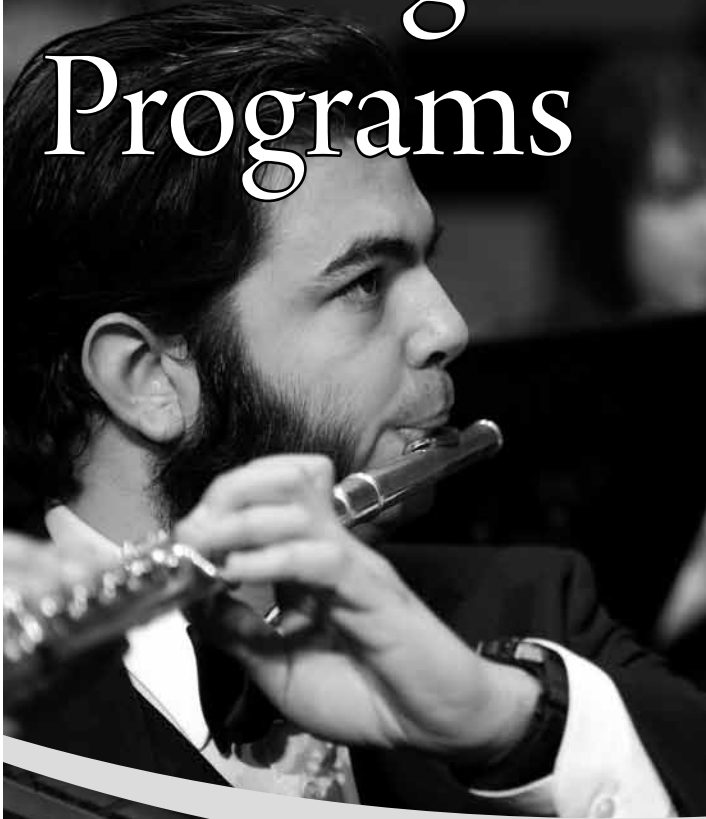


Undergraduate Programs

10



Curriculum

Academic Programs

**General University Requirements
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Undergraduate Program Descriptions

10 Undergraduate Programs

The Curriculum

The University of Alaska Anchorage provides curricula that offer its students the opportunity to acquire the intellectual skills, habits of mind and ethical sensibilities necessary to develop into individuals who make informed judgments and interpretations about their community and the broader world, who take full responsibility for their beliefs and actions, who recognize the connection between knowing and acting, and who commit themselves to lifelong learning. The UAA curricula emphasize that while the acquisition of knowledge is an end in itself, each UAA graduate must enter the world beyond the university fully equipped to live resiliently in a changing world and be willing to apply theories and methodologies to examine and resolve the problems of their own communities and those of an increasingly diverse and interdependent world.

The university does not prescribe specific courses for all students. It is the responsibility of each student to determine an appropriate program of courses within the framework of their academic program in consultation with an academic advisor. (See Chapter 6, Advising and Academic Support, for further information.) The requirements for each degree include completion of a minimum number of courses, resident credits, fulfillment of the General University Requirements and the General Education Requirements, and completion of program requirements.

Academic Programs

Certificates and Occupational Endorsements

The university offers two types of certificates at the undergraduate level:

- Undergraduate certificates of 30 credits or more offer focused instruction in a concentrated area. They include an equivalent of at least 6 credits of related instruction at the collegiate level in communications, computation and human relations. These certificates provide knowledge and skill development in broad enough areas to prepare students for entry into a variety of career fields. They are particularly appropriate in scientific or technical areas such as health care, computer systems, transportation or industrial technology.
- Occupational endorsements are certificates requiring 29 or fewer credits to complete. These certificates provide the specialized knowledge and skills needed in specific employment sectors.

Both of these certificate types are noted on transcripts. Coursework used to complete each type may also apply to associate's and baccalaureate degrees that the student may pursue.

Associate Degrees

The University of Alaska Anchorage offers two types of associate degrees, both of which require the completion of 60 credits or more:

- The Associate of Arts (AA) degree combines broad studies in written communication, oral communication, humanities, mathematics, natural sciences and social sciences, with elective coursework selected by the student. The degree provides broad exposure to systems of thought and inquiry, allows exploration of a variety of disciplines and learning experiences, and provides a solid foundation for further study at the baccalaureate level. The AA degree is administered by the College of Arts and Sciences (CAS). The complete program description is found under the CAS section of this chapter.
- Associate of Applied Science (AAS) degrees provide applied or specialized studies that are used to satisfy a student's specific educational needs. Many AAS programs prepare students for work in a particular field of employment. Some AAS degrees are designed to provide a foundation for a specific related baccalaureate degree. Students in AAS degree programs build

knowledge and skills needed to carry out specific tasks while they develop abilities in the essential elements of communications, computation and human relations.

Baccalaureate Degrees

Baccalaureate, or bachelor's degrees, are organized programs of study that consist of a minimum of 120 credits. In addition to providing extensive preparation in a specific knowledge area, the content and activities found in the baccalaureate degree promote in students the abilities to reason, research and analyze, and to form, support and communicate ideas and opinions.

