN F674 Group Counseling 3
COUN F686 Internship II 3
COUN F698 Non-Thesis Research/Project or COUN F699 Thesis
ED F601 Introduction to Applied Social Science Research 3

Concentrations
Select one from the following concentrations: 6-27
- School Counseling (elementary or secondary)
- K-12 School Counseling (elementary or secondary)
- Clinical Mental Health

Total Credits 48-72

Concentrations
SCHOOL COUNSELING
COUN F646 School Counseling 3
Elective credits 3
Total Credits 6

K-12 SCHOOL COUNSELING
COUN F646 School Counseling 3
COUN F687 Internship III 3
COUN F688 Internship IV 3
Total Credits 9

CLINICAL MENTAL HEALTH
COUN F638 Adult Development 3
COUN F650 Cross-Cultural Psychopathology 3
COUN F666 Family and Network Therapy 3
COUN F687 Internship III 3
Elective credits 6
Total Credits 18

CLINICAL MENTAL HEALTH AND SCHOOL COUNSELING
Complete the following courses for both clinical mental health concentration and school counseling at one level (elementary or secondary)
COUN F636 Internship I 3
COUN F638 Adult Development 3
COUN F646 School Counseling 3
COUN F650 Cross-Cultural Psychopathology 3
COUN F666 Family and Network Therapy 3
COUN F686 Internship II 3
COUN F687 Internship III 3
Total Credits 21

CLINICAL MENTAL HEALTH AND K-12 SCHOOL COUNSELING
Complete the following courses for both clinical mental health concentration and K-12 school counseling (elementary and secondary)
COUN F636 Internship I 3
COUN F638 Adult Development 3
COUN F646 School Counseling 3
COUN F650 Cross-Cultural Psychopathology 3
COUN F666 Family and Network Therapy 3
COUN F686 Internship II 3
COUN F687 Internship III 3
COUN F688 Internship IV 3
Total Credits 27

Note: Courses assigned by the student's graduate committee to remove deficiencies will not be allowed as part of the graduate program.

School Counselor Certification Program

Complete the following admission requirements:
1. Application to the licensure only program follows the same admission requirements and procedures as for the M.Ed. in counseling
2. People who currently hold a master's degree in education or one of several helping professions such as social work, psychology or human services (as approved by counseling faculty) may apply.

Additional requirements:
1. Submit a disclosure statement upon admission to the program. Resubmit annually.
3. Complete internship placements appropriate to the student's declared area of interest.
4. Complete background check procedure required by the school or community internship placement. The procedure varies depending on placement.
5. Pass the Counselor Preparation Comprehensive Exam (CPCE).

Note: The FBI criminal background check process takes up to three months.

Minimum Requirements for Degree: 39-45 credits

Certification in One Level (Elementary or Secondary)
Complete the following requirements for certification in one level (Elementary or Secondary):
COUN F615 Foundations of Counseling 3
COUN F623 Counseling Theories and Applications I 3
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUN F627</td>
<td>Developmental Interventions</td>
<td>3</td>
</tr>
<tr>
<td>COUN F628</td>
<td>Child and Adolescent Development</td>
<td>3</td>
</tr>
<tr>
<td>COUN F632</td>
<td>Career Development</td>
<td>3</td>
</tr>
<tr>
<td>COUN F630</td>
<td>Appraisal for Counselors</td>
<td>3</td>
</tr>
<tr>
<td>COUN F634</td>
<td>Practicum in Individual Counseling</td>
<td>3</td>
</tr>
<tr>
<td>COUN F636</td>
<td>Internship I</td>
<td>3</td>
</tr>
<tr>
<td>COUN F646</td>
<td>School Counseling</td>
<td>3</td>
</tr>
<tr>
<td>COUN F647</td>
<td>Professional Ethics</td>
<td>3</td>
</tr>
<tr>
<td>COUN F660</td>
<td>Cross-Cultural Counseling</td>
<td>3</td>
</tr>
<tr>
<td>COUN F674</td>
<td>Group Counseling</td>
<td>3</td>
</tr>
<tr>
<td>COUN F686</td>
<td>Internship II</td>
<td>3</td>
</tr>
<tr>
<td>COUN F687</td>
<td>Internship III</td>
<td>3</td>
</tr>
<tr>
<td>COUN F688</td>
<td>Internship IV</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete the following optional classes for K-12 school counseling certification (Elementary and Secondary) 0-6

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUN F687</td>
<td>Internship III</td>
<td></td>
</tr>
<tr>
<td>COUN F688</td>
<td>Internship IV</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits 39-45

1 Additional fee required. Charges are added to fee statements each semester.

Students must take 15 UAF credits. Up to 30 graduate transfer credits from a previous degree program may be applied, as approved by the School of Education counseling program.

## Cross-Cultural Studies

**College of Liberal Arts**
**Center for Cross-Cultural Studies**
907-474-1902
www.uaf.edu/cxcs/ (http://www.uaf.edu/cxcs)

### M.A. Degree

Minimum Requirements for Degree: 36 credits

The cross-cultural studies M.A. degree program emphasizes indigenous knowledge systems. The program is designed to provide graduate students from various fields of interest an opportunity to pursue in-depth study of the role and contributions of indigenous knowledge in the contemporary world. Students are expected to demonstrate the ability to work effectively with indigenous people in their studies.

### Degree

- M.A., Cross-Cultural Studies (p. 261)

### M.A., Cross-Cultural Studies

Minimum Requirements for Degree: 36 credits

#### General University Requirements

Complete the general university requirements. (p. 242)

#### Master’s Degree Requirements

Complete the master’s degree requirements. (p. 245)

#### Program Requirements

Complete at least 6 credits in a field setting, including minimum of one week camp with elders.

Complete at least 36 semester hours beyond the bachelor’s degree level.

### Students may transfer a maximum of 9 hours from another university into their program.

Complete at least 30 of the 36 semester hours at the F600 level.

Satisfactorily complete a comprehensive examination.

#### Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCS F604</td>
<td>Documenting Indigenous Knowledge</td>
<td>3</td>
</tr>
<tr>
<td>CCS F608</td>
<td>Indigenous Knowledge Systems</td>
<td>3</td>
</tr>
<tr>
<td>CCS F612</td>
<td>Traditional Ecological Knowledge</td>
<td>3</td>
</tr>
<tr>
<td>CCS/ED F690</td>
<td>Seminar in Cross-Cultural Studies</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Cross-Cultural Studies Specialization Courses

Select at least one from the following:

- ANS/ED F461 Native Ways of Knowing
- CCS/ED F610 Education and Cultural Processes
- RD F425 Cultural Resource Issues

#### Electives

Select a minimum of 15 credits of approved electives to provide specialization depth:

- Examples of approved electives:
  - ANS F475 Alaska Native Social Change
  - CCS F602 Cultural and Intellectual Property Rights
  - CCS/ED F603 Field Study Research Methods
  - CCS/ED F611 Culture, Cognition and Knowledge Acquisition
  - CCS/ED F613 Alaska Standards for Culturally Responsive Schools
- CCS F698 Non-Thesis Research/Project 6

Total Credits 36

### Design and Construction Management

**College of Engineering and Mines**
**Department of Civil and Environmental Engineering**
907-474-7241
http://cem.uaf.edu/cee/

### Graduate Certificate

Minimum Requirements for Certificate: 15 credits

The graduate certificate in design and construction management is designed to advance the managerial skills and decision-making abilities of engineers and other professionals in the construction industry. The program was designed in collaboration with construction industry employers and continues to engage industry as a partner in the program. Engineers and other construction professionals will enhance their skills to help prepare them for more responsible jobs and help them advance to more responsible management positions.

The program permits flexibility of course selection within the major rubrics: human relations, communications, construction project management and technical construction areas.

### Graduate Certificate

- Graduate Certificate, Design and Construction Management (p. 262)
Graduate Certificate, Design and Construction Management

• Complete the following admission requirements:
  • A four-year ABET college degree in engineering and at least two years’ construction management experience;
  • or a four-year non-ABET college degree in engineering, science or mathematics and at least four years construction experience;
  • or a four-year college degree and at least six years construction experience;
  • or at least 10 years construction management experience.

Minimum Requirements for Degree: 15 credits

General University Requirements
Complete the general university requirements. (p. 242)
As part of the general university requirements:
  Enroll in one course per year to remain in good standing.
  The graduate advisory committee will be a construction management certificate faculty member or faculty committee as appointed by the dean of CEM.
  Complete a graduate study plan after completing 5 credits.

Graduate Certificate Requirements
Complete the graduate certificate requirements. (p. 245)
Program Requirements
Select 15 credits from three main construction management rubrics and two associated rubrics as approved by the student’s advisory committee:

Human Relations and Communication
Select 4-6 credits from the following:
  ESM F601 Managing and Leading Engineering Organizations
  MBA F607 Human Resources Management
  Other approved human relations courses

Construction Project Management and Scheduling
Select 4-6 credits from the following:
  CE F620 Construction Project Management
  ESM F609 Project Management
  ESM F608 Legal Principles for Engineering Management
  Other approved construction project management courses

Technical Management of Construction and Costs
Select 4-6 credits from the following:
  CE F451 Construction Cost Estimating and Bid Preparation
  CE F603 Arctic Engineering
  CE F622 Foundations and Retaining Structures
  Other approved technical management of construction and costs courses

Business and Financial Aspects of Construction
Select 0-3 credits from the following:
  ESM F605 Engineering Economic Analysis
  MBA F602 Accounting for Managers

Other Technical Areas
Select 0-3 credits from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE F603</td>
<td>Arctic Engineering</td>
</tr>
<tr>
<td>ENVE F644</td>
<td>Environmental Management and Permitting</td>
</tr>
</tbody>
</table>

Total Credits 15

Economics, Resource and Applied

School of Management
Department of Economics
907-474-7461
www.uaf.edu/som/degrees/graduate/msecon/ (http://www.uaf.edu/som/degrees/graduate/msecon)

M.S. Degree
Minimum Requirements for Degree: 30-33 credits

Economics is the study of social activities concerned with the production, distribution and consumption of goods and services. In today’s complex world, nearly all social phenomena and problems have economic aspects. Organized knowledge of the functioning of our economy and its relations with other economic systems is therefore essential to an understanding of the world in which we live.

The economics department offers study leading to the M.S. degree in resource and applied economics. The resource economics program offers a specialization in the economics of natural resources with emphasis in a variety of specific fields possible through interdisciplinary elective courses and thesis research. These might include fisheries, wildlife management, land resources management, agriculture, oil and minerals, water resources or forest management.

The program consists of core course work in micro- and macro-economic theory, mathematical economics, economic methods and courses in the economic theory and public policy of natural resources. Master’s candidates may select a thesis or non-thesis option. Thesis topics, consistent with students’ interest and project requirements, may be selected from current research projects of the department or from one of the several research institutes on campus. Most research projects deal with issues pertinent to the development and management of Alaska’s renewable and nonrenewable resources.

Degree
• M.S., Economics, Resource and Applied (p. 262)

M.S., Economics, Resource and Applied

Thesis Option
Minimum Requirements for Degree: 30 credits

Students may be accepted into the program subject to identified deficiencies being rectified. Unconditional acceptance into the program requires completion of intermediate microeconomics and macroeconomics, basic statistics and one semester of calculus.

General University Requirements
Complete the general university requirements. (p. 242)

Master’s Degree Requirements
Complete the master’s degree requirements. (p. 245)

Program Requirements
ECON F601  Microeconomic Theory I 3
ECON F603  Macroeconomic Theory I 3
ECON F623  Mathematical Economics 3
ECON F626  Econometrics 3
ECON F635  Renewable Resource Economics 3
ECON F636  Non-Renewable Resource Economics 3
Thesis 1
ECON F699  Thesis 6
Electives 6
Total Credits 30

1  Complete at least 25 credits at the F600 level.

Non-Thesis Option
Minimum Requirements for Degree: 33 credits

Students may be accepted into the program subject to identified deficiencies being rectified. Unconditional acceptance into the program requires completion of intermediate microeconomics and macroeconomics, basic statistics and one semester of calculus.

General University Requirements
Complete the general university requirements. (p. 242)

Master’s Degree Requirements
Complete the master's degree requirements. (p. 245)

Program Requirements
ECON F601  Microeconomic Theory I 3
ECON F603  Macroeconomic Theory I 3
ECON F623  Mathematical Economics 3
ECON F626  Econometrics 3
ECON F635  Renewable Resource Economics 3
ECON F636  Non-Renewable Resource Economics 3
Non-Thesis 1
ECON F698  Non-Thesis Research/Project 3
Electives at the F600 level 6
Electives 6
Total Credits 33

1  Complete at least 25 credits at the F600 level.

Education
School of Education
907-474-7341
www.uaf.edu/soe/ (http://www.uaf.edu/educ)

M.Ed. Degree and Postbaccalaureate Licensures
Minimum Requirements for Art K-12 Licensure: 34 credits;
Elementary Postbaccalaureate Licensure: 39 credits;
Secondary Postbaccalaureate Licensure: 31-37 credits;
Special Education K-12 Postbaccalaureate Licensure Program Certificate of Completion: 24-27 credits;
M.Ed.: 30-39 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 complete 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 programs in elementary education, secondary education, counseling, curriculum and instruction, and reading at both the postbaccalaureate and Master of Education degree levels. During their internships, candidates pay an additional fee. Charges are added to fee statements each semester.

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. Courses are available on-site and by distance delivery through the Kuskokwim, Bristol Bay, Interior Alaska, 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 support 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.

Candidates for all School of Education programs are required to have a laptop computer and iPad. This computer may be of any type but enable candidates to meet School of Education requirements. Laptop and iPad requirements and purchase information can be viewed here (https://sites.google.com/a/alaska.edu/soe-technology/home/tech-requirements). If you have questions about how a laptop of iPad purchase can fit into your financial aid package, please contact the UAF Financial Aid Office.

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

The State of Alaska requires that all initial applicants for a teaching certificate provide evidence of passing Alaska qualifying scores on the Praxis I Academic Skills Assessment, including the Pre-Professional Skills Test and/or the Computer-Based Academic Skills Assessment. For additional information, visit the website of the State Department of Education and Early Development at www.eed.state.ak.us/TeacherCertification/.

Licensures
• Art K-12 Licensure Program toward M.Ed., Secondary Education (p. 264)
• Elementary (K-8) Postbaccalaureate Licensure Program (p. 264)
Special Education K-12 Postbaccalaureate Certificate of Completion (p. 275)

Degrees

- Master of Education in Counseling (p. 265)
- Master of Education in Cross-Cultural Education (p. 265)
- Master of Education in Curriculum and Instruction (p. 266)
- Master of Education in Elementary Education (p. 267)
- Master of Education in Language and Literacy (p. 268)
- Master of Education in Online Innovation and Design (p. 268)
- Master of Education in Secondary Education (p. 269)
- Master of Education in Special Education (p. 271)
- Interdisciplinary Ph.D. (p. 265)

Art K-12 Licensure Program toward M.Ed., Secondary Education

Offered on the Fairbanks campus only, this is an intensive, classroom-based K-12 art licensure program (34 credits) that prepares postbaccalaureate 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.

Candidates who apply as graduate applicants may simultaneously pursue teacher licensure and the M.Ed. secondary education degree. Significant additional course work will be required. (See requirements for M.Ed. secondary education (p. 269).

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 for the secondary postbaccalaureate licensure program (p. 273).

Admission to the K-12 Art licensure program toward M.Ed. in secondary education includes meeting requirements of the UAF Graduate School and the School of Education. Candidates take five of the licensure courses at the F600 level.

For information on the application process, acceptance to the program and professional field experience, please refer to the secondary postbaccalaureate licensure program toward M.Ed. (p. 273) section.

Admission Process and Requirements

Applicants will follow the admission process and requirements listed in the catalog for the secondary postbaccalaureate licensure (p. 273) 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.

Minimum Requirements for Licensure: 34 credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ED F452</td>
<td>Elementary Internship</td>
<td>3</td>
</tr>
<tr>
<td>ED F453</td>
<td>Secondary Internship</td>
<td>3</td>
</tr>
<tr>
<td>ED F649</td>
<td>Elementary Art Methods</td>
<td>3</td>
</tr>
<tr>
<td>EDSC F402</td>
<td>Methods of Teaching in the Secondary School</td>
<td>3</td>
</tr>
<tr>
<td>EDSC F415</td>
<td>Foundations of Modern Educational Practice</td>
<td>3</td>
</tr>
<tr>
<td>or EDSC F205</td>
<td>Introduction to Secondary Education</td>
<td></td>
</tr>
<tr>
<td>EDSC F614</td>
<td>Learning, Development and Special Needs Instruction</td>
<td>3</td>
</tr>
<tr>
<td>or EDSE F622</td>
<td>Curriculum, Management and Strategies II: High Incidence</td>
<td></td>
</tr>
<tr>
<td>EDSC F636</td>
<td>Art Secondary Instruction and Assessment</td>
<td>3</td>
</tr>
<tr>
<td>EDSC F642</td>
<td>Technology Applications in Education I</td>
<td>1</td>
</tr>
<tr>
<td>EDSC F643</td>
<td>Technology Application in Education II</td>
<td>2</td>
</tr>
<tr>
<td>EDSC F657</td>
<td>Multicultural Education and School-Community Relations</td>
<td>4</td>
</tr>
<tr>
<td>EDSC F658</td>
<td>Classroom Organization and Management</td>
<td>3</td>
</tr>
<tr>
<td>PSY F240</td>
<td>Psychology of Development</td>
<td>3</td>
</tr>
<tr>
<td>or PSY F245</td>
<td>Child Development</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits: 34

Elementary (K-8) Postbaccalaureate Licensure Program

This program is offered in Fairbanks and College of Rural and Community Development campus service areas. The elementary teacher postbaccalaureate 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 an elementary teacher in Alaska. This classroom-based program is built upon the principle of partnership — a cooperative effort between intern, mentor teachers and university faculty partners.

Students begin the program in the summer with a 9-credit block of courses. Students who complete the undergraduate courses ED F110, ED F201, ED F330, ED F344, and EDSE F316 can 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.

Students must apply through the Office of Admissions and the Registrar to graduate with a certificate of completion. 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 Elementary License.

Elementary applicants apply as graduate-level licensure students. They may choose to complete this licensure program as part of the M.Ed. degree in elementary education. However, application to the M.Ed. degree program should be made at the beginning of elementary postbaccalaureate course work to avoid losing credits for
the M.Ed. degree. (See M.Ed. elementary education (p. ) options requirements.) Candidates who enter the elementary postbaccalaureate licensure program are required to have laptop computers prior to enrolling in ED F344 or ED F624.

**Admission and Application Information**

It is recommended that students submit applications before Dec. 15 to provide time to complete prerequisites if necessary. Applications will be reviewed as submitted. Deadline is Feb. 15.

Admission includes meeting both UAF graduate admissions requirements and the School of Education admissions requirements.

**GRADUATE SCHOOL REQUIREMENTS**

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

1. UAF graduate application and fee.
2. Official transcript of bachelor’s degree from an accredited institution and official transcripts from all institutions attended. A GPA of at least 3.0 (B grade) in undergraduate degree is required but students with less than a 3.0 may be considered for conditional admission in special circumstances.
3. Submit ACT, SAT or GRE scores.
4. Three letters of reference that address qualifications and potential as a teacher.
5. A vitae/resume.
6. Four- to five-page essay indicating: reasons for wanting to become a teacher, assessment of academic and personal strengths relative to teaching, future plans and reasons for selecting the elementary postbaccalaureate program.

**SCHOOL OF EDUCATION REQUIREMENTS**

Submit the following information directly to the School of Education, using School of Education forms:

1. Alaska passing scores from the Praxis I or Praxis Core ASE exam in reading, writing and mathematics and score from Praxis II Elementary Content exam (test 5014 or 5018).
2. Completed academic analysis form to provide information on breadth and depth of prior course work relative to 10 Alaska Student Content Standard areas. If additional course work is required, it must be completed prior to beginning the program.
3. A writing sample, autobiography, evidence of successful paid or volunteer teaching/learning experience, evidence of successful cross-cultural experience.
4. Evidence of technology competence through successful completion of ED F237A, ED F237B, ED F237C and ED F237D or by successfully challenging each of the four components of the two-credit course.
5. Completed Alaska Department of Education and Early Development authorization packet (fingerprint cards and criminal background check necessary to work in schools). Packet is available from the School of Education.
6. Some school districts may require interns to submit a physical examination form.

Minimum Requirements for Degree: 39 credits

<table>
<thead>
<tr>
<th>Summer Semester 1</th>
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<tbody>
<tr>
<td>ED F624</td>
<td>Foundations of Education in Alaska: From Segregation to Standards 2</td>
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<tr>
<td>ED F625</td>
<td>Exceptional Learners and Child Development: Individual and Cultural Characteristics</td>
</tr>
<tr>
<td>ED F626</td>
<td>Teaching Reading, Writing and Language Arts</td>
</tr>
<tr>
<td><strong>Fall Semester</strong></td>
<td></td>
</tr>
<tr>
<td>ED F411</td>
<td>Reading, Writing, Language Arts: Methods and Curriculum Development</td>
</tr>
<tr>
<td>ED F412</td>
<td>Integrated Social Studies and Language Arts: Methods and Curriculum Development</td>
</tr>
<tr>
<td>ED F466</td>
<td>Internship and Collaborative Student Teaching</td>
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<td>ED F467</td>
<td>Synthesizing the Standards I</td>
</tr>
<tr>
<td>ED F478/F678</td>
<td>Math Methods and Curriculum Development</td>
</tr>
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<td>ED F479/F688</td>
<td>Science Methods and Curriculum Development</td>
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<tr>
<td><strong>Spring Semester</strong></td>
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<tr>
<td>ED F414</td>
<td>Art, Music and Drama in Elementary Classrooms</td>
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<td>ED F417</td>
<td>Physical and Health Education for Elementary Teachers</td>
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<tr>
<td>ED F468</td>
<td>Internship and Student Teaching</td>
</tr>
<tr>
<td>ED F469</td>
<td>Synthesizing the Standards II</td>
</tr>
<tr>
<td>ED F476</td>
<td>Assessment of Literacy Development</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td>39</td>
</tr>
</tbody>
</table>

1 Or complete ED F110, ED F201, ED F330, ED F344 and EDSE F316 prior to Aug. 1 of the internship year.
2 ED F624 meets the State of Alaska requirement for an approved multicultural/cross-cultural communication course.

**Interdisciplinary Ph.D. Degree**

Students wishing to further their education beyond a Master of Education degree may pursue an interdisciplinary Ph.D. degree. For more information, refer to the program section on interdisciplinary studies — Ph.D. degree (p. 287).

**M.Ed., Counseling**

Students may earn an M.Ed. degree in counseling with specialization in school or community counseling. Refer to the counseling program section (p. 259) for more information.

**M.Ed., Cross-Cultural Education**

The School of Education offers Master of Education degrees in counseling, special education and education. Students in the education major may earn a degree in these areas of specialization: cross-cultural education, curriculum and instruction, language and literacy, and online innovation and design. Students completing postbaccalaureate certification in elementary or secondary education may earn an M.Ed. in the respective area. For elementary education, secondary education,
special education and counseling majors, refer to specific admission and program requirements listed in the respective sections.

**Admission Requirements**

Applications will be reviewed on March 1 and Oct. 1 for admission in the following semester. Faculty may vote to admit, not admit or admit with stipulations. Stipulations are specified when additional development in particular areas is needed before beginning a graduate degree program.

**Minimum requirements for admission to the M.Ed. program are:**

1. Bachelor’s degree and a 3.0 GPA.
2. One year of satisfactory teaching or administrative experience. Alternative experience may be accepted.

**Complete the following application procedures for the UAF Graduate School:**

1. Submit a graduate application form to the UAF Office of Admissions.
2. Submit scores on the general GRE if undergraduate GPA is below 3.0.
3. Submit a four- to five-page essay that describes your career goals and educational philosophy, and how those goals and philosophy are relevant to the School of Education’s mission and education graduate degree program.
4. Submit official transcripts.
5. Submit three letters of reference.
6. Submit a resume.

**Minimum Requirements for Degree: 30 credits**

**General University Requirements**

Complete the general university requirements. (p. 242)

**Master of Education Degree Requirements**

Complete the master of education degree requirements. (p. 247)

**Complete the admission requirements for the Master of Education Degree.**

**Program Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ED F601</td>
<td>Introduction to Applied Social Science Research</td>
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</tr>
<tr>
<td>ED/CCS F603</td>
<td>Field Study Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>or ED/CCS F604</td>
<td>Documenting Indigenous Knowledge</td>
<td></td>
</tr>
<tr>
<td>ED F682</td>
<td>Rethinking Multicultural Education</td>
<td>3</td>
</tr>
<tr>
<td>ED F698</td>
<td>Non-Thesis Research/Project</td>
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<tr>
<td>or ED F699</td>
<td>Thesis</td>
<td></td>
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</table>

**Cross-Cultural Foundations with Focus on Alaska Context Courses**

Select one of the following: 3

- ED/CCS F610 Education and Cultural Processes
- ED/CCS F611 Culture, Cognition and Knowledge Acquisition
- ED F616 Education and Socioeconomic Change
- ED F619/CCS F618 Cultural Atlases as a Pedagogical Strategy
- ED F620 Language, Literacy and Learning
- ED/CCS F631 Culture, Community and the Curriculum
- ED F681 Place-Based Education

**Electives**

Select at least 12 credits of approved electives in cross-cultural education in consultation with the student’s graduate advisory committee

**Total Credits**: 30

**M.Ed., Curriculum and Instruction**

The School of Education offers Master of Education degrees in counseling, special education and education. Students in the education major may earn a degree in these areas of specialization: cross-cultural education, curriculum and instruction, language and literacy, and online innovation and design. Students completing postbaccalaureate certification in elementary or secondary education may earn an M.Ed. in the respective area. For elementary education, secondary education, special education and counseling majors, refer to specific admission and program requirements listed in the respective sections.

**Admission Requirements**

Applications will be reviewed on March 1 and Oct. 1 for admission in the following semester. Faculty may vote to admit, not admit or admit with stipulations. Stipulations are specified when additional development in particular areas is needed before beginning a graduate degree program.

**Minimum requirements for admission to the M.Ed. program are:**

1. Bachelor’s degree and a 3.0 GPA.
2. One year of satisfactory teaching or administrative experience. Alternative experience may be accepted.

**Complete the following application procedures for the UAF Graduate School:**

1. Submit a graduate application form to the UAF Office of Admissions.
2. Submit scores on the general GRE if undergraduate GPA is below 3.0.
3. Submit a four- to five-page essay that describes your career goals and educational philosophy, and how those goals and philosophy are relevant to the School of Education’s mission and education graduate degree program.
4. Submit official transcripts.
5. Submit three letters of reference.
6. Submit a resume.

**Minimum Requirements for Degree: 30 credits**

**General University Requirements**

Complete the general university requirements. (p. 242)

**Master of Education Degree Requirements**

Complete the master of education degree requirements. (p. 247)

**Complete the admission requirements for the Master of Education Degree.**

**Program Requirements**

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<tr>
<td>ED/CCS F603</td>
<td>Field Study Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>or ED/CCS F604</td>
<td>Documenting Indigenous Knowledge</td>
<td></td>
</tr>
<tr>
<td>ED F612</td>
<td>Foundations of Education</td>
<td>3</td>
</tr>
<tr>
<td>ED F630</td>
<td>Curriculum Development</td>
<td>3</td>
</tr>
<tr>
<td>ED F659</td>
<td>Multimedia Tools for Educators</td>
<td>3</td>
</tr>
</tbody>
</table>
**Cross-Cultural Foundations with Focus on Alaska Context Courses**

Select one from the following: 3

- ED/CCS F610 Education and Cultural Processes
- ED/CCS F611 Culture, Cognition and Knowledge Acquisition
- ED/CCS F616 Education and Socioeconomic Change
- ED F619/CCS F618 Cultural Atlases as a Pedagogical Strategy
- ED F620 Language, Literacy and Learning
- ED/CCS F631 Culture, Community and the Curriculum
- ED F681 Place-Based Education
- ED F682 Rethinking Multicultural Education

**Select one F600-level education elective course** 3

**Total Credits** 30

---

**M.Ed., Elementary Education**

Following completion of the year-long UAF, postbaccalaureate elementary licensure program, students can pursue a M.Ed. degree in elementary education if they choose to do so. Fifteen specified graduate credits from the elementary licensure program can be used to meet the M.Ed. elementary education requirements. Courses are available through UAF by distance delivery and on the Fairbanks campus. Students can enroll in courses throughout the year. Licensure and the master’s degree requirements must be met within seven years of the beginning of the program.

Students who have completed undergraduate courses 110, 201, 330, 410 and EDSE F316 as part of their licensure program must complete additional graduate level course work to receive a master's degree. Please contact the School of Education Student Services Office for additional information.

**Admission and Application Information**

It is recommended that students submit applications before Dec. 15 to provide time to complete prerequisites if necessary. Applications will be reviewed as submitted. Deadline is Feb. 15.

Admission includes meeting both UAF graduate admissions requirements and the School of Education admissions requirements.

**GRADUATE SCHOOL REQUIREMENTS**

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

1. UAF graduate application and fee.
2. Official transcript of bachelor's degree from an accredited institution and official transcripts from all institutions attended. A GPA of at least 3.0 (B grade) in undergraduate degree is required but students with less than a 3.0 may be considered for conditional admission in special circumstances.
3. Submit ACT, SAT or GRE scores.
4. Three letters of reference that address qualifications and potential as a teacher.
5. A vitae/resume.
6. Four- to five-page essay indicating: reasons for wanting to become a teacher, assessment of academic and personal strengths relative to teaching, future plans and reasons for selecting the elementary postbaccalaureate program.

**SCHOOL OF EDUCATION REQUIREMENTS**

Submit the following information directly to the School of Education, using School of Education forms:

1. Alaska passing scores from the Praxis I or Praxis Core ASE exam in reading, writing and mathematics and score from Praxis II Elementary Content exam (test 5014 or 5018).
2. Completed academic analysis form to provide information on breadth and depth of prior course work relative to 10 Alaska Student Content Standard areas. If additional course work is required, it must be completed prior to beginning the program.
3. A writing sample, autobiography, evidence of successful paid or volunteer teaching/learning experience, evidence of successful cross-cultural experience.
4. Evidence of technology competence through successful completion of ED F237A, ED F237B, ED F237C and ED F237D or by successfully challenging each of the four components of the two-credit course.
5. Completed Alaska Department of Education and Early Development authorization packet (fingerprint cards and criminal background check necessary to work in schools). Packet is available from the School of Education.
6. Some school districts may require interns to submit a physical examination form.

**Minimum Requirements for Degree: 30 credits**

**General University Requirements**

Complete the general university requirements. (p. 242)

**Master of Education Degree Requirements**

Complete the master of education degree requirements. (p. 247)

Complete the admission requirements for the graduate-level elementary postbaccalaureate licensure program.

**Program Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ED F601</td>
<td>Introduction to Applied Social Science Research</td>
<td>3</td>
</tr>
<tr>
<td>ED/CSS F603 or ED/CSS F604</td>
<td>Field Study Research Methods/Documenting Indigenous Knowledge</td>
<td>3</td>
</tr>
<tr>
<td>ED F624</td>
<td>Foundations of Education in Alaska: From Segregation to Standards</td>
<td>3</td>
</tr>
<tr>
<td>ED F625</td>
<td>Exceptional Learners and Child Development: Individual and Cultural Characteristics</td>
<td>3</td>
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<td>ED F626</td>
<td>Teaching Reading, Writing and Language Arts</td>
<td>3</td>
</tr>
<tr>
<td>ED F678</td>
<td>Mathematics Methods and Curriculum Development</td>
<td>3</td>
</tr>
<tr>
<td>ED F688</td>
<td>Science Methods and Curriculum Development</td>
<td>3</td>
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</table>
M.Ed., Language and Literacy

The School of Education offers Master of Education degrees in counseling, special education and education. Students in the education major may earn a degree in these areas of specialization: cross-cultural education, curriculum and instruction, language and literacy, and online innovation and design. Students completing postbaccalaureate certification in elementary or secondary education may earn an M.Ed. in the respective area. For elementary education, secondary education, special education and counseling majors, refer to specific admission and program requirements listed in the respective sections.

Admission Requirements

Applications will be reviewed on March 1 and Oct. 1 for admission in the following semester. Faculty may vote to admit, not admit or admit with stipulations. Stipulations are specified when additional development in particular areas is needed before beginning a graduate degree program.

Minimum requirements for admission to the M.Ed. program are:

1. Bachelor’s degree and a 3.0 GPA.
2. One year of satisfactory teaching or administrative experience.
   Alternative experience may be accepted.

Complete the following application procedures for the UAF Graduate School:

1. Submit a graduate application form to the UAF Office of Admissions.
2. Submit scores on the general GRE if undergraduate GPA is below 3.0.
3. Submit a four- to five-page essay that describes your career goals and educational philosophy, and how those goals and philosophy are relevant to the School of Education’s mission and education graduate degree program.
4. Submit official transcripts.
5. Submit three letters of reference.
6. Submit a resume.

Minimum Requirements for Degree: 30 credits

General University Requirements

Complete the general university requirements. (p. 242)

Master of Education Degree Requirements

Complete the master of education degree requirements. (p. 247)

Complete the admission requirements for the Master of Education Degree.

Program Requirements

<table>
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<tr>
<th>Course</th>
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<th>Credits</th>
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<tr>
<td>ED F601</td>
<td>Introduction to Applied Social Science</td>
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</tr>
<tr>
<td>ED/CCS F603</td>
<td>Field Study Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>or ED/CCS F604</td>
<td>Documenting Indigenous Knowledge</td>
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</tr>
<tr>
<td>ED F620</td>
<td>Language, Literacy and Learning</td>
<td>3</td>
</tr>
<tr>
<td>ED F698</td>
<td>Non-Thesis Research/Project</td>
<td>6</td>
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</table>

Select one graduate-level elective course approved by candidate’s graduate committee 3

Total Credits 30

Cross-Cultural Foundations with Focus on Alaska Context Courses

Select one from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ED/CCS F610</td>
<td>Education and Cultural Processes</td>
<td>3</td>
</tr>
<tr>
<td>ED/CCS F611</td>
<td>Culture, Cognition and Knowledge Acquisition</td>
<td></td>
</tr>
<tr>
<td>ED/CCS F616</td>
<td>Education and Socioeconomic Change</td>
<td></td>
</tr>
<tr>
<td>ED F619/CCS F618</td>
<td>Cultural Atlases as a Pedagogical Strategy</td>
<td></td>
</tr>
<tr>
<td>ED/CCS F631</td>
<td>Culture, Community and the Curriculum</td>
<td></td>
</tr>
<tr>
<td>ED F681</td>
<td>Place-Based Education</td>
<td></td>
</tr>
<tr>
<td>ED F682</td>
<td>Rethinking Multicultural Education</td>
<td></td>
</tr>
</tbody>
</table>

Select two F600-level education elective courses 6

Total Credits 30

M.Ed., Online Innovation and Design

The School of Education offers Master of Education degrees in counseling, special education and education. Students in the education major may earn a degree in these areas of specialization: cross-cultural education, curriculum and instruction, language and literacy, and online innovation and design. Students completing postbaccalaureate certification in elementary or secondary education may earn an M.Ed. in the respective area. For elementary education, secondary education, special education and counseling majors, refer to specific admission and program requirements listed in the respective sections.

Admission Requirements

Applications will be reviewed on March 1 and Oct. 1 for admission in the following semester. Faculty may vote to admit, not admit or admit with stipulations. Stipulations are specified when additional development in particular areas is needed before beginning a graduate degree program.

Minimum requirements for admission to the M.Ed. program are:

1. Bachelor’s degree and a 3.0 GPA.
2. One year of satisfactory teaching or administrative experience.
   Alternative experience may be accepted.

Complete the following application procedures for the UAF Graduate School:

1. Submit a graduate application form to the UAF Office of Admissions.
2. Submit scores on the general GRE if undergraduate GPA is below 3.0.
3. Submit a four- to five-page essay that describes your career goals and educational philosophy, and how those goals and philosophy are relevant to the School of Education’s mission and education graduate degree program.
4. Submit official transcripts.
5. Submit three letters of reference.
6. Submit a resume.

Minimum Requirements for Degree: 30 credits

General Education Requirements
Complete the general university requirements. (p. 242)

**Master of Education Degree Requirements**

Complete the master of education degree requirements. (p. 247)

Complete the admission requirements for the Master of Education Degree.

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Credits</th>
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</thead>
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<td>ED F431</td>
<td>Web 2.0 Fundamentals: Participate, Produce, Publish</td>
<td>3</td>
</tr>
<tr>
<td>ED F601</td>
<td>Introduction to Applied Social Science Research</td>
<td>3</td>
</tr>
<tr>
<td>ED F650</td>
<td>Current Topics in Educational Technology: Innovative Instruction and Leadership</td>
<td>3</td>
</tr>
<tr>
<td>ED F654</td>
<td>Digital Citizenship, Internet Legal Issues, Digital Copyright and Fair Use</td>
<td>3</td>
</tr>
<tr>
<td>ED F659</td>
<td>Multimedia Tools for Educators</td>
<td>3</td>
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**Cross-Cultural Foundations with Focus on Alaska Context Courses**

Select one from the following:

<table>
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<tr>
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<td>ED/CCS F611</td>
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<td>ED/CCS F631</td>
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<td>ED F682</td>
<td>Rethinking Multicultural Education</td>
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**Options**

Select one of the following options: 12

- Thesis option
- Project option
- Comprehensive exam option

**Total Credits** 30

**Options**

**Thesis Option**

One F600-level Online Innovation and Design Elective 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED/CCS F603</td>
<td>Field Study Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>or ED/CCS F604</td>
<td>Documenting Indigenous Knowledge</td>
<td></td>
</tr>
<tr>
<td>ED F699</td>
<td>Thesis</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total Credits** 12

**Project Option**

One F600-level Online Innovation and Design Elective 3

<table>
<thead>
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<td></td>
</tr>
<tr>
<td>ED F698</td>
<td>Non-Thesis Research/Project</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total Credits** 12

**Comprehensive Exam Option**

Complete the following classes or comparable electives approved by the student’s graduate advisory committee.

<table>
<thead>
<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>ED F653</td>
<td>Instructional Design</td>
<td>3</td>
</tr>
<tr>
<td>ED F655</td>
<td>Online Pedagogy</td>
<td>3</td>
</tr>
<tr>
<td>ED F676</td>
<td>Supporting Learning in Diverse Systems</td>
<td>3</td>
</tr>
<tr>
<td>ED F677</td>
<td>Digital Storytelling</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete the comprehensive examination

**Total Credits** 12

**M.Ed., Secondary Education**

Following the completion of the year-long UAF secondary postbaccalaureate licensure program, students can pursue an M.Ed. degree in secondary education.

This program is designed to expand the preparation and instructional practices of middle and secondary educators and education professionals. Fifteen graduate-level credits from the UAF Secondary Postbaccalaureate Licensure program may be applied toward the M.Ed. in secondary education program. Courses are available through UAF by distance-delivery and on the Fairbanks campus. Master’s degree requirements must be met within seven years of beginning the program.

**Admissions Process and Requirements**

Admission to the secondary postbaccalaureate licensure program toward an M.Ed. in secondary education includes meeting requirements of the UAF Graduate School and of the School of Education. Candidates take five of the licensure courses at the F600 level.

Submit the following information to the UAF Office of Admissions and the Registrar:

1. UAF graduate application and application fee.
2. Official transcript of bachelor’s degree from accredited institution. Applicants who have attended more than one university should include transcripts from all universities.
3. ACT or SAT or GRE scores.
4. Three current letters of reference that address qualifications and potential as a teacher.
5. A vitae/resume.
6. A personal statement of 1,200-1,500 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.

Submit the following information to the School of Education:

1. A writing sample.
2. Passing scores from the Alaska Praxis I or Praxis Core ASE exam in reading, writing and mathematics.
3. 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 teach. The scores must meet the score set by the State of Alaska (https://education.alaska.gov/TeacherCertification/).
   b. World language exams: Applicants applying to teach a world language are required to submit Praxis II scores in the target...
language and for the ACTFL Oral Proficiency Interview and Test. Applicants must meet the Advanced Low rating for both tests (www.languagetesting.com (http://www.languagetesting.com)). In the target language, write a 2-3 page, well organized, coherent response to one of three prompts (contact SOE secondary program for additional information).

4. Demonstrated evidence of content competency in one of the UAF-approved secondary endorsement areas: art, biology, Earth science, economics, English, French, German, political science, history, mathematics, physics, political science and Spanish.
   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 before applying to the program. Additional course work may be required to enter the program.

5. Initial content preparation: complete a checklist of each content area you expect to teach.

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

7. All applicants will be required to interview with secondary faculty as part of the admission process.

Application Review Process

Applications are due March 1 (summer or fall admissions) and Oct. 15 (spring admissions), and are reviewed thereafter for admission. 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 postbaccalaureate program.

The UAF School of Education coordinates the review and evaluation of the candidate’s qualifications, professional experiences and academic performance with appropriate academic departments based on the contents of his/her application. The secondary postbaccalaureate 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 and/or GRE exam scores, and letters of reference. A personal interview will be required as part of the admission process.

Minimum Requirements for Degree: 31 credits

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**Options**

**THESIS OPTION**

<table>
<thead>
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<td></td>
</tr>
<tr>
<td>ED F699</td>
<td>Thesis</td>
<td>6</td>
</tr>
</tbody>
</table>

Total Credits: 9

**PROJECT OPTION**

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<td>ED F698</td>
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</tr>
</tbody>
</table>

Total Credits: 9

**COMPREHENSIVE EXAM OPTION**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDSC F407</td>
<td>Developing Literacy in the Content Areas</td>
<td>3</td>
</tr>
<tr>
<td>(or one elective course approved by candidate’s graduate committee)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6 graduate-level elective credits approved by candidate’s graduate committee: 6
M.Ed., Special Education

Prepares K-12 special educators at the graduate level with specific training in the areas of disabilities, assessment, interventions strategies, current law and the implementation of programs including development of legally defensible federal IDEA documents.

Graduates will have mastery of the Council for Exceptional Children standards for special education teachers: learner development and individual learning differences, learning environments, curricular content knowledge, assessment, instructional planning and strategies, professional learning and ethical practice and collaboration.

The program will provide individuals who already possess, or are eligible for, a current Alaska teaching certificate or a bachelor’s degree and the necessary prerequisites with specific training in the area of special education. The program prepares K-12 special education teachers who can effectively understand state and national education issues and respond appropriately. Special education candidates will progress through a series of developmentally sequenced field experiences for all ages, types and levels of abilities including collaborative opportunities.

An option is available for individuals who are already certified special education teachers or individuals who want the special education knowledge and master’s degree to perform professional duties that do not include being a special education classroom instructor. These individuals will not complete special education clinical practice, and no institutional recommendation for special education teacher certification will be issued.

The Master of Education in Special Education provides development in collaboration/consultation models and program development in multicultural settings. Completion of this program meets requirements for Alaska licensure as a K-12 special education teacher.

The School of Education offers Master of Education degrees in counseling, special education and education. Students in the education major may earn a degree in these areas of specialization: cross-cultural education, curriculum and instruction, language and literacy, and online innovation and design. Students completing postbaccalaureate certification in elementary or secondary education may earn an M.Ed. in the respective area. For elementary education, secondary education, special education and counseling majors, refer to specific admission and program requirements listed in the respective sections.

Admission Requirements

Applications will be reviewed on March 1 and Oct. 1 for admission in the following semester. Faculty may vote to admit, not admit or admit with stipulations. Stipulations are specified when additional development in particular areas is needed before beginning a graduate degree program.

Minimum requirements for admission to the M.Ed. program are:

1. Bachelor’s degree and a 3.0 GPA.
2. One year of satisfactory teaching or administrative experience. Alternative experience may be accepted.

Complete the following application procedures for the UAF Graduate School:

1. Submit a graduate application form to the UAF Office of Admissions.
2. Submit scores on the general GRE if undergraduate GPA is below 3.0.
3. Submit a four- to five-page essay that describes your career goals and educational philosophy, and how those goals and philosophy are relevant to the School of Education’s mission and education graduate degree program.
4. Submit official transcripts.
5. Submit three letters of reference.
6. Submit a resume.

For Certified Teachers

Complete the following admission requirements:

• Current Alaska teaching certificate or equivalent course work towards an Alaska teaching certificate.
Prerequisite: EDSE F482 or comparable transfer course from another institution.

For Initial Certification

Complete the following admission requirements:

1. Submit ACT, SAT or GRE scores.
2. Baccalaureate degree along with the following prerequisites:
   a. Documented recent experience (minimum of 12 hours) in an educational setting with children experiencing disabilities.
   b. UAF prerequisite course or comparable transfer courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ED F245</td>
<td>Child Development</td>
<td>3</td>
</tr>
<tr>
<td>Select one from the following:</td>
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<td></td>
</tr>
<tr>
<td>ED F201</td>
<td>Introduction to Education</td>
<td></td>
</tr>
<tr>
<td>EDSC F205</td>
<td>Introduction to Secondary Education</td>
<td></td>
</tr>
<tr>
<td>EDSC F415</td>
<td>Foundations of Modern Educational Practice</td>
<td></td>
</tr>
<tr>
<td>ED F624</td>
<td>Foundations of Education in Alaska: From Segregation to Standards</td>
<td></td>
</tr>
<tr>
<td>EDSE F482</td>
<td>Inclusive Classrooms for All Children</td>
<td>3</td>
</tr>
</tbody>
</table>

c. An Alaska studies course approved by the Alaska Department of Education and Early Development. See [http://education.alaska.gov/teachercertification/](http://education.alaska.gov/teachercertification/).

d. A multicultural education/cross-cultural communication course approved by the Alaska Department of Education and Early Development. See [http://education.alaska.gov/teachercertification/](http://education.alaska.gov/teachercertification/).

e. Passing scores on the Praxis Academic Skills for Educators text (or Praxis I) or another test acceptable to the Alaska Department of Education and Early Development before or during the first semester of classes. Current test numbers and minimum scores can be found at [www.eed.state.ak.us/teachercertification/prof.html](http://www.eed.state.ak.us/teachercertification/prof.html).
f. Passing scores on the appropriate Praxis II Exam(s) required before entering EDSE F678. Current test numbers and minimum scores can be found at [www.eed.state.ak.us/teachercertification/prof.html](http://www.eed.state.ak.us/teachercertification/prof.html). Candidates should consult the
employing school district to determine preferred tests based on teaching assignment.

All prerequisite courses must be completed with a minimum final grade of B. Once the admission requirements, prerequisite courses and testing requirements have been met, applicants will be formally admitted to the program.

**Program Requirements for Certified Teachers**

Minimum Requirements for Degree: 36 credits

**General University Requirements**

Complete the general university requirements. (p. 242)

**M.Ed. Degree Requirements**

Complete the Master of Education degree requirements. (p. 247)

**Program Requirements**

<table>
<thead>
<tr>
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<td>Introduction to Applied Social Science Research</td>
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</tr>
<tr>
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</tr>
<tr>
<td>EDSE F610</td>
<td>Assessment of Students with Disabilities</td>
<td>3</td>
</tr>
<tr>
<td>EDSE F612</td>
<td>Curriculum, Management and Strategies I: Low Incidence</td>
<td>3</td>
</tr>
<tr>
<td>EDSE F622</td>
<td>Curriculum, Management and Strategies II: High Incidence</td>
<td>3</td>
</tr>
<tr>
<td>EDSE F625</td>
<td>Teaching Mathematics to Special Learners</td>
<td>3</td>
</tr>
<tr>
<td>EDSE F632</td>
<td>Special Education Law: Principles and Practices</td>
<td>3</td>
</tr>
<tr>
<td>EDSE F677</td>
<td>English Language Arts Assessment, Curriculum and Strategies for Special Learners</td>
<td>3</td>
</tr>
<tr>
<td>EDSE F680</td>
<td>Special Education Clinical Practice 1,2</td>
<td>3</td>
</tr>
<tr>
<td>Select three from the following elective courses as approved by the candidate's graduate committee:</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>EDSE F605</td>
<td>Early Childhood Special Education</td>
<td></td>
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</tr>
<tr>
<td>EDSE F640</td>
<td>Culturally Responsive Collaboration: Working with Parents, Colleagues and Paraprofessionals</td>
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<td>EDSE F642</td>
<td>Autism Spectrum Disorders and Other Developmental Disabilities: Sensory and Behavioral Interventions</td>
<td></td>
</tr>
<tr>
<td>EDSE F648</td>
<td>Understanding FASD: Diagnosis, Intervention and Strategies</td>
<td></td>
</tr>
</tbody>
</table>

Complete comprehensive examination 3

**Total Credits** 36

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2 Students pursuing a K-12 special education certificate must complete clinical practice in a public school setting.

3 Must be enrolled in 3 graduate credits the semester the comprehensive exam is completed.

**Program Requirements for Initial Certification**

Minimum Requirements for Degree: 39 credits

**General University Requirements**

Complete the general university requirements. (p. 242)

**Master of Education Degree Requirements**

Complete the Master of Education degree requirements. (p. 247)

**Program Requirements**

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</table>

Complete comprehensive examination 3

**Total Credits** 39

---

1 Additional fee required. Charges are added to fee statements every semester.
Students pursuing a K-12 special education certificate must complete clinical practice in a public school setting.

Must be enrolled in 3 graduate credits the semester the comprehensive exam is completed.

Program Requirements for M.Ed. Degree Without Certification

General University Requirements
Complete the general university requirements. (p. 242)

Master of Education Degree Requirements
Complete the Master of Education degree requirements. (p. 247)

Prerequisite: EDSE F482 or comparable transfer course from another institution.