Baccalaureate degrees are offered at UAA in over 50 major study areas.

Minors

A minor is a component of a baccalaureate degree. A minor may only be issued simultaneously with a baccalaureate degree. A minor from UAA consists of a minimum of 18 credits, at least 6 of which must be upper division. Students must earn at least 3 credits in residence in each minor field. They must also earn a UAA cumulative GPA of at least 2.00 (C) in the minor. Students must follow minor requirements from the same catalog used for the baccalaureate program. Refer to each discipline for specific requirements. Students must declare minors no later than the deadline to submit an Application for Graduation.

Regional Studies

Regional studies programs offer students opportunities to develop the academic insight, knowledge and technical skills needed to deal effectively with the far-reaching challenges of contemporary global society. At UAA, regional studies are informed by national developments, international contexts and comparative studies, and their aim is to prepare students to become educated world citizens by providing courses which draw upon the insights of many academic disciplines and by recognizing the cultural diversity that exists within the North Pacific region.

Post-Baccalaureate and Graduate Programs

Post-baccalaureate and graduate certificates and degrees are described in chapters 11 and 12.

General University Requirements for Undergraduate Certificates and Associate's Degree Programs

General University Requirements have been established for all certificate and associate's degree programs at UAA.

General University Requirements for Undergraduate Certificates

1. Students must be admitted to the program and must complete the certificate program requirements listed in the program section of this chapter.
2. When completing the last half of a certificate program, students must earn at least 50 percent of the credits in residence. For example, in a 30-credit certificate program, at least 8 of the last 15 must be resident credits. Additional residency credit requirements, to meet discipline or accreditation standards, may be established.
3. Students must earn a cumulative GPA of at least 2.00 (C) at UAA. Some certificate programs require higher GPAs.
4. Students must earn a minimum of 30 credits for an undergraduate certificate.
5. Students may elect to complete under the requirements of the catalog in effect at the time of formal acceptance to a certificate program or the catalog in effect at the time of graduation.

- If the requirements for a certificate 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 graduation requirements in effect at the time of formal acceptance.
- Students may earn more than one certificate by completing all requirements for each additional program.
- Undergraduate certificates that share a common core must differ by at least 6 credits.

General University Requirements for Occupational Endorsement Certificates

- Students must be admitted to the program and must complete the certificate program requirements listed in the program section of this chapter.
- Students must complete at least 30 percent of the program in residence at UAA. Additional residency credit requirements, to meet discipline or accreditation standards, may be established.
- Students must earn a cumulative GPA of at least 2.00 (C) at UAA. Some certificate programs require higher GPAs.
- Students must earn a minimum of 9 credits for an occupational endorsement certificate.
- Students may elect to complete under the requirements of the catalog in effect at the time of formal acceptance to a certificate program or the catalog in effect at the time of graduation.
- If the requirements for a certificate 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 graduation 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 certificate by completing all requirements for each additional program.
- Occupational endorsement certificates must differ by 3 or more credits.

Note: Not all occupational endorsement certificates are eligible for federal financial aid.

General University Requirements for the Associate of Arts Degree

The following requirements must be met for the Associate of Arts degree:

- Students must be admitted to the program and must complete the degree requirements listed in the program section of this chapter, under the College of Arts and Sciences.
- Students must earn a minimum of 60 credits for an AA degree.
- Students must complete at least 15 credits in residence. Additional residency credit requirements, to meet program accreditation standards, may be established.
- Students must earn a cumulative GPA of at least 2.00 (C) at UAA.
- Students may elect to graduate under the requirements of the catalog in effect at the time of formal acceptance to an associate degree program or the catalog in effect at the time of graduation.
- If the requirements for an associate degree 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 graduation requirements in effect at the time of formal acceptance.
- Students must complete a minimum of 60 credits at the 100 level or above, including at least 20 credits at the 200 level or above.

General University Requirements for Associate of Applied Science Degrees

The following requirements must be met for Associate of Applied Science degrees:

- Students must be admitted to the degree program and complete the General Course Requirements that follow this section.

- Students must complete the major degree requirements listed in the program section of this chapter. Each program is listed under its offering college.
- Students must earn a minimum of 60 credits for an AAS degree.
- Students must complete at least 15 credits in residence. Additional residency credit requirements, to meet program accreditation standards, may be established.
- Students must earn a cumulative GPA of at least 2.00 (C) at UAA. They must also earn a cumulative GPA of at least 2.00 (C) in all courses required for each major. Some associate's degree programs may require higher GPAs.
- Students may elect to graduate under the requirements of the catalog in effect at the time of formal acceptance to an associate's degree program or the catalog in effect at the time of graduation.
- If the requirements for an associate's degree 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 graduation requirements in effect at the time of formal acceptance.
- All courses for an AAS degree must be at the 100 level or above.

Associate of Applied Science Degree Requirements

In order to receive an Associate of Applied Science degree, students must be admitted to the program and must satisfy:

- General University Requirements** for Associate of Applied Science Degrees;
- General Course Requirements** for Associate of Applied Science Degrees in oral and written communications (9 credits total, see below).

Advising note for AAS students who plan to pursue a four-year degree: AAS students who intend to pursue a baccalaureate degree should consult a faculty or academic advisor for appropriate course selections.

| | |
|--|--|
| A. Oral Communication Skills | 3 |
| COMM A111 | Fundamentals of Oral Communication |
| COMM A235 | Small Group Communication |
| COMM A237 | Interpersonal Communication |
| COMM A241 | Public Speaking |
| B. Written Communication Skills | 6 |
| ENGL A111 | Methods of Written Communication |
| | <i>and one of the following:</i> |
| CIOS A260A | Business Communications |
| ENGL A211 | Academic Writing About Literature |
| ENGL A212 | Technical Writing |
| ENGL A213 | Writing in the Social and Natural Sciences |
| ENGL A214 | Persuasive Writing |
| 3. General Course Requirements in designated disciplines. Choose humanities*, math, natural sciences or social sciences courses from the General Course Requirement Classification List for Associate of Applied Science Degrees (see below.) Courses chosen must be at or above the 100 level. | 6 |
| <i>*Any English course used to satisfy the humanities general requirement must be different from the written communications skills requirement and have a course number higher than ENGL A111.</i> | |
| 4. Degree-Specific Requirements | Varies |
| (See degree programs under each college in this chapter.) | |
| 5. Electives | Varies |
| Total Minimum Credits | 60 |
| All courses must be at the 100 level or above. | |

General Course Requirement Classification List for Associate of Applied Science Degrees

These General Course Requirements are designed to ensure that all students graduating with AAS degrees have demonstrated fundamental written and oral communication skills and have successfully performed

at the collegiate level in at least one of the listed discipline areas (humanities, natural science, mathematics or social science).

The design of AAS degrees, like that of undergraduate certificates, ensures further that students gain some proficiency in essential skills of communication, computation and human relations. In the absence of specific required courses in these areas, the degrees address these topics in the major requirements and measure student performance in those classes.

Humanities

Alaska Native Studies
American Sign Language
Art
Chinese
Communication
Creative Writing and Literary Arts
Dance
English*
French
German
History
Humanities
Italian
Japanese
Korean
Languages
Latin
Liberal Studies Integrated Core
Linguistics
Music
Philosophy
Political Science (PS A331, A332, and A333 only)
Russian
Spanish
Theatre

**Any English course may be used to satisfy the humanities general requirement, but must be different from the written communications requirement and have a course number higher than ENGL A111.*

Mathematics and Natural Sciences

Anthropology (ANTH A205 only)
Astronomy
Biological Sciences
Chemistry
Computer Science
Environmental Studies (ENVI A211 only)
Geography (ENVI A211/A211L only)
Geology
Liberal Studies Integrated Science
Mathematics
Philosophy (PHIL A101 only)
Physics
Statistics

Social Sciences

Anthropology
Business Administration (BA A151 only)
Counseling
Economics
Environmental Studies (ENVI A212 only)
Geography (except ENVI A211/A211L)
Guidance
Health Sciences (HS A220 only)
Human Services (HUMS A106 only)
International Studies
Journalism and Public Communications (JPC A101 only)
Justice (JUST A110 and JUST A330 only)
Liberal Studies Social Sciences
Paralegal Studies (PARL A101 only)
Political Science
Psychology
Social Work (SWK A106 and SWK A243)
Sociology
Women's Studies

Multiple Associate's Degrees or Concurrent Majors

The Associate of Arts degree (AA) is intended to provide a broad education. Therefore, it includes no major specialty, and students may earn only one AA degree.

Associate's degree-seeking students may graduate (during the same semester) with two degrees, provided they have applied to and been accepted in both degree programs. (An Associate of Applied Science and Associate of Arts is an example.)

Students must submit a separate Application for Admission for each degree they expect to receive. Admission forms are available from the Office of Admissions (www.uaa.alaska.edu/admissions/index.cfm).

Students seeking a second associate's degree must be admitted to the program and must complete the General University Requirements for that degree, the degree requirements for both programs, and at least 12 resident credits earned after the posting of the primary degree. Students seeking both an associate's degree and a baccalaureate degree must be admitted to both programs (or have completed one program) and must complete the General University Requirements and degree-specific requirements for both degrees.

Students must satisfy the catalog requirements in effect at the time of acceptance into the degree program(s) or the catalog requirements in effect at the time of graduation.

Double Majors for AAS Programs

The Associate of Applied Science (AAS) degree is intended to provide specialized education. Therefore, it does include a major specialty and students may earn more than one AAS degree.

Associate of Applied Science degree-seeking students may apply to graduate (during the same semester) with two majors. For example, a student may select two areas from the approved majors within the Associate of Applied Science degree program (such as Welding and Automotive Technology).

Students must apply and be accepted into each major program. Students may request a double major at the time of initial admission to UAA or add a major at a later date through the Change of Major degree process. Forms are available from Enrollment Management One-Stop or online at www.uaa.alaska.edu/admissions/forms.cfm. Students must satisfy the General University Requirements, the General Course Requirements, and both sets of major requirements.