Program Requirements

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Select four from the following elective courses as approved by the candidate’s graduate committee:

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</table>

Complete comprehensive examination

Total Credits 36

Secondary Postbaccalaureate Licensure Program toward M.Ed., Secondary Education

Program is offered in Fairbanks and in areas served by the College of Rural and Community Development 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 postbaccalaureate 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 F657 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.

Candidates who apply as graduate applicants may simultaneously pursue teacher licensure and the M.Ed. secondary education degree. Significant additional course work will be required. (See requirements for M.Ed. secondary education (p. ) option.)

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.

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 licenses and will receive certificates of completion from UAF.

Candidates who enter the secondary postbaccalaureate licensure program are required to have use of/own laptop computers 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, Two-Year or Teaching While Training

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 in summer, fall and 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 postbaccalaureate 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 Alaska school district. Generally, this option is available only to those candidates in areas of teacher shortage. Candidates complete the secondary postbaccalaureate licensure program over a period of 24 months.
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.

The 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;
- some school districts require completion of district substitute training which may include a fee, a finger print card and AST background check; and
- State of Alaska certificate of authorization, fingerprint cards and money order in the amount of $60 to the School of Education by June 1 (this fee is nonrefundable once submitted to the State of Alaska). The 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. These materials will be provided to the student.

Professional Field Experiences

The secondary postbaccalaureate 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 Specialty 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 Postbaccalaureate 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 that 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 postbaccalaureate licensure program does not guarantee an internship placement.

Admissions Process and Requirements

Admission to the secondary postbaccalaureate licensure program toward an M.Ed. in secondary education includes meeting requirements of the UAF Graduate School and of the School of Education. Candidates take five of the licensure courses at the F600 level.

Submit the following information to the UAF Office of Admissions and the Registrar:

1. UAF graduate application and application fee.
2. Official transcript of bachelor’s degree from accredited institution. Applicants who have attended more than one university should include transcripts from all universities.
3. ACT or SAT or GRE scores.
4. Three current letters of reference that address qualifications and potential as a teacher.
5. A vitae/resume.
6. A personal statement of 1,200-1,500 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.

Submit the following information to the School of Education:

1. A writing sample.
2. Passing scores from the Alaska Praxis I or Praxis Core ASE exam in reading, writing and mathematics.
3. 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 teach. The scores must meet the score set by the State of Alaska (https://education.alaska.gov/TeacherCertification/).
   b. World language exams: Applicants applying to teach a world language are required to submit Praxis II scores in the target language and for the ACTFL Oral Proficiency Interview and Test. Applicants must meet the Advanced Low rating for both tests (www.languagetesting.com (http://www.languagetesting.com)). In the target language, write a 2-3 page, well organized, coherent response to one of three prompts (contact SOE secondary program for additional information
4. Demonstrated evidence of content competency in one of the UAF-approved secondary endorsement areas: art, biology, Earth science,
economics, English, French, German, political science, history, 
mathematics, physics, political science and Spanish.
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 before applying to the program. Additional course 
work may be required to enter the program.

5. Initial content preparation: complete a checklist of each content area 
you expect to teach.
6. Applicants must submit a placement packet; contact the School 
of Education for specifics. The School of Education determines 
placement approval, change or termination.
7. All applicants will be required to interview with secondary faculty as 
part of the admission process.

Application Review Process
Applications are due March 1 (summer or fall admissions) and Oct. 
15 (spring admissions), and are reviewed thereafter for admission. 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 postbaccalaureate 
program.

The UAF School of Education coordinates the review and evaluation 
of the candidate’s qualifications, professional experiences and academic 
performance with appropriate academic departments based on the 
contents of his/her application. The secondary postbaccalaureate 
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 and/or GRE exam 
scores, and letters of reference. A personal interview will be required as 
part of the admission process.

Program Requirements
Minimum Requirements for Degree: 31-37 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDSC F402</td>
<td>Methods of Teaching in the Secondary School</td>
<td>3</td>
</tr>
<tr>
<td>EDSC F407</td>
<td>Developing Literacy in the Content Areas</td>
<td>3</td>
</tr>
<tr>
<td>EDSC F415</td>
<td>Foundations of Modern Educational Practice</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>or EDSC F205 Introduction to Secondary Education</td>
<td></td>
</tr>
<tr>
<td>EDSC F614</td>
<td>Learning, Development and Special Needs Instruction</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>or EDSE F622 Curriculum, Management and Strategies II: High Incidence</td>
<td></td>
</tr>
<tr>
<td>EDSC F642</td>
<td>Technology Applications in Education I</td>
<td>1</td>
</tr>
<tr>
<td>EDSC F643</td>
<td>Technology Application in Education II</td>
<td>2</td>
</tr>
<tr>
<td>EDSC F657</td>
<td>Multicultural Education and School-Community Relations</td>
<td>4</td>
</tr>
<tr>
<td>EDSC F658</td>
<td>Classroom Organization and Management</td>
<td>3</td>
</tr>
</tbody>
</table>

EDSC F471 Secondary Teaching: School Internship I and Seminar 3
EDSC F472 Secondary Teaching: School Internship II and Seminar 3

Select one of the following: 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDSC F632</td>
<td>English/Language Arts Secondary Instruction and Assessment</td>
<td>3</td>
</tr>
<tr>
<td>EDSC F633</td>
<td>Mathematics Secondary Instruction and Assessment</td>
<td></td>
</tr>
<tr>
<td>EDSC F634</td>
<td>Science Secondary Instruction and Assessment</td>
<td></td>
</tr>
<tr>
<td>EDSC F635</td>
<td>Social Studies Secondary Instruction and Assessment</td>
<td></td>
</tr>
<tr>
<td>EDSC F636</td>
<td>Art Secondary Instruction and Assessment</td>
<td></td>
</tr>
<tr>
<td>EDSC F637</td>
<td>World Language Secondary Instruction and Assessment</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits 31-37

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

Special Education K-12 Postbaccalaureate Certificate of Completion

Prepares K-12 special educators at the graduate level with specific 
training in the areas of disabilities, assessment, interventions strategies, 
current law and the implementation of programs including development of legally defensible federal IDEA documents.

Graduates will have mastery of the Council for Exceptional Children 
standards for special education teachers: learner development and 
individual learning differences, learning environments, curricular 
content knowledge, assessment, instructional planning and strategies, 
professional learning and ethical practice and collaboration. The 
program will provide individuals who already possess, or are eligible 
for, a current Alaska teaching certificate or a bachelor’s degree and the 
necessary prerequisites, with specific training in the area of special 
education. The program prepares K-12 special education teachers 
who can effectively understand state and national education issues 
and respond appropriately. Special education candidates will progress 
through a series of developmentally sequenced field experiences for all 
ages, types and levels of abilities, including collaborative opportunities.

The program provides development in collaboration/consultation models 
and program development in multicultural settings. Completion of this 
program meets requirements for Alaska licensure as a K-12 special 
education teacher.

Admissions Requirements for Certified Teachers

• Complete the following admission requirements:
  1. Admission requirements for the graduate program.
  2. Current teaching certificate or equivalent course work towards 
an Alaska teaching certificate.
Prerequisite: EDSE F482 or comparable transfer course from another institution

**Admissions Requirements for Initial Certification**

1. Complete the following admission requirements:
   a. Admission requirements for the graduate program.
   b. Baccalaureate degree along with the following prerequisites:
      i. Documented recent experience (minimum 12 hours) in an educational setting with children experiencing disabilities.
      ii. Submit ACT, SAT or GRE scores.
      iii. UAF prerequisite courses or comparable transfer courses:
         - ED F245 Child Development 3
         - Select one of the following:
           - ED F201 Introduction to Education
           - EDSC F205 Introduction to Secondary Education
           - EDSC F415 Foundations of Modern Educational Practice
           - ED F624 Foundations of Education in Alaska: From Segregation to Standards
           - EDSE F482 Inclusive Classrooms for All Children 3
      iv. An Alaska studies course approved by the Alaska Department of Education and Early Development. See http://education.alaska.gov/teachercertification/.
      v. A multicultural education/cross-cultural communication course approved by the Alaska Department of Education and Early Development. See http://education.alaska.gov/teachercertification/.
      vi. Passing scores on the Praxis Academic Skills for Educators (or Praxis I) or another test acceptable to the Alaska Department of Education and Early Development before or during the first semester of classes. Current test numbers and minimum scores can be found at www.eed.state.ak.us/teachercertification/prof.html (http://www.eed.state.ak.us/teachercertification/prof.html). Candidates should consult the employing school district to determine preferred tests based on teaching assignment.
      vii. Passing scores on the appropriate Praxis II Exam(s) required before entering EDSE F678. Current test numbers and minimum scores can be found at www.eed.state.ak.us/teachercertification/prof.html (http://www.eed.state.ak.us/teachercertification/prof.html).
   2. All prerequisite courses must be completed with a minimum final grade of B. Once the admission requirements, prerequisite courses and testing requirements have been met, applicants will be formally admitted to the program.

**Program Requirements for Certified Teachers**

Minimum Requirements for Certification: 24 credits

**General University Requirements**

Complete the general university requirements. (p. 242)

**Program Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDSE F610</td>
<td>Assessment of Students with Disabilities</td>
<td>3</td>
</tr>
<tr>
<td>EDSE F612</td>
<td>Curriculum, Management and Strategies I: Low Incidence</td>
<td>3</td>
</tr>
<tr>
<td>EDSE F622</td>
<td>Curriculum, Management and Strategies II: High Incidence</td>
<td>3</td>
</tr>
<tr>
<td>EDSE F625</td>
<td>Teaching Mathematics to Special Learners</td>
<td>3</td>
</tr>
<tr>
<td>EDSE F632</td>
<td>Special Education Law: Principles and Practices</td>
<td>3</td>
</tr>
<tr>
<td>EDSE F677</td>
<td>English Language Arts Assessment, Curriculum and Strategies for Special Learners</td>
<td>3</td>
</tr>
<tr>
<td>EDSE F680</td>
<td>Special Education Clinical Practice¹,²</td>
<td>3</td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>EDSE F605</td>
<td>Early Childhood Special Education</td>
<td></td>
</tr>
<tr>
<td>EDSE F624</td>
<td>Social/Emotional Development, Assessment and Intervention</td>
<td></td>
</tr>
<tr>
<td>EDSE F633</td>
<td>Autism and Other Developmental Disabilities: Communication and Social Interventions</td>
<td></td>
</tr>
<tr>
<td>EDSE F640</td>
<td>Culturally Responsive Collaboration: Working with Parents, Colleagues and Paraprofessionals</td>
<td></td>
</tr>
<tr>
<td>EDSE F642</td>
<td>Autism Spectrum Disorders and Other Developmental Disabilities: Sensory and Behavioral Interventions</td>
<td></td>
</tr>
<tr>
<td>EDSE F648</td>
<td>Understanding FASD: Diagnosis, Intervention and Strategies</td>
<td></td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
<td>24</td>
</tr>
</tbody>
</table>

¹ Additional fee required. Charges are added to fee statements every semester.
² Students pursuing a K-12 special education certificate must complete clinical practice in a public school setting.

**Program Requirements for Initial Certification**

Minimum Requirements for Certification: 27 credits

**General University Requirements**

Complete the general university requirements. (p. 242)

**Program Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDSE F610</td>
<td>Assessment of Students with Disabilities</td>
<td>3</td>
</tr>
<tr>
<td>EDSE F612</td>
<td>Curriculum, Management and Strategies I: Low Incidence</td>
<td>3</td>
</tr>
<tr>
<td>EDSE F622</td>
<td>Curriculum, Management and Strategies II: High Incidence</td>
<td>3</td>
</tr>
<tr>
<td>EDSE F625</td>
<td>Teaching Mathematics to Special Learners</td>
<td>3</td>
</tr>
<tr>
<td>EDSE F632</td>
<td>Special Education Law: Principles and Practices</td>
<td>3</td>
</tr>
</tbody>
</table>
EDSE F677  English Language Arts Assessment, Curriculum and Strategies for Special Learners  3
EDSE F678  Special Education Clinical Practice: Initial  3
EDSE F680  Special Education Clinical Practice  3

Electives
Select one of the following:  3
EDSE F605  Early Childhood Special Education
EDSE F624  Social/Emotional Development, Assessment and Intervention
EDSE F633  Autism and Other Developmental Disabilities: Communication and Social Interventions
EDSE F640  Culturally Responsive Collaboration: Working with Parents, Colleagues and Paraprofessionals
EDSE F642  Autism Spectrum Disorders and Other Developmental Disabilities: Sensory and Behavioral Interventions
EDSE F648  Understanding FASD: Diagnosis, Intervention and Strategies

Total Credits  27

1 Additional fee required. Charges are added to fee statements every semester.
2 Students pursuing a K-12 special education certificate must complete a clinical practice in a public school setting.

Note: Students who do not have a current Alaska teacher certificate must take 6 credits of clinical practice. Clinical practice courses are taken during the last two semesters of the program. To enter the clinical practice, students must apply for authorization from the State of Alaska. This includes fingerprinting and a background check. Fingerprint clearance may take up to six months to complete. Submit the clinical practice application two semesters prior to the desired placement. Failure to comply with the requirement, falsification of information, or evidence of a criminal conviction that is named in the law or the Professional Teaching Practices Commission is considered an ethics violation. This will result in denied access to field placement in Alaska school districts. Authorization is required before clinical practice can begin.

Electrical Engineering

College of Engineering and Mines
Department of Electrical and Computer Engineering
907-474-7137
http://cem.uaf.edu/ece/

M.S. Degree
Minimum Requirements for Degree: 32 credits

The M.S. degree includes three options: a written thesis and oral defense for students interested in research and development; a project; or a course-work-only option. UAF offers an engineering Ph.D. program for students with an approved curriculum. Capable students with undergraduate degrees in physics, mathematics or related sciences, as well as in various branches of engineering, may also be admitted for graduate study. A student with adequate background can usually complete M.S. requirements within two years and a Ph.D. in another three years.

Graduate degree programs in electrical and computer engineering are closely connected with faculty research activities. Main areas of research include communications, radar, lidar and sonar remote sensing, instrumentation and microwave circuit design, electric power and energy systems, digital and computer engineering, nanotechnology, controls, and robotics. Current research topics include high-latitude satellite communications, rocket telemetry, radio wave propagation, ultra-wideband wireless communications, electromagnetic and acoustic wave propagation, remote biomedical and environmental instrumentation, microwave design, digital signal processing, digital and physical electronics, computer applications, remote hybrid electric power systems, electric power system design and analyses, electric power quality improvement, system identification, simulation, computer-controlled systems, control theory, robotics, and automation.

A number of on- and off-campus research facilities are available to students. Satellite, rocket and ground-based communication studies are carried out on campus and at Poker Flat Research Range, the only university-operated rocket range in the world. The Space Systems Engineering Laboratory provides students hands-on experience in all aspects of space system engineering through a design/build/launch paradigm applied to balloon and rocket payloads as well as small satellites. The Alaska Center for Unmanned Aircraft Systems Integration affords opportunities to work with drones and other UAVs. Department research laboratories include microwave, wireless communications, ultra-wideband technology, waves, power electronics/robotics, instrumentation and digital laboratories.

Alaska’s environment and remote location provide unique opportunities for research, such as the use of acoustic, light and radio wave techniques for measuring fish in Alaska rivers to the geophysical properties of the aurora. Remote sensing for biomedical (animal tracking) and environmental (groundwater and air monitoring) applications is an important research area for Alaska. Electric power systems research includes issues related to isolated rural Alaska communities, analysis of larger interconnected generation, transmission and distribution systems serving major Alaska population centers, and the use of alternative energy systems.

Graduate students in electrical and computer engineering at UAF receive the highest quality contemporary education available at the graduate level and perform research appropriate to the technical needs of Alaska, the nation and the world.

Degrees
• M.S., Electrical Engineering (p. 277)

M.S., Electrical Engineering

• Complete the following admission requirement:
  a. Submit GRE scores.
• Complete one of the following admission requirements:
  a. Complete a bachelor’s degree in electrical engineering.
  b. Students with bachelor’s degrees in other fields should work out a program to address any background deficiencies with their graduate committee.

Minimum Requirements for Degree: 32 credits

General University Requirements
Complete the general university requirements. (p. 242)

Master's Degree Requirements
Complete the master's degree requirements. (p. 245)

Program Requirements
Select one from the following options:

<table>
<thead>
<tr>
<th>Option</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thesis</td>
<td>32</td>
</tr>
<tr>
<td>Non-Thesis Project</td>
<td></td>
</tr>
<tr>
<td>Non-Thesis Course Work</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits 32

THESIS

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE F699 Thesis</td>
<td>6-12</td>
</tr>
<tr>
<td>Additional credits at F600-level</td>
<td>26</td>
</tr>
</tbody>
</table>

Total Credits 32-38

NON-THESIS PROJECT

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE F698 Non-Thesis Research/Project</td>
<td>6</td>
</tr>
<tr>
<td>Additional credits at F600-level</td>
<td>26</td>
</tr>
</tbody>
</table>

Total Credits 32

1 An oral project presentation and defense is required. The project will be archived in the UAF Rasmuson Library.

NON-THESIS COURSEWORK

| Additional credits at F600-level | 26      |

Total Credits 26

See Engineering (p. 278) for Ph.D. program.

Engineering

College of Engineering and Mines
907-474-7241
http://cem.uaf.edu/academics/programs/

Ph.D. Degree

Minimum Requirements for Degree: 36 credits

Engineers use knowledge of the mathematical and natural sciences to develop economical uses of materials and forces of nature for human benefit. The professional practice of engineering requires sophisticated skills, use of judgment and exercise of discretion. The basic education necessary for the professional practice of engineering is provided by the engineering bachelor and master’s degrees. Doctoral-level education requires independent research that generates fundamental advances in technology and discovers new knowledge for the benefit of society. Engineering Ph.D. degrees provide leadership in scientific research, academia and industrial research and development. The Ph.D. degree in engineering draws on the combined strength of the College of Engineering and Mines and offers opportunities for engineers at other UA campuses to participate.

Degree

- Ph.D., Engineering (p. 278)
- Arctic

Ph.D., Engineering

Complete the following admissions requirements:

1. Complete either a B.S. or M.S. degree in engineering.
2. Complete a master's degree in engineering or a closely related field.
3. Submit GRE scores.

Concentrations: Arctic, Civil, Computer, Electrical, Engineering Management, Environmental, Geological, Mechanical, Mining and Petroleum

Minimum Requirements for Degree: 30 credits

General University Requirements
Complete the general university requirements. (p. 242)

Ph.D. Degree Requirements
Complete the Ph.D. degree requirements. (p. 246)

As part of the Ph.D. degree requirements:

1. Complete at least 18 credits of course work beyond the M.S. degree.
2. Complete at least three full-time semesters of residency, which may include a summer semester.¹
3. Complete and pass a written and oral comprehensive examination.
4. Complete and submit a written thesis proposal for approval.
5. Complete a research program as arranged with the graduate advisory committee.
6. Complete a thesis that is a substantial contribution to the body of knowledge in engineering and pass an oral defense of thesis.

Total Credits 18

¹ Residency is defined as living in the Fairbanks area, working with the student’s graduate advisor and graduate committee, while taking courses at UAF.

English

College of Liberal Arts
Department of English
907-474-7193
www.uaf.edu/english/


Minimum Requirements for Degrees: M.A.: 30-36 credits; M.F.A.: 45 credits; M.F.A./M.A.: 45 credits

The English department offers core courses in writing and literature, and upper-division courses in literature, linguistics, creative writing, technical
writing and literary criticism. The department also offers a two-year M.A. degree in literature, a three-year M.F.A. degree in creative writing and an M.F.A./M.A. combined degree in creative writing and literature that can be completed in three years. Teaching assistantships are available for the three programs. The M.A. degree offers advanced study of literature and literary theory, as preparation for teaching or for entering a Ph.D. program. The M.F.A. degree is a terminal degree, culminating in the production of a publication-quality thesis manuscript of poetry, fiction, drama, or creative non-fiction. The M.F.A./M.A. is a combined degree designed for qualified individuals who wish to produce a publication-quality thesis manuscript of creative writing, but also would like to pursue in a systematic manner the study of literature and literary theory in preparation for college teaching or entering a Ph.D. program.

Degrees

- M.A., English (p. 279)
- M.F.A., Creative Writing (p. 279)
- M.F.A./M.A., Combined Degree, Creative Writing and Literature (p. 280)

M.A., English

- Complete the following admission requirements:
  a. Submit GRE scores.
  b. Submit academic writing sample.

General University Requirements
Complete the general university requirements. (p. 242)

Master’s Degree Requirements
Complete the master’s degree requirements. (p. 245)
Pass a written comprehensive examination based on a standardized reading list

Students may advance to candidacy when their advisory committee deems that they have made satisfactory progress toward completion of their degree.

Pass an oral defense of the thesis or non-thesis project.

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL F601</td>
<td>Theory, Criticism and Methods</td>
<td>3</td>
</tr>
<tr>
<td>ENGL F685</td>
<td>Teaching College Composition (or ENGL F600-level elective course)</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives

Select three from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL F603</td>
<td>Studies in British Literature: Old and Middle English</td>
</tr>
<tr>
<td>ENGL F604</td>
<td>Studies in British Literature: Renaissance and 17th Century</td>
</tr>
<tr>
<td>ENGL F606</td>
<td>Studies in British Literature: Restoration and 18th Century</td>
</tr>
<tr>
<td>ENGL F607</td>
<td>Studies in British Literature: 19th Century</td>
</tr>
</tbody>
</table>

Select one from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL F609</td>
<td>Early and Romantic American Literature</td>
</tr>
<tr>
<td>ENGL F611</td>
<td>American Realism and Modernism</td>
</tr>
<tr>
<td>ENGL F612</td>
<td>Twentieth-Century American Literature</td>
</tr>
</tbody>
</table>

Select one from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL F608</td>
<td>Studies in British Literature After 1900</td>
</tr>
<tr>
<td>ENGL F614</td>
<td>Studies in Comparative Literature</td>
</tr>
</tbody>
</table>

Note:
Students may apply up to 3 credit hours of independent study toward the English M.A. degree requirements.

M.F.A., Creative Writing

- Complete the following admission requirements:
  a. Submit GRE scores.
  b. Submit creative writing sample.

Minimum Requirements for Degree: 45 credits

General University Requirements
Complete the general university requirements. (p. 242)

Master’s Degree Requirements
Complete the master’s degree requirements. (p. 245)

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ENGL F615</td>
<td>Contemporary Literature</td>
<td></td>
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<tr>
<td></td>
<td><strong>Thesis or Non-Thesis Option</strong></td>
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</tr>
<tr>
<td></td>
<td>Select the thesis or non-thesis option</td>
<td>15-24</td>
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<tr>
<td></td>
<td><strong>Total Credits</strong></td>
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THESIS OPTION
Minimum Requirements for Degree: 30 credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL F699</td>
<td>Thesis</td>
<td>6</td>
</tr>
<tr>
<td>ENGL electives</td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

Pass an oral defense of the thesis.

Total Credits: 24

NON-THESIS OPTION
Minimum Requirements for Degree: 36 credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL F698</td>
<td>Non-Thesis Research/Project</td>
<td>6</td>
</tr>
</tbody>
</table>

A research paper which the advisory committee judges to be of publishable quality.
Pass an oral defense of the non-thesis project.

Total Credits: 15

1 The examination is to be taken in the student’s second year of work. The examination will be held on the Saturday ending the fourth full week of classes in the spring semester.
2 Students are required to take ENGL F601 in their first year of study.
3 Required if you are a teaching assistant or planning to teach.
4 To maximize breadth of study, M.A. students and their advisors will draft individualized courses of study with the following program requirements in mind. The advisor will direct students to courses covering the required areas, subject to particular exemptions based upon undergraduate course work. Exemptions and any subsequent revisions of the course of study must have the agreement of the advisor and department head. Plans can be revised to substitute an appropriate seminar for one of the courses.

Note: Students may apply up to 3 credit hours of independent study toward the English M.A. degree requirements.
Students may advance to candidacy when their advisory committee deems that they have made satisfactory progress in both academic and writing areas.

ENGL F601 Theory, Criticism and Methods 2 3 3
ENGL F671 Writers' Workshop 9
ENGL F685 Teaching College Composition (or ENGL F600-level elective course) 3 3
ENGL F699 Thesis 6
ENGL approved electives 6
Literature seminars 4 12

Select two from the following: 6
ENGL F681 Forms of Poetry
ENGL F682 Forms of Fiction
ENGL F684 Forms of Nonfiction Prose
ENGL F688 Writing for Film and Television

Total Credits 45

1 Based on a standardized reading list; examination to be taken no later than student's fourth semester of work. Examination will be held on the Saturday ending the fourth full week of classes in the spring semester.