Students must satisfy the catalog requirements in effect at the time of acceptance into the major(s), or the catalog requirements in effect at the time of graduation.

A double major is not applicable to the Associate of Arts degree.

Transfer Students

Students who have received a baccalaureate degree from another regionally accredited college or university and who want to obtain an associate's degree from UAA must:

1. Meet program admission requirements;
2. Complete the General University Requirements but not the General Education or General Course Requirements; and
3. Complete the Major Program Requirements.

Baccalaureate Degrees

The Academic Major

Baccalaureate degree-seeking students select a major discipline which reflects their interests, academic talents and professional goals, and in consultation with academic advisors declare themselves to be majors in the selected discipline. Students select courses within the declared discipline, which in combination with other successfully completed university requirements, lead to a UAA baccalaureate degree. Students may declare a major, a double major, and/or an interdisciplinary major. The requirements for completing specific majors are presented in detail in the section describing the programs offered by each department.

Interdisciplinary majors are described below. Students may declare their majors at any time during their academic careers but should do so before registering for courses for the junior year or applying to participate in off-campus study programs. Some departments have courses that must be passed, or standards that must be met before a student will be accepted as

a major. Students are encouraged to think well in advance about possible majors and to speak with faculty about their educational interests.

Students may change their majors after consultation with the relevant departments. Declaration of major is a formal process which requires the appropriate forms and signatures. Students must follow established UAA procedures for declaring a major and for changing a major or degree.

Baccalaureate Degree Requirements

To receive a baccalaureate degree from UAA, students must be admitted to the program and must satisfy:

- General University Requirements;
- General Education Requirements;
- School/college requirements, if applicable; and
- Major program requirements.

For General Education Requirements, refer to the General Education Requirements (GER) for Baccalaureate Degrees section of this chapter. For school/college and major program requirements, refer to the appropriate school or college section of this catalog.

General University Requirements for All Baccalaureate Degrees

1. **Total Credits:** Students must earn at least 120 credits at the 100 level and above. Some degree programs require completion of additional credits.
2. **Upper Division Credits:** Students must earn at least 42 upper division credits, including 24 upper division credits in residence. Some degree programs require completion of additional upper division credits.
3. **Resident Credit:** Students must earn at least 30 credits in residence. In addition, transfer students must earn in residence at least 12 credits in each major field and, where applicable, at least 3 credits in each minor field. Additional residency credit requirements, to meet program accreditation standards, may be established.
4. **Minimum GPA:** Students must earn a cumulative GPA of at least 2.00 (C) at UAA. They must also earn a cumulative GPA of at least 2.00 (C) in all courses required for each major and each minor. Some degree programs may require higher GPAs.
5. **Controlling Catalog:**
 - a. Students may elect to graduate under the requirements of the catalog in effect at the time of formal acceptance to a baccalaureate degree program or the catalog in effect at the time of graduation.
 - b. If the requirements for a baccalaureate degree, as specified in the entry-level catalog, are not met within seven years of formal acceptance into the program, admission expires and the student must reapply for admission and meet the admission and graduation requirements in effect at the time of formal acceptance.
 - c. Students must follow established UAA procedures for declaring a major and for changing a major or degree. Students who change their major or degree must satisfy the catalog requirements for the new major or degree in effect at the time of the change.

General Education Requirements (GERs) for Baccalaureate Degrees

Preamble

GERs provide students with a common educational experience in order to (1) provide a foundation for further study, and (2) broaden the educational experience of every degree-seeking student. They are designed to promote an elevation of the student's level in basic, college-level skills (Tier 1), a breadth of exposure to traditional academic disciplines (Tier 2), and experience in applying his/her education in understanding and responding to the evolving state of knowledge and the world in the 21st century (Tier 3).

Tier 1: Basic College-Level Skills 12 credits

The UAA GER begins with basic college-level skills enhancement in written communication, oral communication and quantitative skills:

- Courses in written communication and oral communication develop the critical reading, thinking and communication skills (writing, speaking, and listening) necessary for personal and professional success.
- Courses in quantitative skills foster the analytical and mathematical abilities necessary for success in undergraduate study and professional life. Baccalaureate students are required to complete the 12 credits of basic college-level skills (oral, written and quantitative) before completing 60 total degree applicable credits. Students may select approved basic college-level skills, which may also fulfill requirements in their intended major. Faculty in English, communication and mathematics provide placement criteria (which may require the completion of preparatory coursework).

Tier 2: Disciplinary Areas 22 credits

GERs continue with courses in four required disciplinary areas categorized by course content and academic discipline that are designed to guarantee a breadth of academic experience. These are fine arts, humanities, natural science and social science:

- Courses in the fine arts examine the historical, aesthetic, critical and creative aspects of art.
- Courses in the humanities consider the cultural, historical, literary, aesthetic, ethical and spiritual traditions shaping the contemporary world.
- Courses in natural science present theoretical and descriptive approaches to understanding the natural and physical worlds. Lab courses in the natural sciences emphasize gathering data and analyzing hypotheses according to the scientific method.
- Courses in the social sciences explore insights about individuals, groups and cultures derived from empirical methodologies.