2 Students are required to take ENGL F601 in their first year of study.

3 Required if you are a teaching assistant or planning to teach.

4 Minimum of four to be determined by student's advisory committee.

A literature class is one that does not have as its primary purpose the training of a student to be a creative writer or to teach composition. The following courses meet the literature-seminar requirement for the M.F.A. degree: ENGL F603, ENGL F604, ENGL F605, ENGL F606, ENGL F607, ENGL F608, ENGL F609, ENGL F611, ENGL F612, ENGL F614, ENGL F615, ENGL F620 and versions of ENGL F692 and ENGL F693 that meet the above criteria.

Note: A student may petition the Thesis Advisory Committee and the department chair to take up to 6 credit hours of independent study to be applied toward the English M.F.A. electives requirement.

Note: The English Department requires that a student receive an A or B grade for all F600-level courses that the student wishes to apply toward the master's degree programs.

M.F.A./M.A. Combined Degree, Creative Writing and Literature

1. A student who wishes to be awarded an M.F.A./M.A. combined degree in creative writing and literature must be admitted to both programs;

2. Fulfill all general university requirements and master's degree requirements and all course requirements within both programs (double counting allowed);

3. Pass comprehensive examinations in both programs;

4. Complete a thesis required for an M.F.A. degree and
   a. a thesis required for an M.A. degree,
   b. OR a scholarly essay which from a critical and/or historical perspective supplements the M.F.A. thesis and which the advisory committee(s) must judge to be of publishable quality,
   c. OR a scholarly essay on a topic approved by the advisory committee(s) and likewise judged as publishable.

5. Pass an oral examination of materials submitted from 4 above.

6. Finish all requirements in order to be awarded the combined degree instead of the M.A. or M.F.A. separately (i.e., a student may not claim at any time more than one degree for the same work).

Environmental Chemistry

College of Natural Science and Mathematics
Department of Chemistry and Biochemistry
907-474-5510
www.uaf.edu/chem/ (http://www.uaf.edu/chem)

Ph.D. Degree

Minimum Requirements for Degree: 18 thesis credits

Environmental chemistry focuses on the chemical processes influencing the composition and chemical speciation of natural systems (air, water and soils), the chemical fate and mobility of contaminants in the environment, chemical processes that affect the toxicity and bioavailability of contaminants, and chemical aspects of contaminant remediation and pollution prevention. The common link is a focus on the underlying chemical structure, reactivity and mechanisms that dictate the extent and rates of environmentally important chemical reactions. Environmental chemistry is a challenging field, requiring core training in physical, analytical, organic and inorganic chemistry, and an understanding of how these disciplines can be applied to complex environmental systems. It also provides a quantitative and fundamental approach to understanding the processes that influence the quality of the environment.

The Department of Chemistry and Biochemistry offers B.S. and M.S. via concentrations under the chemistry degree. The program provides education and research opportunities focused on the molecular scale aspects of environmental science. The program defines three tracks to meet a wide range of student interest:

1. atmospheric chemistry,
2. aqueous/environmental geochemistry, and
3. environmental toxicology and contaminant fate.

Students may also design a custom focus area, subject to approval by their advisory committee.

Our faculty are involved in a wide range of projects from field studies of chemical transformation and transport, to laboratory and modeling studies of the basic mechanisms of environmental reactions, to the development of novel chemistry useful in contaminant remediation. The program is centered in the Reichardt Building on the Fairbanks campus that houses stat-of-the-art classrooms, laboratories and computer facilities to support education and research activities. Located in Interior Alaska, UAF is home to numerous research institutes and center that focus on Arctic science and engineering and provide great opportunities for collaboration and cross-disciplinary studies focused on the chemistry of polar and sub-Arctic systems.

The Ph.D. program in environmental chemistry provides advanced training in the concepts and methods of molecular environmental sciences with the expectation that Ph.D. recipients will be acknowledged as experts in their particular topic of study. This is accomplished primarily through the Ph.D. dissertation, which is a body of independent research that presents new findings on forefront topics related to molecular processes in the environment. The Ph.D. in environmental
chemistry prepares students for careers in academia or the public and private research sectors. Graduate students in the environmental chemistry program are typically supported through teaching and research assistantships or fellowships. Students interested in a M.S. degree focusing on environmental chemical problems should see the M.S. Chemistry with concentration in Environmental Chemistry program.

**Degree**

- **Ph.D., Environmental Chemistry (p. 281)**

**Ph.D., Environmental Chemistry**

- Complete the following admission requirements
  a. Submit GRE General Test scores
  b. If English is not your native language, submit scores from both the Test of Spoken English and the Test of Written English, as well as TOEFL scores. Requests, including justification, for exceptions to this requirement should be made to the chair of the department.

Minimum Requirements for Degree: 32 credits

**General University Requirements**

Complete the general university requirements. (p. 242)

**Ph.D. Degree Requirements**

Complete the Ph.D. degree requirements. (p. 246)

**Program Requirements**

Select three from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM F605 Aquatic Chemistry</td>
<td>9</td>
</tr>
<tr>
<td>CHEM F606 Atmospheric Chemistry</td>
<td></td>
</tr>
<tr>
<td>CHEM F631 Environmental Fate and Transport</td>
<td></td>
</tr>
<tr>
<td>CHEM F655 Environmental Toxicology</td>
<td></td>
</tr>
</tbody>
</table>

**Seminar Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM F691 Research Presentation Techniques</td>
<td>1</td>
</tr>
<tr>
<td>CHEM F692 Seminar</td>
<td>1</td>
</tr>
</tbody>
</table>

Complete approved electives 1 3-6

Complete a thesis 18

Total Credits 32-35

1 Approved electives are specified by the student’s committee. The following tracks are defined as a guide. Within these tracks students will be expected to complete as part of the core and electives:

- Atmospheric Chemistry: CHEM F601, CHEM F605, CHEM F606 and CHEM F631
- Aquatic/Environmental Geochemistry: CHEM F605, CHEM F606 or CHEM F631, GEOS F618 and CHEM F609/GEOS F633.
- Environmental Toxicology and Contaminant Fate: CHEM F605 or CHEM F606, CHEM F631 and CHEM F655

A customized focus area may be developed based on an appropriate sequence of core and elective courses, subject to approval by the student’s advisory committee.

See Biochemistry and Neuroscience (p. 251).

See Chemistry (p. 254).

**Fisheries**

School of Fisheries and Ocean Sciences
907-474-7289

www.sfos.uaf.edu/academics/ (http://www.sfos.uaf.edu/academics)

**M.S., Ph.D. Degrees**

Minimum Requirements for Degrees: M.S.: 30 credits; Ph.D.: 18 thesis credits

Fisheries graduate students take classes and undertake research on a diverse set of fisheries-related topics. Program strengths include quantitative science, fisheries management and human dimensions, biology and ecology, and seafood technology. Students are typically based in Juneau, Fairbanks or Kodiak, but most courses are video-delivered to locations throughout Alaska.

Traditionally, the Juneau location emphasizes the marine environment; Fairbanks, the freshwater; and Kodiak, seafood science. However, students at each location are engaged in a wide variety of research topics. All locations have excellent laboratory facilities, access to pristine environments and healthy fisheries, and strong connections to state and federal agency scientists and managers as well as to participants in commercial, sport and subsistence fisheries.

Most students are supported as research assistants for some or all of their tenure. Agencies such as the National Atmospheric and Oceanic Administration, the U.S. Fish and Wildlife Service, and the Alaska Department of Fish and Game are collaborators on research projects and employ many of our graduates.

**Degrees**

- **M.S., Fisheries (p. 281)**
- **Ph.D., Fisheries (p. 282)**

**M.S., Fisheries**

- Complete the following admission requirements:
  a. Prerequisites: calculus; elementary statistics; ichthyology, biology of fish or invertebrate zoology; and computer competency.
  b. Submit GRE scores.

Minimum Requirements for Degree: 30 credits

**General University Requirements**

Complete the general university requirements. (p. 242)

**Master’s Degree Requirements**

Complete the master’s degree requirements. (p. 245)

**Program Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FISH F699 Thesis</td>
<td>6-12</td>
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<tr>
<td>STAT F401 Regression and Analysis of Variance</td>
<td>4</td>
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</tbody>
</table>

Graduate seminars 2

Select one from the following emphasis areas: 9-14

<table>
<thead>
<tr>
<th>Emphasis Area</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fisheries Emphasis</td>
<td></td>
</tr>
<tr>
<td>Seafood Science Emphasis</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits 21-32

**Fisheries Emphasis**

Select one from the following under each area: 9-11

**Biology and Ecology of Fish and Shellfish**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FISH F612 Fish Conservation Biology</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>FISH F626</td>
<td>Behavioral Ecology of Fishes</td>
</tr>
<tr>
<td>FISH F628</td>
<td>Physiological Ecology of Fishes</td>
</tr>
<tr>
<td>FISH F633</td>
<td>Pacific Salmon Life Histories</td>
</tr>
<tr>
<td>FISH F650</td>
<td>Fish Ecology</td>
</tr>
<tr>
<td>FISH F651</td>
<td>Fishery Genetics</td>
</tr>
<tr>
<td>FISH/MSL F676</td>
<td>Aquatic Food Web Ecology</td>
</tr>
<tr>
<td>MSL F615</td>
<td>Physiology of Marine Organisms</td>
</tr>
<tr>
<td>MSL F640</td>
<td>Fisheries Oceanography</td>
</tr>
<tr>
<td>MSL F652</td>
<td>Marine Ecosystems</td>
</tr>
</tbody>
</table>

**Quantitative Population Dynamics of Fish and Shellfish**

- FISH F421 Fisheries Population Dynamics
- FISH F487 Fisheries Management
- FISH F601 Quantitative Fishery Science
- FISH F621 Estimation of Fish Abundance
- FISH F622 Quantitative Fish Population Dynamics

**Management and Human Dimensions of Fisheries**

- FISH F411 Human Dimensions of Environmental Systems
- FISH F487 Fisheries Management
- FISH F640 Management of Renewable Marine Resources
- FISH F645 Bioeconomic Modeling and Fisheries Management
- FISH F670 Quantitative Analysis for Marine Policy Decisions
- FISH F675 Political Ecology

**Total Credits** 9-11

**Seafood Science Emphasis**

- FISH F661 Seafood Processing and Preservation 3
- FISH F662 Seafood Composition and Analysis 3

Select one of the following from two of the three core areas: 6-8

**Biology and Ecology of Fish and Shellfish**

- FISH F612 Fish Conservation Biology
- FISH F626 Behavioral Ecology of Fishes
- FISH F628 Physiological Ecology of Fishes
- FISH F633 Pacific Salmon Life Histories
- FISH F650 Fish Ecology
- FISH F651 Fishery Genetics
- FISH/MSL F676 Aquatic Food Web Ecology
- MSL F615 Physiology of Marine Organisms
- MSL F640 Fisheries Oceanography
- MSL F652 Marine Ecosystems

**Quantitative Population Dynamics of Fish and Shellfish**

- FISH F421 Fisheries Population Dynamics
- FISH F601 Quantitative Fishery Science
- FISH F621 Estimation of Fish Abundance
- FISH F622 Quantitative Fish Population Dynamics

**Management and Human Dimensions of Fisheries**

- FISH F411 Human Dimensions of Environmental Systems
- FISH F487 Fisheries Management
- FISH F640 Management of Renewable Marine Resources

**Total Credits** 12-14

**Note:** At least 21 credits of the required 30 M.S. degree credits must be at the F600 level. All other credits must be at least at the F400 level.

**Ph.D., Fisheries**

- Complete the following admission requirement:
  a. Complete a master’s degree in a fisheries-related field or meet the requirements as outlined below to be accepted directly into a Ph.D. program without a master’s degree.
  b. Submit GRE scores.

**Admission to Ph.D. Program Directly from Bachelor’s Program**

Entering graduate students whose highest earned degree is the baccalaureate are normally admitted as Master of Science candidates. However, exceptionally able and accomplished students in this category are eligible for direct admission to the Ph.D. program. Criteria for direct admission to the Ph.D. program from the baccalaureate are:

1. Endorsement by proposed chair of graduate advisory committee AND
2 or 3 below.
2. At least one first-authored manuscript published or accepted for publication in a peer-reviewed scientific journal or receipt of an NSF, NIH, or similar prestigious pre-doctoral fellowship. OR
3. Demonstrated research proficiency (e.g. undergraduate thesis, Research Experiences for Undergraduates or other intensive research experience) documented in the application AND either
   1. attained a GPA of at least 3.5 at the undergraduate level, or
   2. scored at the 80% level in two of three categories in the GRE.

Students who elect this route must fulfill course requirements as outlined for both the M.S. and Ph.D. degrees. Applicants who do not meet these criteria may enter the graduate program as M.S. candidates, and in exceptional cases may petition for conversion to the Ph.D. program after advancement to candidacy (for the M.S.). Such petitions must be approved both by the student’s current (M.S.) and proposed (Ph.D.) advisory committee and the department director or designee.

**Minimum Requirements for Degree:** 18 credits

**General University Requirements**

Complete the general university requirements. (p. 242)

**Ph.D. Degree Requirements**

Complete the Ph.D. degree requirements. (p. 246)

**Program Requirements**

Complete at least one year of full-time course work, as approved by the student’s advisory committee.

Complete a thesis.

**Geological Engineering**

College of Engineering and Mines


M.S. Degree
Minimum Requirements for Degree: 30-33 credits

Geological engineering deals with the application of geology. Geological engineers work with the environment in the true sense of the word. Properties of earth materials exploration activities, geophysical and geochemical prospecting, site investigations and engineering geology are all phases of geological engineering.

The graduate program prepares students for employment with industry, consulting companies and government agencies.

Degree

- M.S., Geological Engineering (p. 283)

M.S., Geological Engineering

Complete one of the following admission requirements:

Complete a bachelor’s degree in geological engineering;

Complete a bachelor’s degree in engineering and complete the following courses:

Select one of the following: 6-8

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOS F262</td>
<td>Rocks and Minerals</td>
<td></td>
</tr>
<tr>
<td>GEOS F332</td>
<td>Ore Deposits and Structure</td>
<td></td>
</tr>
<tr>
<td>GEOS F322</td>
<td>Stratigraphy and Sedimentation</td>
<td></td>
</tr>
<tr>
<td>GEOS F314</td>
<td>Structural Geology</td>
<td></td>
</tr>
<tr>
<td>GE F365</td>
<td>Geological Materials Engineering</td>
<td>3</td>
</tr>
<tr>
<td>or MIN F370</td>
<td>Rock Mechanics</td>
<td></td>
</tr>
<tr>
<td>GE F405</td>
<td>Exploration Geophysics</td>
<td>6</td>
</tr>
<tr>
<td>GE F420</td>
<td>Subsurface Hydrology</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits: 15-17

Complete a bachelor’s degree in geology and complete the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES F208</td>
<td>Mechanics</td>
<td>4</td>
</tr>
<tr>
<td>ES F331</td>
<td>Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>ES F341</td>
<td>Fluid Mechanics</td>
<td>4</td>
</tr>
<tr>
<td>GE F365</td>
<td>Geological Materials Engineering</td>
<td>3</td>
</tr>
<tr>
<td>or MIN F370</td>
<td>Rock Mechanics</td>
<td></td>
</tr>
<tr>
<td>GE F405</td>
<td>Exploration Geophysics</td>
<td>3</td>
</tr>
<tr>
<td>GE F420</td>
<td>Subsurface Hydrology</td>
<td>3</td>
</tr>
<tr>
<td>MIN F408</td>
<td>Mineral Valuation and Economics</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits: 23

Complete a bachelor’s degree in the natural sciences and complete the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES F208</td>
<td>Mechanics</td>
<td>4</td>
</tr>
<tr>
<td>ES F331</td>
<td>Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>ES F341</td>
<td>Fluid Mechanics</td>
<td>4</td>
</tr>
</tbody>
</table>

Select one from the following: 6-8

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOS F262</td>
<td>Rocks and Minerals</td>
<td></td>
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<tr>
<td>GEOS F332</td>
<td>Ore Deposits and Structure</td>
<td></td>
</tr>
<tr>
<td>GEOS F322</td>
<td>Stratigraphy and Sedimentation</td>
<td></td>
</tr>
<tr>
<td>GEOS F314</td>
<td>Structural Geology</td>
<td></td>
</tr>
<tr>
<td>GE F365</td>
<td>Geological Materials Engineering</td>
<td>3</td>
</tr>
<tr>
<td>or MIN F370</td>
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</tr>
<tr>
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<td>Exploration Geophysics</td>
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</tr>
<tr>
<td>GE F420</td>
<td>Subsurface Hydrology</td>
<td>3</td>
</tr>
<tr>
<td>MIN F408</td>
<td>Mineral Valuation and Economics</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits: 29-31

Submit GRE scores.

Thesis Option
Minimum Requirements for Degree: 30 credits

General University Requirements
Complete the general university requirements. (p. 242)

Master’s Degree Requirements
Complete the master’s degree requirements. (p. 245)

Thesis Requirements
Select four from the following: 12

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GE F360</td>
<td>Subsurface Hydrology</td>
<td>3</td>
</tr>
<tr>
<td>GE F420</td>
<td>Advanced Soil Physics</td>
<td>3</td>
</tr>
<tr>
<td>GE F624</td>
<td>Stochastic Hydrology and Geohydrology</td>
<td>3</td>
</tr>
<tr>
<td>GE F626</td>
<td>Thermal Geotechnics</td>
<td>3</td>
</tr>
<tr>
<td>GE F635</td>
<td>Advanced Geostatistical Applications</td>
<td>3</td>
</tr>
<tr>
<td>GE F665</td>
<td>Advanced Geological Materials Engineering</td>
<td>3</td>
</tr>
<tr>
<td>GE F666</td>
<td>Advanced Engineering Geology</td>
<td>3</td>
</tr>
<tr>
<td>GE F668</td>
<td>Tunneling Geotechniques</td>
<td>3</td>
</tr>
<tr>
<td>MIN F621</td>
<td>Advanced Mineral Economics</td>
<td>3</td>
</tr>
<tr>
<td>MIN F673</td>
<td>Advanced Rock Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>ES F208</td>
<td>Mechanics</td>
<td>4</td>
</tr>
<tr>
<td>ES F331</td>
<td>Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>ES F341</td>
<td>Fluid Mechanics</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Credits: 30

Non-Thesis Option
Minimum Requirements for Degree: 33 credits

General University Requirements
Complete the general university requirements. (p. 242)

Master’s Degree Requirements
Complete the master’s degree requirements. (p. 245)

Non-Thesis Requirements
Select five from the following: 15

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GE F360</td>
<td>Subsurface Hydrology</td>
<td>3</td>
</tr>
<tr>
<td>GE F420</td>
<td>Advanced Soil Physics</td>
<td>3</td>
</tr>
<tr>
<td>MIN F408</td>
<td>Mineral Valuation and Economics</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one from the following: 6-8

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>GEOS F262</td>
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<tr>
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</tr>
<tr>
<td>MIN F408</td>
<td>Mineral Valuation and Economics</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits: 33
GE F620  Advanced Groundwater Hydrology
GE F622  Advanced Soil Physics
GE F624  Stochastic Hydrology and Geohydrology
GE F626  Thermal Geotechnics
GE F635  Advanced Geostatistical Applications
GE F665  Advanced Geological Materials Engineering
GE F666  Advanced Engineering Geology
GE F668  Tunneling Geotechniques
MIN F621  Advanced Mineral Economics
MIN F673  Advanced Rock Mechanics
Geological engineering courses and technical electives 11
GE F692  Graduate Seminar 1
GE F698  Non-Thesis Research/Project 6
Total Credits 33

Geophysics

College of Natural Science and Mathematics
Department of Geosciences
907-474-7565
www.uaf.edu/geology/ (http://www.uaf.edu/geology)

M.S., Ph.D. Degrees

Minimum Requirements for Degrees: M.S.: 30 credits; Ph.D.: 18 thesis credits

The geophysics program at UAF is closely connected with the Geophysical Institute and is optimally positioned to investigate a wide array of geophysical phenomena. Students have the option to obtain a general geophysics degree or to choose one of the three concentrations to focus their studies.

Upon graduation, a student is expected to be able to:

1. address geophysical problems using the principles of conservation of energy, mass and momentum using both physical and mathematical concepts, particularly with respect to mathematical techniques such as linear algebra, vector calculus and partial differential equations;
2. explain physical processes underlying the Earth’s global scale features, including plate tectonics and the gravitational and magnetic fields;
3. describe common geophysical problems and assess the advantages and disadvantages of various theoretical, modeling or observational approaches to solving them, including identifying key assumptions underlying each approach;
4. frame well-defined scientific research questions and apply modern computational methods and observational techniques necessary to conduct the research;
5. publish and present results in peer-reviewed articles, scientific reports, and at national and international scientific meetings using oral and written skills developed through regular faculty feedback.

Degrees

• M.S., Geophysics (p. 284)
• Ph.D., Geophysics (p. 285)

M.S., Geophysics

• Complete the following admission requirements:
  a. Submit GRE scores.
  b. Complete a background at least to the level of a B.S. concentration in geology, geophysics or an appropriate physical science or engineering.
  c. Complete MATH F302
  d. Recommended: MATH F314, MATH F421, PHYS F220

Concentrations: Solid-Earth Geophysics; Snow, Ice and Permafrost Geophysics; Remote Sensing Geophysics

Minimum Requirements for Degree: 30 credits

General University Requirements
Complete the general university requirements. (p. 242)

Master’s Degree Requirements
Complete the master’s degree requirements. (p. 245)
Complete 6-12 thesis credits
Complete any deficiencies concurrently with this degree.
Submit a written thesis proposal and pass an oral comprehensive examination centered on this proposal.
Complete and submit a written thesis and pass an oral defense of thesis.

Geophysics Core Requirements
GEOS F631  Foundations of Geophysics 4
GEOS F682  Geoscience Seminar (fall semester) 1
Select 6 credits from relevant graduate-level courses agreed by the advisory committee or select one from the following concentrations:
  Solid-Earth Geophysics
  Snow, Ice and Permafrost Geophysics
  Remote Sensing
Select 7 credits of courses approved by the advisory committee
GEOS F699  Thesis 6
Thesis credits or credits from courses that are F400-level or higher. 1
Total Credits 30

Concentrations

SOLID-EARTH GEOPHYSICS

Select 6 credits from the following:

GEOS F604  Seismology
GEOS F605  Geochronology
GEOS F626  Applied Seismology
GEOS F613  Global Tectonics
GEOS F655  Tectonic Geodesy

1 The minimum credits required is 30. The required M.S. course work above represents 18 credits. The minimum number of thesis credits required is 6. The remaining 6 credits can either be thesis credits or courses that are F400-level or higher.
Ph.D., Geophysics

- Complete the following admission requirement:
  1. Submit GRE scores.
  2. Complete a master’s degree in geology, geophysics or an appropriate field of physical science or engineering.

Admission to Ph.D. Geophysics Program Directly from a Bachelor’s Program

Entering graduate students whose highest earned degree is the baccalaureate are normally admitted as Master of Science candidates. However, exceptionally able and accomplished students in this category are eligible for direct admission to the Ph.D. program. For direct admission from the baccalaureate to the Ph.D. program, a student must receive approval from the graduate admission committee and also meet one of three criteria:

a. At least one first-authored manuscript published, accepted or submitted for publication in a peer-reviewed scientific journal
b. Receipt of an NSF, NIH or similar prestigious pre-doctoral fellowship.
c. Demonstrated research proficiency AND either
   1. attained a GPA of at least 3.5 in mathematics and science courses at the undergraduate level, or
   2. scored at or above the 80th percentile in two of three categories in the GRE.

The requirement of demonstrated research proficiency can be waived for exceptionally promising students. In this case the student is required to complete a research or review paper focusing on a thesis-related topic approved by the graduate advising committee. The paper should be roughly 4,000-5,000 words and must be submitted and approved by the advising committee within the first three semesters to maintain Ph.D. status. Failure will result in changing the student’s status to M.S. candidate.

After admission, M.S. candidates may, in exceptional cases, petition for conversion to the Ph.D. program if they satisfy one of the above criteria. Such petitions must be approved both by the student’s current (M.S.) and proposed (Ph.D.) advisory committee and the department director or designee.