Tier 3: Integrative Capstone 3 credits

For baccalaureate students, the GER experience culminates with an integrative capstone, which includes courses from across the university that require students to integrate knowledge of GER basic college-level skills (Tier 1) and/or disciplinary areas (Tier 2) as part of their course design.

Tier 3 (Integrative Capstone) courses may be taken only after the student has completed all Tier 1 (Basic College-Level Skills) requirements.

GER advising note: All students should consult a faculty or academic advisor for appropriate course selections.

- Baccalaureate students are required to complete 12 credits of basic college-level skills (oral, written and quantitative) before completing 60 total degree applicable credits.
- Each of the eight General Education classifications has a list of approved courses (see the General Education Classification List in this chapter). Only courses from the GER Classification List may be used to satisfy a distribution area requirement.
- Courses used to satisfy distribution area requirements in General Education may also be used to satisfy school/college requirements and/or degree/program requirements, but no course may be counted in more than one General Education category.
- Courses ending with numbers _93 or _94 cannot satisfy a GER, and UAA courses not on the approved GER Classification List cannot be petitioned to meet a GER.

General Education Requirements Student Outcomes

After completing the General Education Requirements, UAA students shall be able to:

1. Communicate effectively in a variety of contexts and formats;
2. Reason mathematically, and analyze quantitative and qualitative data competently to reach sound conclusions;
3. Relate knowledge to the historical context in which it developed and the human problems it addresses;

4. Interpret different systems of aesthetic representation and understand their historical and cultural contexts;
5. Investigate the complexity of human institutions and behavior to better understand interpersonal, group and cultural dynamics;
6. Identify ways in which science has advanced the understanding of important natural processes;
7. Locate and use relevant information to make appropriate personal and professional decisions;
8. Adopt critical perspectives for understanding the forces of globalization and diversity; and
9. Integrate knowledge and employ skills gained to synthesize creative thinking, critical judgment and personal experience in a meaningful and coherent manner.

Petitions for General Education and/or General University Requirements

Petitions pertaining to General Education Requirements and/or General University Requirements must be processed through the Office of Academic Affairs, with final authority to deny or approve resting with the provost. After the petition has received final approval or denial, the student is notified of the decision. Changes in course level, grading or number of credits awarded are not petitionable. UAA courses not on the approved baccalaureate General Education Requirements (GER) list cannot be petitioned to meet a GER. For more information, see the Academic Petition section in Chapter 7, Academic Standards and Regulations.

General Education Classification List

Courses listed here as satisfying a General Education Requirement are also identified in Chapter 13, Course Descriptions.

Students may elect to graduate under the catalog in effect at the time of formal acceptance to a baccalaureate degree program or the catalog in effect at the time of graduation. However, a course satisfying a particular GER in the semester in which it was completed will continue to satisfy that GER for that student even if its status has changed in the catalog under which the student graduates.

Tier 1: Basic College-Level Skills

| | |
|-----------------------|----------------|
| Classification | Credits |
|-----------------------|----------------|

- | | |
|-------------------------------------|---|
| 1. Oral Communication Skills | 3 |
|-------------------------------------|---|
- Oral communication skills courses increase the abilities of students to interact appropriately and effectively in a variety of contexts, including interpersonal, small group and public speaking settings. In these courses, students develop both their message creation and message interpretation skills in order to be more successful communicators. In doing so, students develop an awareness of the role of communication in a variety of human relationships. Students develop and implement effective and appropriate communication skills, including the ability to develop, organize, present and critically evaluate messages; analyze audiences; and adapt to a variety of in-person communication settings.

Courses completed at UAA must be selected from the following **Oral Communication** courses:

- | | |
|-----------|------------------------------------|
| COMM A111 | Fundamentals of Oral Communication |
| COMM A235 | Small Group Communication |
| COMM A237 | Interpersonal Communication |
| COMM A241 | Public Speaking |

| | |
|-----------------------|----------------|
| Classification | Credits |
|-----------------------|----------------|

- | | |
|-------------------------------|---|
| 2. Quantitative Skills | 3 |
|-------------------------------|---|
- Quantitative skills courses increase the mathematical abilities of students in order to make them more adept and competent producers and wiser consumers of the mathematical, statistical and computational analyses which will dominate 21st century decision-making. In these courses, all baccalaureate students develop their algebraic, analytic and numeric skills, use them to solve applied problems, and correctly explain their mathematical reasoning.

Courses completed at UAA must be selected from the following **Quantitative Skills** courses:

- | | |
|-----------|-------------------------------------|
| MATH A107 | College Algebra |
| MATH A108 | Trigonometry |
| MATH A109 | Precalculus |
| MATH A172 | Applied Finite Mathematics |
| MATH A200 | Calculus I |
| MATH A201 | Calculus II |
| MATH A272 | Applied Calculus |
| STAT A252 | Elementary Statistics |
| STAT A253 | Applied Statistics for the Sciences |
| STAT A307 | Probability and Statistics |

| | |
|-----------------------|----------------|
| Classification | Credits |
|-----------------------|----------------|

- | | |
|--|---|
| 3. Written Communication Skills | 6 |
|--|---|
- Written communication courses emphasize that writing is a recursive and frequently collaborative process of invention, drafting and revising as well as a primary element of active learning in literate cultures. Students practice methods for establishing credibility, reasoning critically and appealing to the emotions and values of their audience. They write for a variety of purposes and audiences by employing methods of rhetorical and cultural analysis. They develop the tools to read, think and write analytically about print and nonprint texts and to generate texts that engage their own perceptions while synthesizing the ideas of texts and scholars. Students demonstrate their ability to communicate effectively by selecting form and content that fits the situation; adhering to genre conventions; adapting their voice, tone, and level of formality to that situation; and controlling stylistic features such as sentence variety, syntax, grammar, usage, punctuation and spelling.

Courses completed at UAA must be selected from the following **Written Communication** courses:

- | | |
|-----------|--|
| ENGL A111 | Methods of Written Communication |
| ENGL A211 | Academic Writing About Literature |
| ENGL A212 | Technical Writing |
| ENGL A213 | Writing in the Social & Natural Sciences |
| ENGL A214 | Persuasive Writing |
| ENGL A311 | Advanced Composition |
| ENGL A312 | Advanced Technical Writing |
| ENGL A414 | Research Writing |

Tier 2: Disciplinary Areas

| | |
|-----------------------|----------------|
| Classification | Credits |
|-----------------------|----------------|

- | | |
|----------------------|---|
| 4. Fine Arts* | 3 |
|----------------------|---|
- The fine arts (visual and performing arts) focus on the historical, aesthetic, critical and creative approaches to understanding the context and production of art as academic and creative disciplines as opposed to those that emphasize acquisition of skills. Students who complete the fine arts requirement should be able to identify and describe works of art by reference to media employed, historical context and style, and structural principles of design and composition. They should be able to interpret the meaning or intent of works of art and assess their stylistic and cultural importance by reference to their historical significance, their relationship to earlier works and artists and their overall impact of subsequent artistic work.

Courses completed at UAA must be selected from the following **Fine Arts** courses:

- | | |
|-----------|--|
| AKNS/ | |
| MUS A215* | Music of Alaska Natives and Indigenous Peoples of Northern Regions |
| ART A160 | Art Appreciation |
| ART A261 | History of Western Art I |
| ART A262 | History of Western Art II |
| ART A360A | History of Non-Western Art I |
| ART A360B | History of Non-Western Art II |
| DNCE A170 | Dance Appreciation |
| MUS A121 | Music Appreciation* |
| MUS A124* | History of Jazz |
| MUS A221* | History of Music I |
| MUS A222* | History of Music II |

| | |
|----------|-----------------------------|
| THR A111 | Introduction to the Theatre |
| THR A311 | Representative Plays I |
| THR A312 | Representative Plays II |
| THR A411 | History of the Theatre I |
| THR A412 | History of the Theatre II |

*Note: Music majors must select courses outside the major.

Classification

Credits

5. Humanities

6

(outside the major)

The humanities examine the characteristic of reality, the purpose of human existence, the properties of knowledge and the qualities of sound reasoning, eloquent communication and creative expression. They study the problems of right conduct in personal, social and political life. They also consider the qualities of the divine, the sacred and the mysterious. In these tasks the humanities reflect upon the world's heritage of the arts, history, languages, literature, religion and philosophy. Students who complete a content-oriented course in the humanities should be able to identify texts or objects, place them in the historical context of the discipline, articulate the central problems they address and provide reasoned assessments of their significance. Students who complete a skills-oriented humanities course in logic should be able to identify the premises and conclusions of brief written arguments, evaluate their soundness or cogency, and recognize common fallacies. They should also be able to use a formal technique to determine the validity of simple deductive arguments and evaluate the adequacy of evidence according to appropriate inductive standards. Students who complete a skill-oriented humanities course in a language should demonstrate proficiency in listening, speaking and writing.

Courses completed at UAA must be selected from the following **Humanities** courses:

| | |
|------------|--|
| AKNS A101A | Elementary Central Yup'ik Language I |
| AKNS A101B | Elementary Tlingit Language I |
| AKNS A101C | Elementary Alaska Native Language I |
| AKNS A102A | Elementary Central Yup'ik Language II |
| AKNS A102B | Elementary Tlingit Language II |
| AKNS A102C | Elementary Alaska Native Language II |
| AKNS A201 | Alaska Native Perspectives |
| ART A261 | History of Western Art I |
| ART A262 | History of Western Art II |
| ART A360A | History of Non-Western Art I |
| ART A360B | History of Non-Western Art II |
| ASL A101 | Elementary American Sign Language I |
| ASL A102 | Elementary American Sign Language II |
| ASL A201 | Intermediate American Sign Language I |
| ASL A202 | Intermediate American Sign Language II |
| CHIN A101 | First Year Chinese I |
| CHIN A102 | First Year Chinese II |
| CHIN A201 | Second Year Chinese I |
| CHIN A202 | Second Year Chinese II |
| ENGL A121 | Introduction to Literature |
| ENGL A201 | Masterpieces of World Literature I |
| ENGL A202 | Masterpieces of World Literature II |
| ENGL A301 | Literature of Britain I |
| ENGL A302 | Literature of Britain II |
| ENGL A305 | National Literatures in English |
| ENGL A306 | Literature of the United States I |
| ENGL A307 | Literature of the United States II |
| ENGL A310 | Ancient Literature |
| ENGL A383 | Film Interpretation |
| ENGL A445 | Alaska Native Literatures |
| FREN A101 | Elementary French I |
| FREN A102 | Elementary French II |
| FREN A201 | Intermediate French I |
| FREN A202 | Intermediate French II |
| FREN A301 | Advanced French I |
| FREN A302 | Advanced French II |
| GER A101 | Elementary German I |
| GER A102 | Elementary German II |