Minimum Requirements for Degree: 18 thesis credits

**General University Requirements**
Complete the general university requirements. (p. 242)

**Master’s Degree Requirements**

**Solid-Earth Geophysics**
Select 6 credits from the following:

- GEOS F604 Seismology
- GEOS F605 Geochronology
- GEOS F626 Applied Seismology
- GEOS F613 Global Tectonics
- GEOS F655 Tectonic Geodesy
- GEOS F671 Volcano Seismology

**Snow, Ice and Permafrost Geophysics**
Select 6 credits from the following:

- GEOS F614 Ice Physics
- GEOS F615 Sea Ice
- GEOS F616 Permafrost
- GEOS F617 Glaciers

**Remote Sensing**
Select 6 credits from the following:

- GEOS F654 Visible and Infrared Remote Sensing
- GEOS F657 Microwave Remote Sensing
- GEOS F622 Digital Image Processing in the Geosciences
- GEOS F676 Remote Sensing of Volcanic Eruptions
- GEOS F639 InSar and Its Applications
- ATM F613 Atmospheric Radiation

**Advanced Skills Categories**
Select 3 credits each in two of the following advanced skills categories:

**Digital Signal Analysis and Remote Sensing**

- GEOS F654 Visible and Infrared Remote Sensing
- GEOS F657 Microwave Remote Sensing
- GEOS F622 Digital Image Processing in the Geosciences
- PHYS F628 Digital Time Series Analysis

**Statistics and Parameter Estimation**

- GEOS F627 Inverse Problems and Parameter Estimation
- STAT F401 Regression and Analysis of Variance
- STAT F461 Applied Multivariate Statistics
- ATM F610 Analysis Methods in Meteorology and Climate
Mathematical Methods

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH F421</td>
<td>Applied Analysis</td>
</tr>
<tr>
<td>MATH F614</td>
<td>Numerical Linear Algebra</td>
</tr>
<tr>
<td>MATH F615</td>
<td>Numerical Analysis of Differential Equations</td>
</tr>
<tr>
<td>MATH F661</td>
<td>Optimization</td>
</tr>
<tr>
<td>ME F601</td>
<td>Finite Element Analysis in Engineering</td>
</tr>
</tbody>
</table>

Skills course

One graduate-level advanced skills course approved by the student’s advisory committee.

Ph.D. Degree Requirements

Complete the Ph.D. degree requirements. (p. 246)

Complete and pass a written and oral comprehensive examination.

Complete and submit a written thesis proposal for approval.

Complete a research program as arranged with the graduate advisory committee.


Total Credits 35

Geoscience

College of Natural Science and Mathematics
Department of Geosciences
907-474-7565
www.uaf.edu/geology/ (http://www.uaf.edu/geology)

M.S., Ph.D. Degrees

Minimum Requirements for Degrees: M.S.: 30 credits; Ph.D.: 18 thesis credits

Graduates in geoscience have broad backgrounds in Earth sciences or geography. There are concentrations available in geology and geography and requirements are flexible enough to allow students to customize the curriculum.

There are about 40 professional geoscientists in residence on campus and graduate students normally participate in the ongoing research of these professionals. Teaching and research assistantships are available to graduate students in many of these areas.

Degrees

• M.S., Geoscience (p. 286)
• Ph.D., Geoscience (p. 286)

M.S., Geoscience

• Complete the following admission requirements:
  a. Submit GRE scores.
  b. Complete a background at least to the level of a B.S. concentration in geology, geophysics or earth science.

Concentrations: Geography, Geology

Minimum Requirements for Degree: 30 credits

General University Requirements

Complete the general university requirements. (p. 242)

Complete the course work requirements for the appropriate M.S. concentration.

Ph.D. Degree Requirements

Complete the Ph.D. degree requirements. (p. 246)

Complete and pass a written and oral comprehensive examination.

Complete and submit a written thesis proposal for approval.

Complete a research program as arranged with the graduate advisory committee.


Total Credits 18

Note: In addition to courses listed under the geoscience program, students should check the course listings under the College of Engineering and Mines and the marine science program.

Note: In addition to the facilities available directly through the instructional program, UAF has active research laboratories in the fields of seismology, volcanology, paleomagnetism, isotope geochronology, glaciology and ice physics in the Geophysical Institute (see Geophysical Institute (p. 18) under Research). These laboratories can frequently provide topics for M.S. and Ph.D. theses. Other laboratories are also
available in other divisions on campus, as listed under Research Institutes and Centers (p. 17).

**Indigenous Studies**
College of Liberal Arts
College of Rural and Community Development
School of Education
907-474-7464
www.uaf.edu/cxcs/indigenousphd/ (http://www.uaf.edu/cxcs/indigenousphd)

**Ph.D. Degree**
Minimum Requirements for Degree: 48 credits

Indigenous studies doctoral candidates will participate in research activities across a variety of UAF academic disciplines and applied fields. Students are encouraged to engage in comparative studies with other indigenous peoples around the world and to focus their dissertation research on issues of relevance to Alaska and the Arctic. Using the interdisciplinary Ph.D. model of academic assignment, the student’s home base will be in the school or college of the student’s major advisor, who also serves as an affiliate faculty member for the program.

The program objectives and its curriculum center around five thematic areas of study: indigenous studies/research, indigenous knowledge systems, indigenous education/pedagogy, indigenous languages and indigenous leadership. Students may focus on one of these areas or draw on multiple themes in collaboration with their graduate committee to develop their areas of knowledge and dissertation research. In collaboration with the graduate committee, each student will develop a program of course work and research that produces a unique intellectual contribution to the applied fields associated with Indigenous Studies.

**Degree**
• Ph.D., Indigenous Studies (p. 287)

**Ph.D., Indigenous Studies**
Minimum Requirements for Degree: 48 credits

**General University Requirements**
Complete the general university requirements. (p. 242)

**Ph.D. Degree Requirements**
Complete the Ph.D. degree requirements. (p. 246)
Complete required and elective courses.

<table>
<thead>
<tr>
<th>ANL/CCS/ED/ RD F608</th>
<th>Indigenous Knowledge Systems</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANL/CCS/ED/ RD F690</td>
<td>Seminar in Cross-Cultural Studies</td>
<td>3</td>
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</tbody>
</table>

**Core Courses**
Select two from the following: 6

<table>
<thead>
<tr>
<th>ANL F601</th>
<th>Seminar in Language Revitalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH F631</td>
<td>Linguistic Anthropology: Language, Thought and Action</td>
</tr>
<tr>
<td>ANTH F646</td>
<td>Economic Anthropology</td>
</tr>
<tr>
<td>ANTH/BIOL/ECON/NRM F647</td>
<td>Global to Local Sustainability</td>
</tr>
<tr>
<td>ANTH/BIOL/ECON/NRM F649</td>
<td>Integrated Assessment and Adaptive Management</td>
</tr>
<tr>
<td>ANTH/NORS F610</td>
<td>Northern Indigenous Peoples and Contemporary Issues</td>
</tr>
<tr>
<td>CCS F602</td>
<td>Cultural and Intellectual Property Rights</td>
</tr>
<tr>
<td>CCS/ED F610</td>
<td>Education and Cultural Processes</td>
</tr>
<tr>
<td>CCS/ED F611</td>
<td>Culture, Cognition and Knowledge Acquisition</td>
</tr>
<tr>
<td>CCS F612</td>
<td>Traditional Ecological Knowledge</td>
</tr>
<tr>
<td>ED LING F621</td>
<td>Cultural Aspects of Language Acquisition</td>
</tr>
<tr>
<td>ED F616</td>
<td>Education and Socioeconomic Change</td>
</tr>
<tr>
<td>ED F620</td>
<td>Language, Literacy and Learning</td>
</tr>
<tr>
<td>ED F660</td>
<td>Educational Administration in Cultural Perspective</td>
</tr>
<tr>
<td>RD F600</td>
<td>Circumpolar Indigenous Leadership Symposium</td>
</tr>
<tr>
<td>RD F601</td>
<td>Political Economy of the Circumpolar North</td>
</tr>
<tr>
<td>RD F651</td>
<td>Management Strategies for Rural Development</td>
</tr>
<tr>
<td>RD F652</td>
<td>Indigenous Organization Management</td>
</tr>
</tbody>
</table>

**Research Courses**
Select two from the following: 6

| ANTH F424 | Analytical Techniques |
| ANTH F637 | Methods in Ethnohistorical Research |
| CCS F604 | Documenting Indigenous Knowledge |
| CCS/ED F603 | Field Study Research Methods |
| RD F650 | Community-Based Research Methods |

Select four specialty elective courses 12

**Doctoral Dissertation**

| ANL/CCS/ED/ RD F699 | Thesis | 18 |

Total Credits 48

Completion of 18 distance credits will constitute residency.

**Note:** Recommended additional academic experience: Students are encouraged to enroll in a minimum of one semester of course work at a partner institution with program offerings related to their area of specialization. Students are encouraged to make at least one formal academic presentation at a statewide, national or international meeting, as well as a community-level presentation in Alaska. Students are encouraged to study a language other than English, as appropriate for the thematic area in which they are enrolled.

**Interdisciplinary Studies**
Office of the Graduate School and Interdisciplinary Programs
907-474-7464
www.uaf.edu/gradsch/classes/interdisciplinary-program/ (http://www.uaf.edu/gradsch/classes/interdisciplinary-program)

**M.A., M.S., Ph.D. Degrees**
Minimum Requirements for Degrees: M.A. and M.S.: 30 credits; Ph.D.: 18 thesis credits

The UAF interdisciplinary program provides flexibility to students who have well-defined goals that do not fit into one of the established majors offered by the university. Interdisciplinary Studies is located in the
Graduate School office. Help with the application process, contact
information for faculty advisors and assistance for interdisciplinary
students is available at 907-474-7464 or see www.uaf.edu/gradsch/
classes/interdisciplinary-program/ (http://www.uaf.edu/gradsch/
classes/interdisciplinary-program).

Degrees

• M.A. or M.S., Interdisciplinary Studies (p. 288)
• Ph.D., Interdisciplinary Studies (p. 288)

M.A. or M.S., Interdisciplinary Studies

• Complete the admission process including the following:
  a. Submit GRE scores
  b. In consultation with a UAF faculty member: prepare and
     submit a statement of research goals and justification for
     interdisciplinary approach, and a preliminary graduate study
     plan.

Minimum Requirements for Degree: 30 credits

General University Requirements
Complete the general university requirements. (p. 242)

Master’s Degree Requirements
Complete the master’s degree requirements. (p. 245)
Pass a comprehensive examination.

Ph.D., Interdisciplinary Studies

• Complete the admission process including the following:
  a. Submit GRE scores
  b. In consultation with a UAF faculty member: prepare and
     submit a statement of research goals and justification for
     interdisciplinary approach, and a preliminary graduate study
     plan.

Minimum Requirements for Degree: 18 thesis credits

General University Requirements
Complete the general university requirements. (p. 242)

Ph.D. Degree Requirements
Complete the Ph.D. degree requirements. (p. 246)
Pass a comprehensive examination.

Justice, Administration of

College of Liberal Arts
Justice Program
907-474-5500
www.uaf.edu/justice/ (http://www.uaf.edu/justice)

M.A. Degree

Minimum Requirements for Degree: 30 credits

The justice discipline represents a melding of theoretical and applied
concepts, and the M.A. degree in administration of justice reflects
that dichotomy. Consequently, students explore theoretical models
associated with different aspects of the criminal justice system, but also
study the structure and administration of the criminal justice system.

The M.A. degree in administration of justice has been designed as a
web-based degree program in order to accommodate the needs of
justice professionals for whom taking a two-year leave of absence from
their profession is not feasible, or for whom relocating to the Fairbanks
vicinity is not possible. The M.A. degree program has attracted justice
professionals from throughout the country who have found the flexibility
of a web-based format useful.

Degree

• M.A., Justice, Administration of (p. 288)

M.A., Justice, Administration of

Minimum Requirements for Degree: 30 credits

General University Requirements
Complete the general university requirements. (p. 242)

Master’s Degree Requirements
Complete the master’s degree requirements. (p. 245)
Complete a minimum of 18 graduate UAF credits.
Receive a passing grade on a written comprehensive exam
administered on the UAF campus in conjunction with
attendance in JUST F690.
Receive a passing grade on an oral defense examination of a
thesis or project.
Complete a thesis or project.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>JUST F605</td>
<td>Administration and Management of Criminal Justice Organizations</td>
<td>3</td>
</tr>
<tr>
<td>JUST F615</td>
<td>Justice Program Planning/ Evaluation and Grant Writing</td>
<td>3</td>
</tr>
<tr>
<td>JUST F620</td>
<td>Personnel Management in Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>JUST F625</td>
<td>Legal Aspect of Criminal Justice Management</td>
<td>3</td>
</tr>
<tr>
<td>JUST F640</td>
<td>Community/Restorative Justice</td>
<td>3</td>
</tr>
<tr>
<td>JUST F690</td>
<td>Seminar in Critical Issues and Criminal Justice Policy</td>
<td>3</td>
</tr>
<tr>
<td>JUST F698/F699</td>
<td>Non-Thesis Research/Project</td>
<td>6</td>
</tr>
</tbody>
</table>

Select 6 credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>JUST F610</td>
<td>Ethics in Criminal Justice Management</td>
<td></td>
</tr>
<tr>
<td>JUST F630</td>
<td>Media Relations and Public Relations</td>
<td></td>
</tr>
<tr>
<td>JUST F650</td>
<td>Analysis Techniques for the Criminal Justice Administrator</td>
<td></td>
</tr>
<tr>
<td>JUST F670</td>
<td>Seminar in the Administration of Juvenile Justice</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits 30

Linguistics, Applied

College of Liberal Arts
Linguistics Program
907-474-6585
www.uaf.edu/linguist/ (http://www.uaf.edu/linguist)
M.A. Degree

Minimum Requirements for Degree: 30 credits

Linguistics is the study of language and covers a variety of subjects including theories of grammar and how we produce language. It has a number of applications, including language teaching, teaching of English as a second or foreign language, and documentation of endangered languages.

Graduate students in applied linguistics may pursue a general program or develop a concentration in either language documentation or second language acquisition and teacher education. Students are expected either to have or to develop proficiency in at least one language other than English, as demonstrated by a proficiency exam or a comparable measure determined by the student’s graduate committee. Students pursuing certification in Second Language Acquisition and Teacher Education must demonstrate proficiency in the language they intend to teach. The general program provides students with a practical foundation in linguistics but remains broad enough to allow exploration of a variety of possible thesis topics.

Language documentation is designed to provide practical foundations in linguistics, techniques of fieldwork and documentation, with special focus on Alaska Native languages.

Second Language Acquisition and Teacher Education is designed for students interested in teaching English as a second language, a foreign or Alaska Native language. It is designed to provide theoretical and practical foundations in second language acquisition, language teaching, materials development, and language assessment.

Degree

• M.A., Linguistics, Applied (p. 289)

M.A., Linguistics, Applied

Minimum requirements for degree: 30 credits

General University Requirements

Complete the general university requirements. (p. 242)

Master’s Degree Requirements

Complete the master’s degree requirements. (p. 245)

Program Requirements

LING F600 Research Methods for Applied Linguistics 3
LING F601 Principles of Linguistic Analysis 3
LING F698 Non-Thesis Research/Project or LING F699 Thesis 6

Concentrations

Select one from the following concentrations: 18

General

Language Documentation

Second Language Acquisition Teacher Education

Total Credits 30

Concentrations

GENERAL

LING F602 Second Language Acquisition 3
LING F603 Phonetics and Phonology 3
LING F604 Morphology and Syntax 3
Select three from the following: 9
LING F610 Theory and Methods of Second Language Teaching
LING F611 Second Language Curriculum and Materials Development
LING F612 Assessment for the Second Language Classroom
LING F620 Semantics
LING F627 Introduction to Linguistic Description and Documentation
LING F630 Historical Linguistics
LING F631 Field Methods in Descriptive Linguistics I
LING F634 Field Methods in Descriptive Linguistics II
LING F650 Language Policy and Planning

Total Credits 18

LANGUAGE DOCUMENTATION

LING F603 Phonetics and Phonology 3
LING F604 Morphology and Syntax 3
LING F627 Introduction to Linguistic Description and Documentation 3
LING F631 Field Methods in Descriptive Linguistics I 3
LING F634 Field Methods in Descriptive Linguistics II 3
Select one elective approved by graduate committee. 3

Total Credits 18

SECOND LANGUAGE ACQUISITION TEACHER EDUCATION

LING F602 Second Language Acquisition 3
LING F610 Theory and Methods of Second Language Teaching 3
Select three from the following: 9
LING F611 Second Language Curriculum and Materials Development
LING F612 Assessment for the Second Language Classroom
LING F650 Language Policy and Planning
LING F660 Internship
Select one elective approved by graduate committee. 3

Total Credits 18

Marine Biology

School of Fisheries and Ocean Sciences
Graduate Program in Marine Sciences and Limnology
907-474-7289
www.sfos.uaf.edu/academics/ (http://www.sfos.uaf.edu/academics)
M.S., Ph.D. Degrees

Minimum Requirements for Degrees: M.S.: 30 credits; Ph.D.: 18 thesis credits

The marine biology graduate program focuses on the ecology, physiology and biochemistry/molecular biology of marine organisms. Students may pursue either a M.S. or Ph.D. degree in marine biology. Graduate students are afforded excellent opportunities for laboratory and field research through the Institute of Marine Science. Laboratory facilities are available in Fairbanks, the Seward Marine Center, the Juneau Center, School of Fisheries and Ocean Sciences, the Kodiak Seafood and Marine Science Center and at the Kasitsna Bay Laboratory. Opportunities for field work are available on the R/V Little Dipper, which operates in Resurrection Bay.

Students may select courses offered by the graduate program in marine sciences and limnology, the fisheries program, the biology and wildlife department and the chemistry and biochemistry department.

Students considering graduate study in marine biology should have a strong background in biology, molecular biology or biochemistry. Students are admitted on the basis of their ability and the capability of the program to meet their particular interests and needs. Faculty review requests for admission throughout the year. Stipends for financial support are awarded competitively. Limited fellowship support is available. Most students are supported on research projects that relate directly to their degree research.

Degrees

- M.S., Marine Biology (p. 290)
- Ph.D., Marine Biology (p. 290)

M.S., Marine Biology

- Complete the following admission requirement:
  a. Submit GRE scores.

Minimum Requirements for Degree: 30 credits

Students must earn a B- grade or better in the core courses of the degree program before being eligible to take the comprehensive exam.

General University Requirements

Complete the general university requirements. (p. 242)

Master’s Degree Requirements

Complete the master’s degree requirements. (p. 245)

Complete a thesis.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSL F610</td>
<td>Marine Biology</td>
<td>3</td>
</tr>
<tr>
<td>MSL F615</td>
<td>Physiology of Marine Organisms</td>
<td>3</td>
</tr>
<tr>
<td>MSL F650</td>
<td>Biological Oceanography</td>
<td>3</td>
</tr>
<tr>
<td>MSL F651</td>
<td>Marine Biology and Ecology Field Course</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>(or an acceptable substitution)</td>
<td></td>
</tr>
<tr>
<td>MSL F692</td>
<td>Seminar</td>
<td>3</td>
</tr>
<tr>
<td>Total Credits</td>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>

1 The following is the official GPMSL policy regarding acceptable substitutions for MSL F651 to meet the field course requirement for the M.S. marine biology program:

   a. A combination of MSL F421 plus a minimum of eight days (for 2 credits through a pre-approved independent study course) aboard an oceanographic vessel or a coastal field station conducting biological research unrelated to the student’s thesis research, if approved in advance by the Graduate Advisory Committee, Master’s Comprehensive Exam Committee, and the chief scientist of the cruise. (Note: Assuming the student spends 10 hours per day on the vessel/field station, the student will accumulate 80 hours of experience, which is equivalent to a 2-credit lab course.) To obtain approval for this last substitution, the chief scientist of the cruise/field station must submit a memorandum to the Master’s Comprehensive Exam Committee stating that the student will spend at least eight days at sea substantially involved in a variety of cruise activities that are not related to the student’s thesis research, or
   b. MSL F656, or
   c. MSL F697.

Please see department for specific details on course requirements.

Ph.D., Marine Biology

Complete the following admission requirement:

a. Submit GRE scores.

Minimum Requirements for Degree: 18 thesis credits

Students must earn a B- grade or better in the M.S. core courses of the degree program before being eligible to complete the qualifying exam required for this program.

General University Requirements

Complete the general university requirements. (p. 242)

Ph.D. Degree Requirements

Complete the Ph.D. degree requirements. (p. 246)

Complete course work at least equivalent to that required for the M.S. degree.

Mathematics

College of Natural Science and Mathematics
Department of Mathematics and Statistics
907-474-7332
www.uaf.edu/dms/ (http://www.uaf.edu/dms)

M.S., Ph.D. Degrees

Minimum Requirements for Degrees: M.S.: 30-35 credits; Ph.D.: 18 thesis credits

The number of new fields in which professional mathematicians find employment grows continually. This department prepares students for careers in industry, government and education.

The M.S. in mathematics prepares students for Ph.D. work, in addition to providing a terminal degree for those planning to enter industry or education. The aim of the Ph.D. program is to provide the student with the expertise to accomplish significant research in applied or pure mathematics, as well as to provide a broad and deep professional education.

In addition to the major programs, the department provides a number of service courses in support of other programs within the university.
Current and detailed information on mathematics degrees and course offerings is available from the department.

The Department of Mathematics and Statistics also offers programs in statistics (p. 302) (see separate listings).

**Degrees**
- M.S., Mathematics (p. 291)
- Ph.D., Mathematics (p. 291)

**M.S., Mathematics**
- Complete the following admission requirements:
  1. Submit three letters of recommendation addressing the applicant’s educational background, mathematical ability, and research and teaching potential.
  2. Submit undergraduate transcripts.
  3. Submit a resume and written statement of goals.

**Note:** For admission to the graduate school, students who are non-native speakers of English are required to submit either TOEFL or IELTS scores. While not required, submission of GRE general test scores is recommended.

Minimum Requirements for Degree: 30-35 credits

**General University Requirements**
Complete the general university requirements. (p. 242)

**Master’s Degree Requirements**
Complete the master’s degree requirements. (p. 245)

**Core Courses**
- MATH F631 Algebra I 4
- MATH F641 Real Analysis 4
- MATH F645 Complex Analysis 4
- MATH F651 Topology 4

Complete a project or thesis.

Total Credits 16

**Ph.D., Mathematics**
- Complete the following admission requirements:
  1. Submit three letters of recommendation addressing the applicant’s educational background, mathematical ability, and research and teaching potential.
  2. Submit undergraduate and, if applicable, graduate transcripts.
  3. Submit a resume and written statement of goals.

**Note:** For admission to the graduate school, students who are non-native speakers of English are required to submit either TOEFL or IELTS scores. While not required, we strongly recommend the submission of GRE mathematics subject test scores as part of the application for all students.

Minimum Requirements for Degree: 36 credits

1. Either submit transcripts indicating the completion of a master’s degree in mathematics or a related area, or compete all the requirements for the M.S. degree in mathematics, including a project or thesis which initiates study of the Ph.D. research area.

2. Pass the Ph.D. qualifying exam.

**General University Requirements**
Complete the general university requirements. (p. 242)

**Ph.D. Degree Requirements**
Complete the Ph.D. degree requirements. (p. 246)

**Mechanical Engineering**

**College of Engineering and Mines**
Department of Mechanical Engineering
907-474-7136
http://cem.uaf.edu/me/

**M.S. Degree**
Minimum Requirements for Degree: 30 credits

The mission of the mechanical engineering department at UAF is to offer the highest-quality, contemporary education at undergraduate and graduate levels, and to perform research appropriate to the technical needs of the state of Alaska, the nation and the world.

Mechanical engineers conceive, plan, design and direct the manufacturing, distribution and operation of a wide variety of devices, machines and systems for energy conversion, environmental control, materials processing, transportation, materials handling and other purposes. Mechanical engineers are engaged in creative design, applied research, development and management.

The mechanical engineering program prepares its graduates for careers at the professional level; maintains, as a base, ABET accreditation of the undergraduate program; provides continuing educational opportunities for graduate engineers; is a resource of technical knowledge for the state and nation; conducts research in all areas of mechanical engineering including cold regions mechanical engineering; and offers a graduate program in mechanical engineering at the M.S. level.

The educational objectives of the department are that graduates from the mechanical engineering program must be able to apply the knowledge of mathematics, science and engineering; be able to design and conduct experiments, as well as to analyze and interpret data; be able to design a system, component or process to meet desired needs; be able to function on multi-interdisciplinary teams; be able to identify, formulate and solve engineering problems; understand professional and ethical responsibility; be able to communicate effectively; have the broad education necessary to understand the impact of engineering solutions in a global and societal context; recognize the need for, and be able to engage in, life-long learning; understand contemporary issues; and be able to use the techniques, skills and modern engineering tools necessary for engineering practice. The department ensures that each course in the curriculum plays a meaningful role in satisfying one or more of these objectives.

**Degree**
- M.S., Mechanical Engineering (p. 291)

**M.S., Mechanical Engineering**
- Complete the following admission requirement:
  1. Submit GRE scores.

Minimum Requirements for Degree: 30 credits
General University Requirements
Complete the general university requirements. (p. 242)

Master’s Degree Requirements
Complete the master’s degree requirements. (p. 245)

Program Requirements
ME F631 Advanced Mechanics of Materials 3
ME F634 Advanced Materials Engineering 3
ME F641 Advanced Fluid Mechanics 3
ME F642 Advanced Heat Transfer 3
ME F608 Advanced Dynamics 3

Options
Complete the requirements for one of the following options: 15

Thesis option

Non-thesis option

Total Credits 30

THESIS OPTION

ME F699 Thesis 6
Electives 9

Total Credits 15

1 ME or other engineering, science, or mathematics courses approved by the student’s advisory committee.

NON-THESIS OPTION

ME F698 Non-Thesis Research/Project 3
Electives 12

Total Credits 15

1 ME or other engineering, science, or mathematics courses approved by the student’s advisory committee.

See Engineering (p. 278) for Ph.D. degree program.

Mining Engineering
College of Engineering and Mines
Department of Mining and Geological Engineering
907-474-7388
http://cem.uaf.edu/mingeo/

M.S. Degree
Minimum Requirements for Degree: 30-36

The mining engineering program emphasizes engineering as it applies to the exploration and development of mineral resources and upon the economics of the business of mining. The program offers specialization in exploration, mining or mineral beneficiation.

Students are prepared for job opportunities with mining and construction companies, consulting and research firms, equipment manufacturers, investment and commodity firms in the private sector, as well as with state and federal agencies.

Mining engineers may aspire to, and achieve, the highest positions in the industry: operating or engineering management, government agency director or entrepreneur.

Degree

M.S., Mining Engineering (p. 292)

Non-Thesis Option
Minimum Requirements for Degree: 36 credits

General University Requirements
Complete the general university requirements. (p. 242)

Master’s Degree Requirements
Complete the master’s degree requirements. (p. 245)

Program Requirements
MIN F688 Graduate Seminar I 1
MIN F600-level courses 12
Technical electives 11
MIN F698 Non-Thesis Research/Project 6

Total Credits 30

Natural Resources Management
School of Natural Resources and Extension
907-474-7083
www.uaf.edu/snre/ (http://www.uaf.edu/snre)

M.S., M.N.R.M. Degrees
Minimum Requirements for Degrees: M.S.: 30 credits; M.N.R.M.: 35 credits

The two master’s degrees offered by the School of Natural Resources and Extension are designed for students desiring careers in resources management and students planning doctoral work, as well as those wishing to be better-informed citizens. The courses and curriculum for the two degrees were developed in cooperation with groups and agencies that work professionally with resource management in Alaska. These agencies, including the Alaska Department of Natural Resources, Alaska Department of Fish and Game, Agricultural Research Service, U.S. Forest Service, Bureau of Land Management, Natural Resources Conservation Service, and U.S. Fish and Wildlife Service contribute significantly to
the programs by providing guest lecturers and internship and research opportunities for students.

Because of the diversity and broad scope of the field, each degree is customized according to the student’s interests and advisory committee’s recommendations. Student research projects and theses have typically been in the fields of forest management, land use planning, soil management, natural resource policy, range management, parks and recreation management, horticulture, agronomy, animal science, climate change and GIS.

A Bachelor of Science or Bachelor of Arts degree in a relevant discipline is required for acceptance into either program. Candidates should have general familiarity with the major resource fields. The student’s committee may require the student to take courses to remedy any deficiencies; these credits will not count toward the credits required for the degree.

Applicants must submit three letters of recommendation, official GRE scores, undergraduate transcripts and a statement of the applicant’s goals. The latter should include information about why you are applying for the degree, why you chose UAF and SNRE, and how such a degree would fit into your career goals. Applications cannot be considered until all these items have been received by the Office of Admissions and the Registrar.

The M.S. degree in natural resource management is designed for those intending to pursue a career conducting research in management problems and/or to proceed on to a doctoral program. Thesis research in natural resources management is directed toward resource problems and based on hypothesis testing.

The master’s degree in natural resource management is designed to prepare students for a management career in natural resources planning and administration; communication and public information; and/or operational innovation, improvement and impact assessment. While not requiring scientific research, the work is expected to involve critical reflection, empirical inquiry and intellectual honesty. A written product (an “opus”) and an oral presentation demonstrating sound scholarship will be required. Final acceptance of the project will be by the student’s committee and the associate dean of SNRE.

## Degrees

- M.S., Natural Resources Management (p. 293)
- M.N.R.M., Natural Resources Management (p. 293)

## M.N.R.M., Natural Resources Management

Minimum Requirements for Degree: 35 credits

### General University Requirements

Complete the general university requirements. (p. 242)

### Master’s Degree Requirements

Complete the master’s degree requirements. (p. 245)

### Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRM F601</td>
<td>Research Methods in Natural Resources Management (or an approved research methods course)</td>
<td>2</td>
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</table>

Select one from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRM F667</td>
<td>Resilience Seminar I</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete and successfully defend the thesis.

Total Credits: 14-20

1. Requirement may be met with a research methods course in a discipline related to natural resources management.
2. Requirement may be met with a statistics course in mathematical sciences or in a discipline related to natural resources management.
3. These courses will be approved by the student's committee. Up to 6 of these credits may be F400-level courses.

## Natural Resources and Sustainability

School of Natural Resources and Extension
School of Management
907-474-7188
www.uaf.edu/snre/ (http://www.uaf.edu/snre)
www.uaf.edu/som/ (http://www.uaf.edu/som)

### Ph.D. Degree

Minimum Requirements for Degree: 26 credits
The joint Ph.D. program in natural resources and sustainability prepares future leaders as academic researchers, agency professionals and analysts of nongovernmental organizations and communities for careers at the frontiers of science in the management of natural resources and environment.

Exploring and understanding natural resource management systems require a well-defined skill set and a clear understanding of how specific problems are linked to broader cultural, ecological and geopolitical contexts. Thus, the study of natural resources and sustainability encompasses a spectrum of topics. The Ph.D. builds on the existing strengths of the School of Natural Resources and Extension and School of Management faculty members to educate students in specific areas while training them to be conversant in the broader range of relevant topic areas.

The program objectives and its curriculum center around three thematic areas of study:

1. resource economics,
2. resource policy and sustainability science, and
3. forest and agricultural sciences.

Each student draws on a common set of core courses, and, with his/her graduate committee, develops a program of course work and research that produces a unique intellectual contribution to the applied field of natural resources and sustainability. Students elect to focus on one of the three thematic areas or they choose to integrate foci to develop their areas of knowledge and dissertation research.

Additional application requirement: Students are required to have a faculty sponsor upon entering the program. A letter of support from an SOM or SNRE faculty member in addition to three letters of recommendation must be submitted with the graduate application.

### Degree

- **Ph.D., Natural Resources and Sustainability** (p. 294)

#### Ph.D., Natural Resources and Sustainability

Minimum Requirements for Degree: 26 credits (18 thesis credits)

**General University Requirements**

Complete the general university requirements. (p. 242)

**Ph.D. Degree Requirements**

Complete the Ph.D. degree requirements. (p. 246)

Complete course work in thematic area(s) as determined by the advisory committee.

**Required and Elective Elements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRM F647</td>
<td>Global to Local Sustainability</td>
<td>3</td>
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<tr>
<td>NRM F649</td>
<td>Integrated Assessment and Adaptive</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Management</td>
<td></td>
</tr>
<tr>
<td>NRM F692</td>
<td>Graduate Seminar (Complete two</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>semesters)</td>
<td></td>
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</tbody>
</table>

Outreach activity of one annual public presentation

Written and oral comprehensive exams

Dissertation defense seminar

Dissertation defense examination

### Doctoral dissertation

<table>
<thead>
<tr>
<th>Total Credits</th>
<th>8</th>
</tr>
</thead>
</table>

1 Advancement to candidacy occurs when the student demonstrates mastery in understanding sustainability and in-depth knowledge of the student’s dissertation research topic area. Requirements for advancement to candidacy are determined by the academic committee of the student, and shall be consistent with the candidacy requirements for Ph.D. studies at UAF. The basis of the evaluation will be written and oral comprehensive exams.

### Oceanography

School of Fisheries and Ocean Sciences
Graduate Program in Marine Sciences and Limnology
907-474-7289
www.sfos.uaf.edu/academics/ (http://www.sfos.uaf.edu/academics)

#### M.S., Ph.D. Degrees

Minimum Requirements for Degrees: M.S.: 30 credits; Ph.D.: 18 thesis credits

This program offers M.S. degrees in several concentration areas of oceanography: physical, chemical, biological, geological and fisheries. Limnological research projects are also undertaken under the oceanography degree. The Ph.D. degree is offered in oceanography.

Opportunities for laboratory and field work are available through the School of Fisheries and Ocean Sciences, including the Institute of Marine Science. These include laboratories in Fairbanks, the Seward Marine Center, Kasitsna Bay, the Juneau Center and the Kodiak Seafood and Marine Science Center. Research vessels operated by the institute and school include the R/V Little Dipper, which operates on day trips in Resurrection Bay. Laboratory facilities include a seawater system at Seward and a variety of modern and analytical instrumentation, including stable isotope mass spectrometers, a gamma spectrometer, a flow cytometer facility, and gas and liquid chromatography equipment. Mainframe and personal computing facilities are readily accessible to graduate students.

Oceanography is both interdisciplinary and multidisciplinary. For both M.S. and Ph.D. oceanography students, research emphasis is on processes influencing the ocean’s circulation, composition, biological productivity and geology. Students considering graduate study in oceanography should have a strong background in physics, chemistry, biology, geology or mathematics, and a working familiarity with the other subjects.

### Degrees

- **M.S., Oceanography** (p. 294)
- **Ph.D., Oceanography** (p. 295)

#### M.S., Oceanography

- Complete the following admission requirement:
  a. Submit GRE scores.

**Note:** Students are admitted to the graduate program in marine sciences and limnology on the basis of their ability and the capability of the program to meet their particular interests and needs. Applications are considered throughout the year but students should apply by March 1 to have the best chance for admission and financial support for
the subsequent fall semester. Assistantship stipends are awarded competitively and limited fellowship support is available. Most students are supported on research projects that relate directly to their degree research.

Concentrations: Biological, Chemical, Fisheries, Geological, Physical

Minimum Requirements for Degree: 30 credits

Students must earn a B- grade or better in the core courses of the degree program before being eligible to take the comprehensive exam.

General University Requirements
Complete the general university requirements. (p. 242)

Master's Degree Requirements
Complete the master's degree requirements. (p. 245)

Concentrations
Select one from the following concentrations:
- Biological, Chemical, Fisheries, Physical
- Geological

Note: Oceanography majors must demonstrate field experience aboard an oceanographic vessel.

Concentrations

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOLOGICAL, CHEMICAL, GEOLOGICAL, PHYSICAL</td>
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</tr>
<tr>
<td>MSL F620 Physical Oceanography</td>
<td>4</td>
</tr>
<tr>
<td>MSL F630 Geological Oceanography</td>
<td>3</td>
</tr>
<tr>
<td>MSL F650 Biological Oceanography</td>
<td>3</td>
</tr>
<tr>
<td>MSL F660 Chemical Oceanography</td>
<td>3</td>
</tr>
<tr>
<td>MSL F692 Seminar</td>
<td>3</td>
</tr>
<tr>
<td>MSL F699 Thesis</td>
<td>open</td>
</tr>
<tr>
<td>Electives</td>
<td>open</td>
</tr>
</tbody>
</table>

Note: Oceanography majors must demonstrate field experience aboard an oceanographic vessel.

FISHERIES

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MSL F620 Physical Oceanography</td>
<td>4</td>
</tr>
<tr>
<td>MSL F630 Geological Oceanography</td>
<td>3</td>
</tr>
<tr>
<td>MSL F640 Fisheries Oceanography</td>
<td>4</td>
</tr>
<tr>
<td>MSL F650 Biological Oceanography</td>
<td>3</td>
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<tr>
<td>MSL F660 Chemical Oceanography</td>
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<td>MSL F692 Seminar</td>
<td>3</td>
</tr>
<tr>
<td>MSL F699 Thesis</td>
<td>open</td>
</tr>
<tr>
<td>Electives</td>
<td>open</td>
</tr>
</tbody>
</table>

Ph.D., Oceanography

- Complete the following admission requirement:
  a. Submit GRE scores.

Note: Students are admitted to the graduate program in marine sciences and limnology on the basis of their ability and the capability of the program to meet their particular interests and needs. Applications are considered throughout the year but students should apply by March 1 to have the best chance for admission and financial support for the subsequent fall semester. Assistantship stipends are awarded competitively and limited fellowship support is available. Most students are supported on research projects that relate directly to their degree research.

Minimum Requirements for Degree: 18 credits

General University Requirements
Complete the general university requirements. (p. 242)

Ph.D. Degree Requirements
Complete the Ph.D. degree requirements. (p. 246)
Complete course work equivalent to M.S. degree. ¹

¹ There are no fixed course requirements, nor is an M.S. degree required to earn the Ph.D. degree. However, a candidate for the Ph.D. degree in oceanography (biological, chemical, fisheries, geological, and physical oceanography) will be expected to have completed course work at least equivalent to that required for the corresponding M.S. degree.

Note: Oceanography majors must demonstrate field experience aboard an oceanographic vessel.

Petroleum Engineering

College of Engineering and Mines
Department of Petroleum Engineering
907-474-7734
http://cem.uaf.edu/pete/

M.S. Degree

Minimum Requirements for Degree: 30-36 credits

Petroleum engineering offers a unique look at the challenging problems confronting the petroleum industry. This program requires an understanding of many disciplines including mathematics, physics, chemistry, geology and engineering science. Courses in petroleum engineering deal with drilling, formation evaluation, production, reservoir engineering, computer simulation and enhanced oil recovery.

The curriculum prepares graduates to meet the demands of modern technology while emphasizing, whenever possible, the special problems encountered in Alaska. Located in one of the largest oil-producing states in the nation, the UAF petroleum engineering department offers modern and challenging degree programs.

The M.S. program is intended to provide students with an advanced treatment of petroleum engineering concepts. Students may choose either a thesis or non-thesis option. Research and teaching assistantships are available.

A doctoral degree program is offered with concentration in petroleum engineering for qualified students (see Engineering (p. 278)). Contact the graduate program coordinator or the petroleum engineering department for more information.

Degree

- M.S., Petroleum Engineering (p. 295)

M.S., Petroleum Engineering

- Complete the following admission requirement:
  a. Complete a B.S. degree in engineering or the natural sciences.
Minimum Requirements for Degree: 30-36 credits

**General University Requirements**
Complete the general university requirements. (p. 242)

**Master's Degree Requirements**
Complete the master's degree requirements. (p. 245)

**Program Requirements**
Select four from the following: 12

- PETE F607 Advanced Production Engineering
- PETE F608 Flow Assurance in the Petroleum Industry
- PETE F610 Advanced Reservoir Engineering
- PETE F621 Applied Reservoir Characterization
- PETE F630 Water Flooding
- PETE F645 Petroleum Geology
- PETE F656 Advanced Petroleum Economic Analysis
- PETE F661 Applied Well Testing
- PETE F662 Enhanced Oil Recovery
- PETE F663 Applied Reservoir Simulation
- PETE F665 Advanced Phase Behavior
- PETE F666 Drilling Optimization
- PETE F670 Fluid Flow Through Porous Media
- PETE F680 Horizontal Well Technology
- PETE F683 Natural Gas Processing and Engineering
- PETE F685 Non-Newtonian Fluid Mechanics
- PETE F689 Multiphase Fluid Flow in Pipes

**Options**
Complete the requirements for one of the following options: 18:24

- Thesis Option
- Non-Thesis Option

**Total Credits**

30-36

---

**Physics**

College of Natural Science and Mathematics
Department of Physics
907-474-7339
www.uaf.edu/physics/ (http://www.uaf.edu/physics)

**M.S., Ph.D. Degrees**

Minimum Requirements for Degrees: M.S.: 30-33 credits; Ph.D.: 18 thesis credits

Advanced study at the graduate level is offered in various areas of physics and applied physics, including many of the research specialties found at the UAF’s Geophysical Institute. Faculty and student research programs currently emphasize space physics, infrasonics, complex dynamics of nonlinear systems, ice physics and condensed matter physics.

The M.S. degree with computational physics concentration provides expertise in advanced computing environments, in the relevant mathematical foundations and in the specific physics discipline. It is directed toward students with undergraduate academic backgrounds in physics or other closely associated fields, such as engineering, that have the appropriate physics course work. This degree is relevant for students seeking careers in any areas that require expertise in computational modeling and simulation of physical systems.

The M.S. degree with space physics concentration focuses on the physics of upper atmospheres, ionospheres, magnetospheres and the interplanetary medium. It includes core physics courses and specialty courses in space physics, aeronomy, magnetospheric and auroral physics, and advanced plasma physics. The specialty courses support graduate research with faculty members at UAF’s Geophysical Institute, and include areas such as numerical simulations and time-series analysis. Additional courses such as radiative transfer and physics of fluids provide added breadth.

**Master's Degrees**

- M.S., Physics (p. 296)
- M.S., Physics with Computational Physics Concentration (p. 297)
- M.S., Physics with Space Physics Concentration (p. 297)

**Ph.D. Degree**

- Ph.D., Physics (p. 297)

**M.S., Physics**

Minimum Requirements for Degree: 30-33 credits

**General University Requirements**
Complete the general university requirements. (p. 242)

**Master's Degree Requirements**
Complete the master's degree requirements. (p. 245)

Select four from the following: 12

- PHYS F611 Mathematical Physics
- PHYS F612 Mathematical Physics
- PHYS F621 Classical Mechanics
- PHYS F622 Statistical Mechanics

---

1 Electives are chosen with approval of graduate advisory committee.

2 Electives are chosen with approval of graduate advisory committee.
### M.S., Physics with Computational Physics Concentration

Minimum Requirements for Degree: 30-33 credits

#### General University Requirements
Complete the general university requirements. (p. 242)

#### Master's Degree Requirements
Complete the master's degree requirements. (p. 245)

#### Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS F611</td>
<td>Mathematical Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS F612</td>
<td>Mathematical Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS F629</td>
<td>Methods of Numerical Simulation in Fluids and Plasma</td>
<td>3</td>
</tr>
</tbody>
</table>

Select at least 3 credits from the following:
- Approved MATH F600-level courses (excluding MATH F611/PHYS F611 and PHYS F612)
- Approved CS F600-level courses

Select 6 credits of approved PHYS F600-level courses

#### Thesis or Non-Thesis Requirements

<table>
<thead>
<tr>
<th>Option</th>
<th>Requirements</th>
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<tbody>
<tr>
<td>Thesis Option</td>
<td>Thesis Requirements</td>
</tr>
<tr>
<td></td>
<td>PHYS F699 Thesis 6-12</td>
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<tr>
<td></td>
<td>Select 12 credits from approved PHYS F600-level courses 12</td>
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<tr>
<td></td>
<td>Total Credits 18-24</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Option</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Thesis Option</td>
<td>Non-Thesis Requirements</td>
</tr>
<tr>
<td></td>
<td>PHYS F698 Non-Thesis Research/Project 3-6</td>
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<tr>
<td></td>
<td>Select 9 credits from approved PHYS F600-level courses 9</td>
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<td></td>
<td>Total Credits 12-15</td>
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</tbody>
</table>

1. At least 24 credits must be regular course work.
2. At least 30 credits must be regular course work.

---

### M.S., Physics with Space Physics Concentration

Minimum Requirements for Degree: 30-33 credits

#### General University Requirements
Complete the general university requirements. (p. 242)

#### Master's Degree Requirements
Complete the master's degree requirements. (p. 245)

#### Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>PHYS F626</td>
<td>Fundamentals of Plasma Physics</td>
</tr>
<tr>
<td>PHYS F627</td>
<td>Advanced Plasma Physics</td>
</tr>
<tr>
<td>PHYS F629</td>
<td>Methods of Numerical Simulation in Fluids and Plasma</td>
</tr>
<tr>
<td>PHYS F672</td>
<td>Magnetospheric Physics</td>
</tr>
<tr>
<td>PHYS F673</td>
<td>Space Physics</td>
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</table>

#### Thesis or Non-Thesis Requirements

<table>
<thead>
<tr>
<th>Option</th>
<th>Requirements</th>
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<tbody>
<tr>
<td>Thesis Option</td>
<td>Thesis Requirements</td>
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<tr>
<td></td>
<td>PHYS F699 Thesis 6-12</td>
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<td></td>
<td>Select 12 credits from approved PHYS F600-level courses 12</td>
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<td></td>
<td>Total Credits 18-24</td>
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</table>

<table>
<thead>
<tr>
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<th>Requirements</th>
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<tbody>
<tr>
<td>Non-Thesis Option</td>
<td>Non-Thesis Requirements</td>
</tr>
<tr>
<td></td>
<td>PHYS F698 Non-Thesis Research/Project 3-6</td>
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<tr>
<td></td>
<td>Select 18 hours from approved PHYS F600-level courses 18</td>
</tr>
<tr>
<td></td>
<td>Total Credits 21-24</td>
</tr>
</tbody>
</table>

1. At least 30 credits must be regular course work.

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### Ph.D., Physics

Minimum Requirements for Degree: 18 credits
Physics, Space

General University Requirements
Complete the general university requirements. (p. 242)

Ph.D. Degree Requirements
Complete the Ph.D. degree requirements. (p. 246)

Examinations
Complete and pass a written and oral comprehensive examination.

1 Complete in accordance with physics department’s policies and procedures manual for graduate students.

Physics, Space
College of Natural Science and Mathematics
Department of Physics
907-474-7339
www.uaf.edu/physics/ (http://www.uaf.edu/physics)

Ph.D. Degree
Minimum Requirements for Degree: 18 thesis credits

Space physics focuses on the physics of upper atmospheres, ionospheres, magnetospheres and the interplanetary medium. It includes core physics courses and specialty courses in space physics, aeronomy, magnetospheric and auroral physics, and advanced plasma physics. The specialty courses support graduate research with faculty members at UAF’s Geophysical Institute, and include areas such as numerical simulations and time-series analysis. Additional courses such as radiative transfer and physics of fluids provide added breadth.

See Physics. (p. 296)

Degree
• Ph.D., Physics, Space (p. 298)

Ph.D., Physics, Space
Minimum Requirements for Degree: 18 thesis credits

General University Requirements
Complete the general university requirements. (p. 242)

Ph.D. Degree Requirements
Complete the Ph.D. degree requirements. (p. 246)

Examinations
Complete and pass a written and oral comprehensive examination.

1 Complete in accordance with the physics department’s policies and procedures manual for graduate students.

Psychology, Clinical-Community

Ph.D. Degree
Minimum Requirements for Degree: 115 credits

The Ph.D. program in clinical-community psychology is accredited by the American Psychological Association as a clinical psychology program.

The Ph.D. program in clinical-community psychology is a program jointly delivered and administered by the Departments of Psychology at the University of Alaska Fairbanks and the University of Alaska Anchorage. The degree is awarded jointly by UAF and UAA. All program courses are co-taught across campuses via video conference and all program components are delivered by faculty at both campuses. The student experience is equivalent regardless of the students’ city of residence (Fairbanks or Anchorage). The program focus includes clinical, community and cultural psychology with a focus on rural, indigenous issues, and an applied emphasis on the integration of research and practice. As a UAF-UAA partnership, the program integrates the strengths and resources of both campuses to advance academic excellence, promote innovative and practical research, and provide solid graduate training in clinical-community psychology.

The program ensures that graduates have obtained the full range of clinical training mandated for doctoral-level clinical psychologists and will be adequately prepared for licensure as psychologists.

The clinical-community psychology program objectives are:

1. To prepare culturally competent scientists.
   Program graduates will demonstrate culturally grounded knowledge and skills in scientific inquiry. Graduates will also demonstrate competency in using research and evaluation skills to disseminate new knowledge and inform clinical and community practice.

2. To prepare culturally competent practitioners.
   Program graduates will demonstrate culturally grounded knowledge and skills in rural clinical-community practice. Graduates will demonstrate competence in developing and implementing culturally relevant prevention and intervention efforts and programs.

3. To prepare culturally competent policy and social change facilitators.
   Graduates will demonstrate culturally grounded knowledge and skills relevant to social and healthcare solutions and possess the competency to facilitate policy and social change.

Degree
• Ph.D., Psychology, Clinical-Community (p. 298)

Ph.D., Psychology, Clinical-Community

Applying for Admission
Students apply to the joint Ph.D. program through the UAA Office of Admissions. All applicant materials are collected and evaluated by the joint UAF-UAA Ph.D. admissions committee, which makes admissions recommendations to the dean of the UAF or UAA Graduate School, depending on the selected applicant’s campus of residence. Applicants may specify a preference for either campus as a location for their studies. For more information about the application process, visit the program website.
Admission Requirements

1. Application deadline: Received by Jan. 15 for the following fall admission. This is the only opportunity for program admission each year.
2. Compliance with the university requirements for a doctoral degree and admission to graduate studies as detailed in the UAF and UAA catalogs.
3. Minimum of a bachelor’s degree (B.S. or B.A. or B.Ed.); major in psychology or related field preferred. All requirements for bachelor’s degree must be completed by June 30 prior to matriculation.
4. Minimum undergraduate grade point average of 3.0.
5. Minimum 3.0 grade point average in major and in all psychology courses.
6. Course work in the areas of abnormal psychology, statistics, research methods and one of the following: personality, clinical psychology, social psychology or community psychology. All prerequisite course work must be completed by June 30 prior to matriculation.
7. Letter of intent describing the applicant’s interest and purpose in studying clinical-community psychology, the reasons why a Ph.D. in clinical-community psychology at UAF/UAA is sought at this point in the applicant’s professional development, and demonstrating an understanding of relevant professional ethics.
8. Professional vita, including documentation regarding academic, research and professional experiences, special projects and activities, and recognitions or honors.
9. Three professional references (preferably curriculum or research advisors, major course instructors with whom the student had contact in more than one course, and/or supervisors). Reference rating forms are at http://psyphd.alaska.edu/admissions.htm.
10. A disclosure statement, located at http://psyphd.alaska.edu/forms/annualdisclosure.pdf, must accompany the application to the program. Lifetime criminal background check must be submitted by students invited to a personal interview at least two weeks prior to the interview. Additional information on the FBI criminal background check is located at http://psyphd.alaska.edu/admissions.htm.

Minimum Requirements for Degree: 115 credits

General University Requirements
Complete the general university requirements. (p. 242)

Program Requirements

Cultural experience

Complete the following required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY F602</td>
<td>Native Ways of Knowing</td>
<td>3</td>
</tr>
<tr>
<td>PSY F603</td>
<td>Alaska and Rural Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY F604</td>
<td>Biological and Pharmacological Bases of Behavior</td>
<td>3</td>
</tr>
<tr>
<td>PSY F605</td>
<td>History and Systems of Psychology</td>
<td>1</td>
</tr>
<tr>
<td>PSY F607</td>
<td>Cognition, Affect and Culture</td>
<td>3</td>
</tr>
<tr>
<td>PSY F611</td>
<td>Ethics and Professional Practice</td>
<td>3</td>
</tr>
<tr>
<td>PSY F612</td>
<td>Human Development in a Cultural Context</td>
<td>3</td>
</tr>
<tr>
<td>PSY F616</td>
<td>Program Evaluation and Community Consultation</td>
<td>3</td>
</tr>
<tr>
<td>PSY F617</td>
<td>Program Evaluation and Community Consultation</td>
<td>3</td>
</tr>
<tr>
<td>PSY F622</td>
<td>Multicultural Psychopathology</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives

<table>
<thead>
<tr>
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<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY F623</td>
<td>Intervention I</td>
<td>3</td>
</tr>
<tr>
<td>PSY F629</td>
<td>Intervention II</td>
<td>3</td>
</tr>
<tr>
<td>PSY F632</td>
<td>Community Psychology Across Cultures</td>
<td>3</td>
</tr>
<tr>
<td>PSY F633</td>
<td>Tests and Measurement in Multi-Cultural Context</td>
<td>3</td>
</tr>
<tr>
<td>PSY F639</td>
<td>Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>PSY F652</td>
<td>Practicum Placement – Clinical I (multiple semesters)</td>
<td>6</td>
</tr>
<tr>
<td>PSY F653</td>
<td>Practicum Placement – Clinical II (multiple semesters)</td>
<td>6</td>
</tr>
<tr>
<td>PSY F657</td>
<td>Quantitative Analysis</td>
<td>3</td>
</tr>
<tr>
<td>PSY F658</td>
<td>Qualitative Analysis</td>
<td>3</td>
</tr>
<tr>
<td>PSY F672</td>
<td>Practicum Placement – Community I</td>
<td>3</td>
</tr>
<tr>
<td>PSY F679</td>
<td>Multicultural Psychological Assessment I</td>
<td>3</td>
</tr>
<tr>
<td>PSY F681</td>
<td>Substances of Abuse in Alaska</td>
<td>1</td>
</tr>
<tr>
<td>PSY F682</td>
<td>Substance Abuse Assessment and Treatment Planning</td>
<td>1</td>
</tr>
<tr>
<td>PSY F683</td>
<td>Clinical Interventions in Substance Abuse</td>
<td>1</td>
</tr>
<tr>
<td>PSY F686</td>
<td>Predoctoral Internship (multiple semesters)</td>
<td>18</td>
</tr>
<tr>
<td>PSY F699D</td>
<td>Thesis</td>
<td>18</td>
</tr>
</tbody>
</table>

Total Credits: 115

1. Students must complete 26 required courses (for a total of 70 credits), 18 credits of dissertation, 18 credits of predoctoral internship and 9 credits of electives. Students must accumulate a minimum of 115 credits to graduate and must have completed all required course work. Students entering the program with a masters degree in psychology or related field must complete at least two years of full-time course work, 18 credits of dissertation, and one year of predoctoral internship, all approved by the student’s advisory committee.

2. During their first year in the Ph.D. program, students must participate in a cultural experience as defined by program faculty. The actual experience varies from year to year, but includes direct exposure to Alaska Native and other cultural world views, values and life experiences through contact with cultural elders and advisors. The goal of the cultural experience is to provide an opportunity to interact directly with cultures in a non-classroom setting.

Additional Requirements

1. Clinical Competency: Clinical competency is demonstrated through preparation of a clinical portfolio that will be evaluated by an ad hoc committee. Criteria for the portfolio will be clearly defined and samples will be provided for students. Students must demonstrate clinical competency before applying to advance to the predoctoral internship and must pass both the clinical competency and community competency before starting the predoctoral internship.

2. Community competency: Community competency is demonstrated through preparation of a community portfolio that will be evaluated by an ad hoc committee. Criteria for the portfolio will be clearly defined and samples will be provided for students. Students must
pass both the clinical competency and the community competency before actually starting a predoctoral internship.

3. **Research Competency**: Research competency is demonstrated through preparation of a research portfolio that will be evaluated by an ad hoc committee. Criteria for the portfolio will be clearly defined and samples will be provided for students.

4. **Advancement to Candidacy**: Before students are allowed to register for dissertation credits, they will be reviewed for performance by the joint UAF/UAA Ph.D. committee, using existing university standards and forms for advancement to candidacy. Review will be based on faculty experience with students to date, submitted paperwork and student's progress through the program. Feedback from the review will be provided to the student by her or his advisor. To advance to candidacy, students must also have received at least a conditional pass on their comprehensive exams. The program defines the comprehensive exam as being met through passing the required competency portfolios. Passing one portfolio qualifies the student for a conditional pass on the comprehensive exam, which is sufficient for the advancement to candidacy. All portfolios must be passed for the comprehensive exam to be fully passed.

5. **Doctoral Dissertation Proposal Defense**: Before commencing data collection for a dissertation project, students must defend their proposal to their dissertation committee. The defense must be based on a written dissertation proposal to be distributed to the dissertation committee after approval by the dissertation chair. The defense will be an oral presentation to the committee by the student and will not be a public meeting. For data-collection-based dissertations, the proposal must also be approved by the UAF or UAA Institutional Review Board before data collection can commence.

6. **Doctoral Dissertation**: A doctoral dissertation must be carried out successfully and approved by a doctoral dissertation committee. The dissertation committee will consist of at least four members. It is recommended that the dissertation chair be on the same campus as the student. There must be at least one committee member from each psychology department at UAF and UAA. Content areas can vary widely, but must be related to clinical, community, or cross-cultural issues and applicable in Alaska settings.

7. **Advancement to Internship**: Students must pass the clinical portfolio and at least conditionally pass their dissertation proposal defense before applying to advance to predoctoral internship. In addition to passing the clinical portfolio and conditionally passing the dissertation proposal defense, students must apply with a formal memorandum to the local program director by Sept. 30 (the fall semester prior to the year during which the student seeks to complete the internship), stating their intent to advance to internship. For most students this will mean that the application needs to be made in the fall of the fourth year in the program. The program director will notify the core faculty committee, who will review the students' course work, assure that adequate progress has been made toward all prior milestones (i.e., clinical competency, community competency, research competency, doctoral dissertation, proposal defense and advancement to candidacy) before approving students for internship and before writing a letter of support for them. Students must fully pass the clinical portfolio, community portfolio and the dissertation proposal defense before starting the internship. Failure to pass the clinical portfolio, community portfolio and the dissertation proposal defense will result in students being ineligible to apply for or enroll in internship credits.

8. **Predoctoral Internship (PSY F686)**: A full-time, one-year predoctoral internship is required. This internship should meet the criteria laid out by the American Psychological Association; selection of an approved internship is encouraged. Placements in Alaska are preferred but not required.

9. **APA Ethical Guidelines**: Strict compliance with APA ethical guidelines is required throughout participation in the degree program. Violations can result in immediate dismissal from the program and failure to graduate. Completion of an annual disclosure statement is also required. Affirmative answers may result in dismissal from the program and failure to graduate. The disclosure statement may be viewed at http://psyphd.alaska.edu.

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**Rural Development**

College of Rural and Community Development
Department of Alaska Native Studies and Rural Development
Fairbanks Campus 907-474-6528/888-574-6528 toll-free
Anchorage office 907-279-2700/800-770-9531 toll-free
Bristol Bay Camp 907-842-8316
Chukchi Camp 907-442-3400
Interior Alaska Campus 907-474-5439
Kuskokwim Camp 907-543-4500
Northwest Camp 907-443-2201
www.uaf.edu/danrd/ma-program/ (http://www.uaf.edu/danrd/ma-program)

**M.A. Degree**

Minimum Requirements for Degree: 30 credits

The Department of Alaska Native Studies and Rural Development M.A. program is designed to educate leaders who understand the dynamic relationship of rural Alaska with the global economy and who have professional skills in areas of leadership, business development, administration and conflict management. Graduates typically take positions with tribal and municipal governments, fisheries, tourism, Native corporations, regional health corporations or non-profits, state/ federal agencies, or other private businesses.

Graduate degree students gain a broader theoretical understanding of development processes in Alaska and the circumpolar North. Graduate students complete a thesis or applied community development project, and have opportunities for international study and research.

Students can earn the M.A. degree either on the Fairbanks campus or through distance delivery. Special application requirements and deadlines apply for distance M.A. degree programs. For more information contact the department toll-free 800-770-9531 or visit www.uaf.edu/danrd/ma-program/ (http://www.uaf.edu/danrd/ma-program).

**Degree**

- M.A., Rural Development (p. 300)

**M.A., Rural Development**

Minimum Requirements for Degree: 30 credits

**General University Requirements**

Complete the general university requirements. (p. 242)

**Master's Degree Requirements**

Complete the master's degree requirements. (p. 245)

**Program Requirements**
Science Teaching and Outreach

College of Natural Science and Mathematics
Department of Biology and Wildlife
907-474-7671
www.bw.uaf.edu (http://www.bw.uaf.edu)

Graduate Certificate
Minimum Requirements for Certificate: 12 credits

The certificate in science teaching and outreach is a voluntary program that prepares science graduate students for science careers that include teaching and/or communicating science to the public. It does NOT meet the requirements for earning a state teaching certificate and will not allow graduates to apply for certified positions in the K-12 school system. The science teaching and outreach certificate will enhance readiness for college-level teaching by providing hands-on training and familiarity with pedagogical theory. The certificate is expected to increase competitive ability in the higher-education job market.

Graduate Certificate

Graduate Certificate, Science Teaching and Outreach

Graduate Certificate, Science Teaching and Outreach
Minimum Requirements for Certificate: 12 credits

General University Requirements
Complete the general university requirements. (p. 242)

Program Requirements
Have a bachelor’s degree from an accredited institution.

Security and Disaster Management

School of Management
Department of Homeland Security and Emergency Management
907-474-7461
http://www.uaf.edu/som/degrees/graduate/msdm/

M.S.D.M. Degree
Minimum Requirements for Degree: 30 credits

The online master of security and disaster management program serves both aspiring and existing homeland defense/security and emergency management practitioners. The program builds upon the experience and education of those within this highly interdisciplinary enterprise, providing graduate-level education that focuses on supporting the operational and strategic needs of those leading and managing in today's highly complex world. Leveraging the education provided in the bachelor of emergency management degree, the master's degree requires a greater synthesis and integration of the critical thinking and analysis skills required for managers and leaders in homeland defense/security and emergency management and associated fields.

The primary objectives of the program are to: prepare students for leadership and management roles in homeland security and emergency management; identify best practices for integrating community planning, security and aspects of prevention and mitigation when preparing communities and regions for a disaster; underscore the need to adopt and manage an “all hazards” approach to preparing for and managing disasters at the tactical, operational and strategic levels of the HSEM enterprise; and develop critical thinking skills, analytical abilities and leadership/management capacity to serve at the executive level in public and private sector organizations.

Applications are reviewed on a continual basis.

Degree

M.S.D.M., Security and Disaster Management

Complete the following admissions requirements:

a. Submit score from the Watson-Glaser Critical Thinking Appraisal.
Minimum Requirements for Degree: 30 credits

**General University Requirements**
Complete the general university requirements. (p. 242)

**Master's Degree Requirements**
Complete the master's degree requirements. (p. 245)

**Program Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSEM F601</td>
<td>Legal Aspects of Homeland Security and Emergency Management</td>
<td>3</td>
</tr>
<tr>
<td>HSEM F603</td>
<td>Disaster Management Policy</td>
<td>3</td>
</tr>
<tr>
<td>HSEM F605</td>
<td>Community Planning in Emergency Management</td>
<td>3</td>
</tr>
<tr>
<td>HSEM F607</td>
<td>Vulnerability and Protection</td>
<td>3</td>
</tr>
<tr>
<td>HSEM F609</td>
<td>Human Security</td>
<td>3</td>
</tr>
<tr>
<td>HSEM F632</td>
<td>Project Management</td>
<td>3</td>
</tr>
<tr>
<td>HSEM F665</td>
<td>Strategic Collaboration</td>
<td>3</td>
</tr>
<tr>
<td>HSEM F690</td>
<td>Security and Disaster Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Select 6 credits from the following:

- HSEM F613 International Disaster Management
- HSEM F692 Security and Disaster Management Seminar
- Any F400-level HSEM course not taken as an undergraduate

Total Credits 30

---

1. Students with two C's, one D or one F in courses that are part of the HSEM program will not be in good standing even if their cumulative GPA is at or above 3.0. HSEM students who are not in good standing will be subject to review and may be dismissed by the HSEM committee. Students may not use more than two F600-level courses with C grades on the advancement-to-candidacy application.

2. Up to six 400- or graduate-level credits may be transferred from the National Fire Academy, FBI National Academy, Command and General Staff College, or similar programs approved by the American Council on Education, as substitutes.

3. An A or B grade must be earned in F400-level courses.

### Statistics

**College of Natural Science and Mathematics**
Department of Mathematics and Statistics
907-474-7332
www.uaf.edu/dms/ (http://www.uaf.edu/dms)

**Graduate Certificate, M.S. Degree**
Minimum Requirements for Certificate: 12 credits; M.S.: 30 credits

Statistics is a collection of methods and theories used to make decisions or estimate unknown quantities from incomplete information. Statistical techniques are useful, for example, in estimating plant, animal and mineral abundances; forecasting social, political and economic trends; planning field plot experiments in agriculture; performing clinical trials in medical research; and maintaining quality control in industry. Employment opportunities are excellent for statisticians in many of these areas.

As a postbaccalaureate program, the certificate in statistics is equivalent to a full year of graduate statistics courses and is ideal for current graduate students in disciplines other than statistics (especially the sciences). The graduate certificate in statistics encourages a more in-depth study of statistics and provides students a credential recognizing their quantitative expertise.

The M.S. degree program in statistics builds upon UAF's strength in the sciences and our setting in Alaska by introducing a strong quantitative alternative or supplement to existing programs. The curriculum is built around four statistics core courses and flexibility in selection of elective courses. The core courses are designed to blend mathematical statistics course work typical of most M.S. programs in statistics with real applications. We believe this blending provides a substantial improvement in the graduate's skills.

Graduates of this program could be labeled quantitative biologists, biometricians, quantitative geologists, geostatisticians, or mathematical statisticians depending upon their specific course work. In addition, this program prepares individuals for Ph.D.-level work in statistics or their area of application.

The statistics program is administered by the Department of Mathematics and Statistics.

**Degree**
- M.S., Statistics (p. 303)

**Graduate Certificate**
- Graduate Certificate, Statistics (p. 302)

**Graduate Certificate, Statistics**

- Complete the following admission requirements:
  a. Hold a baccalaureate degree from an accredited institution
  b. Complete MATH F251X, MATH F252X and MATH F253X or equivalent
  c. Complete STAT F401 or equivalent

- Students must earn a C grade or better in each course.

Minimum Requirements for Certificate: 12 credits

**General University Requirements**
Complete the general university requirements. (p. 242)

**Graduate Certificate Requirements**
Complete the graduate certificate requirements. (p. 245)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT F651</td>
<td>Statistical Theory I</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one from the following options: 3-6

**Option 1:**
- STAT F652 Statistical Theory II
- or STAT F653 Statistical Theory III: Linear Models

**Option 2:**

Select two from the following:
M.S., Statistics

- Complete the following admission requirements:
  a. Submit three letters of recommendation concerning the applicant’s educational background and quantitative training.
  b. Submit complete transcripts for all college-level work.
  c. Submit a resume.
  d. Submit a written statement of goals.
  e. Submit GRE scores.
  f. The applicant must have completed a bachelor’s degree from an accredited institution with a GPA of at least 3.0.
  g. Must have completed the following courses or their equivalent with a B grade or better: full calculus sequence (MATH F251X, MATH F252X, MATH F253X); or students completing MATH F230X must take MATH F252X and MATH F253X before acceptance; and a course in linear algebra (MATH F314), at least one introductory statistics or probability course (STAT F200X, STAT F300 or MATH F371, MATH F408). Students lacking MATH F314 may be accepted on probation.

Minimum Requirements for Degree: 30 credits

General University Requirements
Complete the general university requirements. (p. 242)

Master’s Degree Requirements
Complete the master’s degree requirements. (p. 245)

Statistics Core Courses
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT F651</td>
<td>Statistical Theory I</td>
<td>3</td>
</tr>
<tr>
<td>STAT F652</td>
<td>Statistical Theory II</td>
<td>4</td>
</tr>
<tr>
<td>STAT F653</td>
<td>Statistical Theory III: Linear Models</td>
<td>3</td>
</tr>
<tr>
<td>STAT F654</td>
<td>Statistical Consulting Seminar</td>
<td>1</td>
</tr>
<tr>
<td>STAT F698</td>
<td>Non-Thesis Research/Project</td>
<td>3</td>
</tr>
</tbody>
</table>

Select two of the following:
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>STAT F461</td>
<td>Applied Multivariate Statistics</td>
<td>3</td>
</tr>
<tr>
<td>STAT F602</td>
<td>Experimental Design</td>
<td>3</td>
</tr>
<tr>
<td>STAT F605</td>
<td>Spatial Statistics</td>
<td>3</td>
</tr>
<tr>
<td>STAT F621</td>
<td>Distribution-Free Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one or more from the following electives to total 12 credits for the certificate:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON F626</td>
<td>Econometrics</td>
</tr>
<tr>
<td>ECON F627</td>
<td>Advanced Econometrics</td>
</tr>
<tr>
<td>ESM F621</td>
<td>Operations Research</td>
</tr>
<tr>
<td>FISH F601</td>
<td>Quantitative Fishery Science</td>
</tr>
<tr>
<td>MATH F641</td>
<td>Real Analysis</td>
</tr>
<tr>
<td>MIN/GE F635</td>
<td>Geostatistical Ore Reserve Estimation</td>
</tr>
<tr>
<td>PHYS F628</td>
<td>Digital Time Series Analysis</td>
</tr>
<tr>
<td>STAT F641</td>
<td>Bayesian Statistics</td>
</tr>
<tr>
<td>WLF/FISH F625</td>
<td>Population Dynamics of Vertebrates</td>
</tr>
</tbody>
</table>

Total Credits: 26

Note: Each student must take and pass a two-part comprehensive exam. The first part, written by the statistics faculty, is a written exam (not a take-home exam) covering the material in the core statistics courses. The second part is an oral exam covering follow-up questions from the written exam as well as any material from courses the student has taken along with their project.

Water and Environmental Science

College of Engineering and Mines
Department of Civil and Environmental Engineering
907-474-6129
http://cem.uaf.edu/cee/

M.S. Degree
Minimum Requirements for Degree: 30 credits

The water and environmental science program offers an M.S. degree for students with a background in science or engineering. The committee chair has to be a civil and environmental engineering faculty member or an Institute of Northern Engineering research faculty. At least one committee member has to be civil and environmental engineering faculty to oversee the student's academic program.

Career opportunities for graduates include hydrology, water supply, treatment and distribution, waste treatment, water and air pollution, solid waste disposal, hazardous and toxic waste management, pollution prevention, environmental impact evaluation, administration of environmental programs and regulatory compliance. Graduates are prepared to hold positions in government, industry, consulting or academia.

Degree
- M.S., Water and Environmental Science (p. 303)
Minimum Requirements for Degree: 30 credits

**General University Requirements**
Complete the general university requirements. (p. 242)

**Master’s Degree Requirements**
Complete the master’s degree requirements. (p. 245)

**Program Requirements**
Select one from following concentrations:

- Environmental Contaminants
- Environmental Science and Management
- Hydrology
- Water Supply and Waste Treatment

**Total Credits**: 21-27

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**Concentrations**

**ENVIRONMENTAL CONTAMINANTS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE F601</td>
<td>Engineering Research Communication</td>
<td>3</td>
</tr>
<tr>
<td>CE F663</td>
<td>Groundwater Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>ENVE F641</td>
<td>Aquatic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>ENVE F642</td>
<td>Contaminant Hydrology</td>
<td>3</td>
</tr>
<tr>
<td>ENVE F647</td>
<td>Biotechnology</td>
<td>3</td>
</tr>
<tr>
<td>ENVE F649</td>
<td>Hazardous and Toxic Waste Management</td>
<td>3</td>
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</tbody>
</table>

Approved electives (3 credits for thesis; 9 credits for project) 3-9

**Total Credits**: 21-27

1. In addition to ENVE courses, recommended courses include: BIOL F657, BIOL F680, CE F603, CE F661, CE F683, CE F684, CHEM F609, CHEM F631, CHEM F655, GE F620 and MATH F615.

**ENVIRONMENTAL SCIENCE AND MANAGEMENT**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CE F601</td>
<td>Engineering Research Communication</td>
<td>3</td>
</tr>
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</table>

Select five from the following: 15

- ENVE F641 Aquatic Chemistry
- ENVE F644 Environmental Management and Permitting
- ENVE F647 Biotechnology
- ENVE F649 Hazardous and Toxic Waste Management
- ENVE F651 Environmental Risk Assessment
- ENVE F652 Introduction to Toxicology for Engineers and Scientists

Approved electives (3 credits for thesis; 9 credits for project) 3-9

**Total Credits**: 21-27

1. In addition to ENVE courses, recommended courses include: BIOL F657, BIOL F680, CE F603, CE F661, CE F683, CE F684, CHEM F609, CHEM F631, CHEM F655, GE F620 and MATH F615.

**HYDROLOGY**

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<th>Course Code</th>
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<tbody>
<tr>
<td>CE F601</td>
<td>Engineering Research Communication</td>
<td>3</td>
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<tr>
<td>CE F662</td>
<td>Open Channel and River Engineering</td>
<td>3</td>
</tr>
<tr>
<td>CE F663</td>
<td>Groundwater Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>CE F665</td>
<td>Introduction to Watershed Hydrology</td>
<td>3</td>
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</table>

**Total Credits**: 21-27

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**WATER SUPPLY AND WASTE TREATMENT**

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<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>CE F601</td>
<td>Engineering Research Communication</td>
<td>3</td>
</tr>
<tr>
<td>ENVE F641</td>
<td>Aquatic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>ENVE F643</td>
<td>Air Pollution Management</td>
<td>3</td>
</tr>
<tr>
<td>ENVE F645</td>
<td>Unit Processes: Chemical and Physical</td>
<td>3</td>
</tr>
<tr>
<td>ENVE F646</td>
<td>Biological Unit Processes</td>
<td>3</td>
</tr>
<tr>
<td>ENVE F647</td>
<td>Biotechnology</td>
<td>3</td>
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</tbody>
</table>

Approved electives (3 credits for thesis; 9 credits for project) 3-9

**Total Credits**: 21-27

1. In addition to ENVE courses, recommended courses include: BIOL F657, BIOL F680, CE F603, CE F661, CE F683, CE F684, CHEM F609, CHEM F631, CHEM F655, GE F620 and MATH F615.

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**Wildlife Biology and Conservation**

College of Natural Science and Mathematics
Department of Biology and Wildlife
907-474-7671
www.bw.uaf.edu (http://www.bw.uaf.edu)

**M.S. Degree**

Minimum Requirements for Degree: 30 credits

The geographic location of the university is particularly advantageous for the study of wildlife biology. Spruce forest, aspen-birch forest, alpine tundra, bogs and several types of aquatic habitats are within easy reach. Studies can be made in many other habitats ranging from the dense forests of southeastern Alaska to Arctic tundra.

Adequate study collections of plants and animals are available, and a 2,000-acre study area is near the campus. Wildlife biology students have ample opportunity for close association with the personnel of the Alaska Cooperative Fish and Wildlife Research Unit, Institute of Arctic Biology and several local offices of federal and state conservation agencies. These agencies often provide support for graduate student projects, and program faculty usually hire a number of students for summer field work. Exceptional opportunities are available for students to gain experience and make job connections.

The Department of Biology and Wildlife, the Institute of Arctic Biology, and the Alaska Cooperative Fish and Wildlife Research Unit cooperate in offering graduate work leading to the M.S. degree. Detailed information on the graduate program in wildlife biology and management is available from the chair of the wildlife program.

The Alaska Cooperative Fish and Wildlife Research Unit and Institute of Arctic Biology offer a limited number of research assistantships.
Teaching assistantships are available in the Department of Biology and Wildlife.

**Degree**

- M.S., Wildlife Biology and Conservation (p. 305)

**M.S., Wildlife Biology and Conservation**

- Complete the following admission requirement:
  - a. Submit scores from both the GRE general test (required) and the GRE subject test in biology (highly recommended).
  - b. If English is not your native language, submit scores from both the Test of Spoken English and the Test of Written English, as well as TOEFL scores. Requests, including justification, for exceptions to this requirement should be made to the chair of the department.

Minimum Requirements for Degree: 30 credits

**General University Requirements**

Complete the general university requirements. (p. 242)

**Master of Science with Thesis Degree Requirements**

Complete the M.S. with Thesis degree requirements. (p. 247)

Select two courses in BIOL or WLF at the graduate level including one of the following: 6-7

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>BIOL/WLF F602</td>
<td>Research Design</td>
</tr>
<tr>
<td>BIOL/WLF F604</td>
<td>Scientific Writing, Editing, and Revising in the Biological Sciences</td>
</tr>
<tr>
<td>BIOL/WLF F680</td>
<td>Data Analysis in Biology</td>
</tr>
</tbody>
</table>

Complete and pass the departmental written and oral master's comprehensive examination.

Total Credits 6-7

See Biological Sciences (p. 252).
# UAF Administration, Faculty and Emeriti

## UA Board of Regents

- **Dale Anderson** 2012-2021
- **Sheri Buretta** 2015-2023
- **John Davies**, Treasurer, 2015-2023
- **Kenneth J. Fisher**, Secretary, 2009-2017
- **Jyotsna Heckman**, Chair, 2011-2019
- **Mary K. Hughes** 2002-2017
- **Stacey Lucason** 2015-2017
- **Gloria O’Neill**, Vice Chair, 2013-2021
- **Deena M. Paramo** 2015-2019
- **Lisa Parker** 2015-2023
- **Andy Teuber** 2015-2023
- **UA BOR on the web** [http://www.alaska.edu/bor/](http://www.alaska.edu/bor/)

## UAF Administration

<table>
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<tr>
<th>Department</th>
<th>UAF Administration</th>
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<tbody>
<tr>
<td>Interim Chancellor</td>
<td>Dana Thomas</td>
</tr>
<tr>
<td>Provost</td>
<td>Susan Henrichs, Executive Vice Chancellor, Academic Affairs</td>
</tr>
<tr>
<td>Administrative Services</td>
<td>Kari Burrell, Vice Chancellor</td>
</tr>
<tr>
<td>Arctic Biology, Institute of</td>
<td>Brian Barnes, Director</td>
</tr>
<tr>
<td>Cooperative Extension Service</td>
<td>Fred Schlutt, Vice Provost for Extension and Outreach, Director</td>
</tr>
<tr>
<td>Diversity and Equal Opportunity</td>
<td>Kevin Calderara, Interim Director</td>
</tr>
<tr>
<td>Education, School of</td>
<td>Steve Atwater, Interim Dean</td>
</tr>
<tr>
<td>eLearning &amp; Distance Education</td>
<td>Carol Gering, Executive Director</td>
</tr>
<tr>
<td>Engineering and Mines, College of</td>
<td>Doug Goering, Dean</td>
</tr>
<tr>
<td>Facilities Services</td>
<td>Scott Bell, Associate Vice Chancellor</td>
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<tr>
<td>Fisheries and Ocean Sciences, School of</td>
<td>S. Bradley Moran, Dean</td>
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<tr>
<td>Geophysical Institute</td>
<td>Robert McCoy, Director</td>
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<tr>
<td>Graduate School</td>
<td>Michael Castellini, Associate Dean</td>
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<tr>
<td>Information Technology</td>
<td>Karl Kowalski, Chief Information Technology Officer</td>
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<tr>
<td>International Arctic Research Center</td>
<td>Hajo Eicken, Director</td>
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<tr>
<td>Liberal Arts, College of</td>
<td>Todd Sherman, Dean</td>
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<tr>
<td>Libraries</td>
<td>Suzan Hahn, Interim Dean</td>
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<tr>
<td>Management, School of</td>
<td>Mark Herrmann, Dean</td>
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<tr>
<td>Marine Science, Institute of</td>
<td>Jennifer Reynolds, Director</td>
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<tr>
<td>Museum of the North, University of Alaska</td>
<td>Aldona Jonaitis, Director</td>
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<tr>
<td>Natural Resources and Extension, School of</td>
<td>David Valentine, Director of Academic Programs</td>
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<tr>
<td>Natural Science and Mathematics, College of</td>
<td>Paul Layer, Dean</td>
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<tr>
<td>Northern Engineering, Institute of Research</td>
<td>William Schnabel, Interim Director</td>
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<tr>
<td>Rural and Community Development, College of</td>
<td>Evon Peter, Vice Chancellor for Rural, Community and Native Education</td>
</tr>
<tr>
<td>–Bristol bay Campus</td>
<td>Deborah McLean-Nelson, Director</td>
</tr>
<tr>
<td>–Chukchi Campus</td>
<td>Linda Joule, Director</td>
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<tr>
<td>–Community and Technical College</td>
<td>Michele Stalder, Dean</td>
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<tr>
<td>–Interior Alaska Campus</td>
<td>Bryan Uher, Acting Director</td>
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<tr>
<td>–Kuskokwim Campus</td>
<td>Mary Ciuniq Pete, Director</td>
</tr>
<tr>
<td>–Northwest Campus</td>
<td>Bob Metcalf, Director</td>
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<tr>
<td>University and Student Advancement</td>
<td>Michael Sfraga, Vice Chancellor</td>
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Governance

<table>
<thead>
<tr>
<th>ASUAF</th>
<th>Colby Freal, President (2016-2017)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty Senate</td>
<td>Orion Lawlor, President (2016-2017)</td>
</tr>
<tr>
<td>Staff Council</td>
<td>Faye Gallant, President (2016-2017)</td>
</tr>
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</table>

Faculty

The date following each name designates the time of original appointment to university faculty. (Dates of resignations and reappointments are not indicated.) A second date in parentheses follows each member’s present rank and indicates the beginning of service in that rank. The abbreviation that follows this second date indicates the University of Alaska Fairbanks unit in which the employee works.

The abbreviations are:

- AFES Agricultural and Forestry Experiment Station
- AKCFWRU Alaska Cooperative Fish and Wildlife Research Unit
- ANLC Alaska Native Language Center
- BBC Bristol Bay Campus
- CANHR Center for Alaska Native Health Research
- CC Chukchi Campus
- CDR College of Natural Science and Mathematics Division of Research
- CEM College of Engineering and Mines
- CES Cooperative Extension Service
- CGC Center for Global Change and Arctic System Research
- CHANC Chancellor’s Office
- CIFAR Cooperative Institute for Arctic Research
- CLA College of Liberal Arts
- CNSM College of Natural Science and Mathematics
- CTC Community and Technical College
- CRCD College of Rural and Community Development
- CRS Center for Research Services
- DANSRD Department of Alaska Native Studies and Rural Development
- EDE eLearning and Distance Education
- FS Facilities Services
- GI Geophysical Institute
- GRAD Graduate School
- IAB Institute of Arctic Biology
- IAC Interior Alaska Campus
- IARC International Arctic Research Center
- INE Institute of Northern Engineering
- KUC Kuskokwim Campus
- LIB Elmer E. Rasmuson Library
- MUSEUM University of Alaska Museum of the North
- NWC Northwest Campus
- OIT Office of Information Technology
- PROV Provost’s Office
- SFOS School of Fisheries and Ocean Sciences
- SNRE School of Natural Resources and Extension
- SOE School of Education
- SOM School of Management
- USA University and Student Advancement
- VCAS Vice Chancellor for Administrative Services
- WERC Water and Environmental Research Center

A

**Abramowicz, Kenneth F.** Associate Professor of Accounting, SOM. University of Tulsa ’82 BA; ’83 MS; University of Missouri–Columbia ’91 PhD.

**Adams, Barbara L.** Term Assistant Professor, SOE. Messiah College ’91 BA; Northern Arizona University ’93 MS; University of Alaska Fairbanks ’02 PhD.

**Adkison, Milo D.** Professor of Fisheries, SFOS. University of California, Davis ’84 BS; Montana State University, Bozeman ’89 MS; Montana State University ’90 MS; University of Washington ’94 PhD.

**Aguilar–Islas, Ana Maria** Assistant Professor of Oceanography, SFOS. University of California, Santa Cruz ’07 PhD.

**Ahmadi, Mohabbat** Assistant Professor, CEM. Petroleum University of Technology, Ahwaz, Iran ’00 BS; ’03 MS; University of Texas at Austin ’10 PhD.

**Ahn, Il Sang** Assistant Professor of Civil and Environmental Engineering, CEM. Seoul National University ’91 BS; ’93 MS; State University of New York at Buffalo ’05 PhD.
Akdogan, Guven Associate Professor of Mineral Processing, CEM. Middle East Technical University (Turkey) ’85 BS; ’87 MS.

Albertson, Leif E. Associate Professor of Extension, SNRE. Youth, Family and Community Development Agent, Yukon–Kuskokwim District, CES. University of California, Berkeley ’01 BA; Harvard University ’06 MS.

Alexander, Kevin Wayne Assistant Professor of Airframe and Power Plant Maintenance, CTC/CRCD. University of Alaska Fairbanks ’96 Certificate; ’05 AAS.

Alexeev, Vladimir Term Research Associate Professor, IARC. Moscow Institute for Physics and Technology ’84 MS; ’88 PhD.

Alexie, Oscar F. Assistant Professor, KUC/CRCD. University of Alaska Fairbanks ’04 BA.

Alexie, Sophie Ann Instructor of Yup’ik Eskimo, KUC/CRCD. Kuskokwim Community College AA; University of Alaska Fairbanks ’78 AA; ’83 BEd.

Anahita, Jensine Martha Associate Professor of Sociology, CLA. Iowa State University ’97 BS; ’00 MS; ’03 PhD.

Andretech, Cynthia R. Instructor, KUC/CRCD.

Andrews, Russel Don Research Assistant Professor, SFOS. University of California, Los Angeles ’90 BS; University of British Columbia, Vancouver ’99 PhD.

Andrews, Susan B. Professor of General Studies, CRCD. Smith College ’81 BA; University of Oregon ’83 MA.

Anger, Andreas Paul Wilhelm Professor, CTC/CRCD. University of Nebraska ’90 MBA; University of Bayreuth, Germany ’91 Diplom–Kaufmann.

Aoki, Miho Associate Professor of Art, CLA. Aichi University, Japan ’91 Bed; Ohio State University ’98 MFA.

Arkell, Frederick James Assistant Professor of Business Administration, SOM. Texas Tech University ’86 BA; ’89 JD.

Arndt, Katherine Louise Assistant Professor of Library Science, LIB. University of Wisconsin–Madison ’74 BA; University of Alaska Fairbanks ’77 MA; ’96 PhD.

Arp, Christopher Douglas Research Assistant Professor, WERC/INE. Utah State University ’06 PhD.

Arthur, Melanie Marie Associate Professor of Sociology, CLA. Rice University ’92 BA; Johns Hopkins University ’01 Ph.D.

Atkinson, Judith Ann Associate Professor of Developmental Mathematics, CRCD. Eastern Kentucky University ’88 BS; University of Alaska Fairbanks ’93 MS; ’02 Ph.D.

Avdonin, Sergei Anatolievich Professor of Mathematics, CNSM. St. Petersburg State University ’72 BS; ’77 PhD.

Awoleke, Obadare Assistant Professor of Petroleum Engineering, CEM. University of Ibadan, Nigeria ’01 BS; Texas AM University ’09 MS; ’12 Ph.D.

B

Bacsujak, Mara C. Term Assistant Professor, Youth, Family and Community Development, SNRE. University of Pennsylvania ’86 BA.

Baek, Jungho Associate Professor, SOM. Hanyang University ’91 BA; Korea University ’93 MA; Michigan State University ’04 MA; ’04 Ph.D.

Baker, Carrie Crosby Associate Professor of Theatre, CLA. Middlebury College ’96 BA; University of California, Irvine ’02 MFA.

Baker, Victoria Nan Associate Professor, SFOS. University of Washington ’81 BA; University of Alaska Anchorage ’02 MEd.

Bandopadhyay, Sukumar Professor of Mining Engineering, CEM. Banaras Hindu University ’75 BS; ’75 M Tech; Pennsylvania State University ’79 MS; ’82 PhD.

Barboza, Peregrine Stephen Professor of Biology, CNSM/IAB. University of South Wales, Kensington ’83 BSc (Hons); University of New England, Armidale, Australia ’91 Ph.D.

Bargar, Harold Edward Assistant Professor of Mechanical Engineering, CEM. University of Nebraska ’77 BS; University of Alaska Fairbanks ’96 MS; ’03 Ph.D.

Barnes, Brian M. Director, IAB. Professor, CNSM. University of California, Riverside ’77 BS; University of Washington ’83 Ph.D.

Barnes, David L. Associate Professor of Civil and Environmental Engineering, CEM. New Mexico State University ’85 BS; ’87 MS; Colorado State University ’97 Ph.D.

Barnes, William Carroll Assistant Professor of Computer and Information Sciences, CTC/CRCD. State University of New York at Buffalo ’71 BA; Nova Southeastern University ’02 MS.

Barry, Ronald P. Professor of Statistics, CNSM. University of Alaska Anchorage ’84 AA; University of Alaska Fairbanks ’85 BS; ’87 MS; University of California, Irvine ’91 Ph.D.

Barry, Timothy Joseph Term Assistant Professor, CRCD. University of Alaska Fairbanks ’07 BS.

Beaudreau, Anne Assistant Professor, SFOS. Harvard University ’01 AB; University of Washington ’09 Ph.D.

Begét, James E. Professor of Geology, CNSM. Columbia University ’74 BA; University of Washington ’77 MS; ’81 Ph.D.

Bell, Scott Votaw Associate Vice Chancellor for Facilities Services, VCAS. University of Alaska Fairbanks ’82 BS.

Belz, Nathan P. Assistant Professor, CEM. University of Maine ’06 BS; ’08 MS; University of Vermont ’13 Ph.D.

Benowitz, Jeffrey Apple Research Associate, GI. University of Alaska Fairbanks ’92 BS; ’04 MFA; ’12 Ph.D.

Berge, Anna Mary Sophia Professor of Linguistics, CLA. University of Wisconsin–Madison ’88 BA; University of California, Berkeley ’91 MA; ’92 MLIS; ’97 Ph.D.

Berman Williams, Leah Wrenn Associate Professor of Mathematics, CNSM. Lewis and Clark College ’97 BA; University of Washington ‘01 MS; University of Washington ’02 Ph.D.

Berry, Kevin T. Associate Professor of Accounting, SOM. Associate Dean, SOM. Bradley University ’89 BS; University of Missouri–Columbia ’90 MAcc; Oklahoma State University ’95 Ph.D.
Bersamin, Andrea Assistant Professor of Nutrition, CNSM/IAB. University of California, Berkeley '99 BA; University of California, Davis '06 PhD.

Bhatt, Uma S. Professor, CNSM/GI. University of Pittsburgh '83 BA; '83 BSE; University of Wisconsin '89 MS, '96 PhD.

Bicigo, James M. Associate Professor of Music, CLA. University of Michigan '88 BM; Western Michigan University '93 MA; Michigan State University '98 DMA.

Billing, Frederick James Assistant Professor of Psychology, CLA. Lehigh University BS; Western Washington University MS; University of Texas PhD.

Blake, John E. Associate Vice Chancellor for Research, CRS. Director of Research Integrity, CRS. University of Saskatchewan '80 DVM, '87 MVetSc.

Blanchard, Amy L. Research Associate Professor, SFOS. University of Alaska Fairbanks '89 BS; '99 MS; '06 PhD.

Bogosyan, Seta Professor of Electrical and Computer Engineering, CEM. Istanbul Technical University '81 BS; '84 MS; '91 PhD.

Bolton, William R. Research Assistant Professor, IARC. California Lutheran University '91 BA; University of Alaska Fairbanks '96 MS; '06 PhD.

Boone, Richard D. Professor of Biology, CNSM/IAB. Oberlin College '77 ABA; Oregon State University '82 MS; University of Massachusetts, Amherst '89 PhD.

Bowman, Latrice Nichelle Instructor of Mathematics, CNSM. Instructor of Mathematics, EDE. University of Alaska Fairbanks '99 AA; '99 BS; '02 MS.

Boyer, Bert B. Director, CANHR. Associate Director, IAB. Professor of Molecular Biology, IAB. Texas Tech University '82 BA; Louisiana State University Medical Center '88 PhD.

Boylan, Brandon M. Associate Professor, CLA. Mercyhurst College '03 BA; University of Limerick '04 MA; University of Pittsburgh '13 PhD.

Brashear, James J. Professor of Art, CLA. Indiana University of Pennsylvania '87 BFA; Louisiana State University '90 MFA.

Breed, Greg A. Assistant Professor, CNSM/IAB.

Breen, Amy Lynn Assistant Research Professor, IARC. Adjunct Professor of Biology, SNRE. College of the Atlantic '94 BA; University of Missouri–Columbia '00 MS; University of Alaska Fairbanks '10 PhD.

Bret–Harte, Marion Syndonia Associate Professor of Plant Biology, CNSM/IAB. Reed College '83 BA; Stanford University '90 Ph.D.

Bridwell, Gara Deanne Assistant Professor, Early Childhood Programs, CRCD.

Brightwell, Geraldine Anne Professor of Creative Writing, CLA. Bristol Polytechnic '87 BA; University of East Anglia '89 MA; University of Alaska Fairbanks '94 MFA; University of Minnesota '04 PhD.

Brinkman, Todd Jared Assistant Professor, CNSM/IAB. Minnesota State University '00 BS; South Dakota State University '03 MSc; University of Alaska Fairbanks '09 PhD.

Bristow, William A. Professor of Electrical and Computer Engineering, CEM. University of Alaska Fairbanks '88 BS; '92 PhD.

Brocious, Heidi Lenore Clinical Associate Professor, CLA. University of Alaska Southeast '95 BEd; Walla Walla College '99 MSW.

Brooks, Catherine Ann Assistant Professor, DANSRD/CRCD. Pennsylvania State University '90 BS; '92 MS.

Brower, Ronald Hopson Instructor of Inupiaq Eskimo, ANLC. Sorbonne University (France) '76 AA; University of Alaska Fairbanks '14 BA.

Brown, Melissa Caldwell Associate Professor of Applied Business, CTC/CRCD. University of Delaware '92 BA; University of Alaska Fairbanks '94 MA.

Brown, Stephen Castlebury Associate Professor of Extension Education, SNRE. Agriculture and Horticulture Agent, Copper River/Matanuska–Susitna District, CES. Texas AM University '87 BS; University of Texas at San Antonio '92 MS; State University of New York at Syracuse '99 PhD.

Bult–Ito, Abel Professor of Biology, CNSM. University of Groningen '85 BS; '88 MS; Wesleyan University '94 PhD.

Burleson, Derrick Professor, CLA. Oklahoma State University '86 BS; Kansas State University '90 MA; University of Montana '96 MFA; University of Houston '01 Ph.D.

Burmeister, Richard A. Term Assistant Professor, CRCD. Term Assistant Professor of Education, SOE. Texas Lutheran College '68 BA; Old Lady of the Lake College '70 Certificate; University of Alaska Southeast '78 Certificate; East Texas State University '78 MS; California Coast University '87 Ed.D.

C

Cahill, Catherine Frances Associate Professor of Chemistry, CNSM. University of California, Davis '90 BS; University of Washington '94 MS; University of Nevada, Reno '96 PhD.

Callhoun, Kendra Louise Term Instructor, Youth, Family and Community Development, SNRE. University of California, Santa Cruz '95 BA; University of Alaska Fairbanks '10 MS.

Campbell, Kendra Assistant Professor, CLA. University of Southern California '04 BA; Seattle Pacific University '12.

Carlson, Cameron D. Instructor of Emergency Management, SOM. Monmouth University '86 BS; Webster University '95 MA.

Carothers, Courtney L. Associate Professor, SFOS. Cornell University '00 BA; University of Washington '04 MA; '08 PhD.

Carr, Richard S. Associate Professor of English, CLA. Director, Writing Center, CLA. University of Wisconsin '72 BA; University of Iowa '75 MA; University of Minnesota '94 Ph.D.

Cascio, Julie Marie Associate Professor of Extension, SNRE. Youth, Family and Community Development Agent, Copper River/Matanuska–Susitna District, CES. University of Wisconsin–Stout '83 BS; Oregon State University '94 MEd.
Castellini, Michael A. Associate Dean, GRAD. Senior Faculty, Center for Arctic Policy Studies, USA. University of California, San Diego '75 BA; Scripps Institution of Oceanography '81 PhD.

Celaire, Jaunelle Roberta Professor of Music Voice, CLA. Anderson Village School '88 BA; Bowling Green State University '00 MM; University of Michigan '03 DMA.

Chappell, Glenn Gilford Associate Professor of Computer Science, CEM. University of Kansas '88 BS; '90 MA; University of Illinois '96 PhD.

Charles, Stephen Walkie Assistant Professor of Yup'ik Language, CLA. University of Alaska Fairbanks '88 BEd; University of Massachusetts, Amherst '94 MEd; University of Alaska Fairbanks '12 PhD.

Chen, Cheng–fu Associate Professor of Mechanical Engineering, CEM. National Taiwan University, Taipei '88 BS; '90 MS; University of Wisconsin–Madison '00 PhD.

Chen, Gang Professor of Mining Engineering, CEM. Shandong Mining Institute '77 BS; Colorado School of Mines '84 MS; Virginia Polytechnic Institute and State University '89 PhD.

Chen, Haiwei Assistant Professor of Business Administration, SOM. Jilin University '88 BA; University of West Georgia '91 MBA; Emory University '98 PhD.

Chen, Jiguo Associate Professor of Virology, CNSM/IAB. Nanchang University '83 BS; Chinese Academy of Sciences '90 MS; Osaka University Medical School '00 Ph.D.

Cherry, Jessica E. Research Assistant Professor, IARC/INE. Columbia University '99 BS; '02 MA; '03 MS; '06 PhD.

Chowdhury, Ataur R. Associate Professor of Physics, CNSM. Dhaka University '77 BS; Clark University '85 PhD.

Christensen, Douglas H. Professor of Geophysics, CNSM. University of Utah '77 BS; University of Michigan '79 MS; '87 PhD.

Clark, Jamie L. Assistant Professor of Athropology, CLA. Northwestern University '02 BA; University of Michigan '04 MA; '09 Ph.D.

Coakley, Bernard James Professor, CNSM. Department Chair, CNSM. University of Michigan '81 BS; Louisiana State University '88 MS; Columbia University '89 MPhil; '91 PhD.

Coffman, Christine Elisabeth Professor of British Literature, CLA. Cornell University '94 AB; University of Southern California '97 MA; '01 Ph.D.

Coker, Robert H. Associate Professor, CNSM/IAB.

Cole, Terrence M. Professor of History, CLA. Director, Office of Public History, CLA. University of Alaska Fairbanks '76 BA; '78 MA; University of Washington '83 PhD.

Collins, James Michael Associate Professor of Business Administration, SOM. Illinois State University at Normal '72 BS; University of Texas at Austin '86 MBA; '91 PhD.

Collins, Richard L. Professor of Atmospheric Sciences, CNSM/GL. National University of Ireland '86 BE; Case Western Reserve University '88 MS; University of Illinois '94 PhD.

Collins, Roy Eric Assistant Professor of Marine Science, SFOS. Washington State University '02 BA; University of Washington '06 MS; '09 PhD.

Conde, Mark G. Assistant Professor of Physics, CNSM. University of Tasmania '82 BS; University of Adelaide '91 Ph.D.

Conell, Shawn Assistant Professor of Automotive Technology, CTC.

Conner, Laura Diane Research Assistant Professor, CNSM. Director, CNSM Outreach, CNSM. University of Colorado at Boulder '95 BA; Montana State University '98 MS; University of Washington '01 MS; University of Arizona '07 PhD.

Cook, Christine Rojas Assistant Professor of Counseling, SOE. Whitman College '91 BA; Western Washington University '93 MS; Washington State University, Vancouver '99 MIT; University of Alaska Fairbanks '11 Ph.D, '12 GLI.

Cooper, Amy Blye Kellum Instructor of Accounting, SOM. Birmingham–Southern College '00 BS; University of Washington '01 MPA.

Cooper, Gordon Burns Professor of English, CLA. Department Chair, CLA. Yale University '83 BA; University of Texas '86 MA; '89 PhD.

Creed, John Professor of General Studies, CRCD. University of Massachusetts, Amherst '75 BA; University of Oregon '83 MA.

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