| | |
|-----------|--|
| GER A201 | Intermediate German I |
| GER A202 | Intermediate German II |
| GER A301 | Advanced German I |
| GER A302 | Advanced German II |
| HIST A101 | Western Civilization I |
| HIST A102 | Western Civilization II |
| HIST A121 | East Asian Civilization I |
| HIST A122 | East Asian Civilization II |
| HIST A131 | History of United States I |
| HIST A132 | History of United States II |
| HIST A341 | History of Alaska |
| HNRS A192 | Honors Seminar: Enduring Books |
| HUM A211 | Introduction to Humanities I |
| HUM A212 | Introduction to Humanities II |
| JPN A101 | First Year Japanese I |
| JPN A102 | First Year Japanese II |
| JPN A201 | Second Year Japanese I |
| JPN A202 | Second Year Japanese II |
| JPN A301 | Advanced Japanese I |
| JPN A302 | Advanced Japanese II |
| LING A101 | The Nature of Language |
| MUS A221 | History of Music I |
| MUS A222 | History of Music II |
| PHIL A101 | Introduction to Logic |
| PHIL A201 | Introduction to Philosophy |
| PHIL A211 | History of Philosophy I |
| PHIL A212 | History of Philosophy II |
| PHIL A301 | Ethics |
| PHIL A313 | Eastern Philosophy and Religion |
| PHIL A314 | Western Religions |
| PS A331 | Political Philosophy |
| PS A332 | History of Political Philosophy I: Classical |
| PS A333 | History of Political Philosophy II: Modern |
| RUSS A101 | Elementary Russian I |
| RUSS A102 | Elementary Russian II |
| RUSS A201 | Intermediate Russian I |
| RUSS A202 | Intermediate Russian II |
| RUSS A301 | Advanced Russian I |
| RUSS A302 | Advanced Russian II |
| SPAN A101 | Elementary Spanish I |
| SPAN A102 | Elementary Spanish II |
| SPAN A201 | Intermediate Spanish I |
| SPAN A202 | Intermediate Spanish II |
| SPAN A301 | Advanced Spanish I |
| SPAN A302 | Advanced Spanish II |
| THR A311 | Representative Plays I |
| THR A312 | Representative Plays II |
| THR A411 | History of the Theatre I |
| THR A412 | History of the Theatre II |

Classification

Credits

6. Natural Sciences

7

(must include a laboratory course)

The natural sciences focus on gaining an understanding of the matter, events and processes that form and sustain our universe. Methods of scientific inquiry are diverse, but all aim to formulate general principles that explain observations and predict future events or behaviors within their disciplines.

Laboratory courses illustrate how scientists develop, test and challenge scientific theories, providing an appreciation for the process and problems involved in the advancement of scientific knowledge.

Students completing their natural sciences requirement will be able to apply the scientific method by formulating questions or problems, proposing hypothetical answers or solutions, testing those hypotheses, and reaching supportable conclusions. They will also demonstrate an understanding of the fundamentals of one or more scientific disciplines, a knowledge of the discoveries and advances made within that discipline, and the impact of scientific information in sculpting thought and in providing the foundations

for the technology in use at various times in history. Students completing the laboratory class will demonstrate the ability to work with the tools and in the settings encountered by professionals in the discipline, will critically observe materials, events or processes, and will accurately record and analyze their observations.

Courses completed at UAA must be selected from the following **Natural Sciences** courses:

| | |
|-------------|---|
| ASTR A103/L | Solar System Astronomy |
| ASTR A104/L | Stars, Galaxies and Cosmology |
| BIOL A102 | Introductory Biology |
| BIOL A103 | Introductory Biology Laboratory |
| BIOL A111 | Human Anatomy and Physiology I |
| BIOL A112 | Human Anatomy and Physiology II |
| BIOL A115 | Fundamentals of Biology I |
| BIOL A116 | Fundamentals of Biology II |
| BIOL/ | |
| GEOL A178 | Fundamentals of Oceanography |
| BIOL/ | |
| GEOL A179 | Fundamentals of Oceanography Laboratory |
| BIOL/ | |
| CPLX A200 | Introduction to Complexity |
| CHEM A103/L | Survey of Chemistry |
| CHEM A104/L | Introduction to Organic Chemistry and Biochemistry |
| CHEM A105/L | General Chemistry I |
| CHEM A106/L | General Chemistry II |
| ENVI A211/L | Environmental Science: Systems and Processes (equivalent to GEOG A211 and ENVI A202)* |
| GEOG A111 | Earth Systems: Elements of Physical Geography (equivalent to GEOG A205)* |
| GEOL A111 | Physical Geology |
| GEOL A115/L | Environmental Geology |
| GEOL A221 | Historical Geology |
| LSIS A101 | Discoveries in Science |
| LSIS A102 | Origins: Earth-Solar System-Life |
| LSIS A201 | Life on Earth |
| LSIS A202 | Concepts and Processes: Natural Sciences |
| PHYS A101 | Physics for Poets |
| PHYS A123/L | Basic Physics I |
| PHYS A124/L | Basic Physics II |
| PHYS A211/L | General Physics I |
| PHYS A212/L | General Physics II |

* Equivalent courses are treated as repeats. Only the credits and chronologically last grade earned are applied toward graduation requirements, prerequisite fulfillment and cumulative UAA GPA Calculation. Only the most recent course taken is used to fulfill university requirements including the General Education Requirement.

| Classification | Credits |
|---|---------|
| 7. Social Sciences (outside the major; from two different disciplines) | 6 |
| The social sciences focus on the acquisition, analysis and interpretation of empirical data relevant to the human experience. Disciplines differ in their focus on collective as opposed to individual behavior, biological as opposed to social or cultural factors, the present as opposed to the past, and quantitative as opposed to qualitative data. Students who complete a General Education social sciences course should be motivated to reflect on the workings of the society of which they are a part and should possess a broad perspective on the diversity of human behavior. They should be able to distinguish between empirical and non-empirical truth claims. They should be aware of the limits of human objectivity and understand the rudiments of how ideas about social phenomena may be tested and verified or rejected. They should have an introductory knowledge of social science thinking which includes observation, empirical data analysis, theoretical models, quantitative reasoning, and application to social aspects of contemporary life. A student who has met the social science General Education Requirement is expected to be able to | |

demonstrate knowledge of social science approaches and to apply that knowledge in a particular content area.

Courses completed at UAA must be selected from the following **Social Sciences** courses:

| | |
|-------------|---|
| ANTH A101 | Introduction to Anthropology |
| ANTH A200 | Natives of Alaska |
| ANTH A202 | Cultural Anthropology |
| ANTH A250 | The Rise of Civilization |
| BA A151 | Introduction to Business |
| CEL A292 | Introduction to Civic Engagement |
| ECON A123 | Introduction to Behavioral Economics |
| ECON A201 | Principles of Macroeconomics |
| ECON A202 | Principles of Microeconomics |
| ECON A210 | Environmental Economics and Policy |
| EDEC A105 | Introduction to the Field of Early Childhood |
| ENVI A212 | Living on Earth: People and the Environment |
| GEOG/ | |
| INTL A101 | Local Places/Global Regions: An Introduction to Geography |
| HNRS A292 | Honors Seminar in Social Science |
| HS A220 | Core Concepts in the Health Sciences |
| HUMS/ | |
| SWK A106 | Introduction to Social Welfare |
| INTL A101 | Local Places: Global Regions/Introduction to Geography |
| JPC A101 | Media and Society |
| JUST A110 | Introduction to Justice |
| JUST/ | |
| SOC A251 | Crime and Delinquency |
| JUST A330 | Justice and Society |
| JUST A375 | Juvenile Justice and Delinquency |
| LSSS A111 | Cultural Foundations of Human Behavior |
| PARL A101 | Introduction to Law |
| PS A101 | Introduction to American Government |
| PS A102 | Introduction to Political Science |
| PS A311 | Comparative Politics |
| PS/SOC A351 | Political Sociology |
| PSY A111 | General Psychology |
| PSY A150 | Lifespan Development |
| SOC A101 | Introduction to Sociology |
| SOC A110 | Introduction to Gerontology: Multidisciplinary Approach |
| SOC A201 | Social Problems and Solutions |
| SOC A202 | Social Institutions |
| SWK A243 | Cultural Diversity and Community Service Learning |
| WS A200 | Introduction to Women's and Gender Studies |

Tier 3: Integrative Capstone

| Classification | Credits |
|--|---------------------|
| 8. Integrative Capstone** | 3 |
| The GER experience culminates with the integrative capstone, which includes courses from across the university that require students to synthesize across GER domains. Integrative capstone courses include knowledge integration of GER basic college-level skills (Tier 1) and/or disciplinary areas (Tier 2) as part of their course design. Integrative capstone courses should focus on practice, study and critical evaluation, and include in their student outcomes an emphasis on the evolving realities of the 21st century. | |
| Students completing the integrative capstone requirement must demonstrate the ability to integrate knowledge by accessing, judging and comparing knowledge gained from diverse fields and by critically evaluating their own views in relation to those fields. | |
| Courses completed at UAA must be selected from the following Integrative Capstone courses: | |
| ACCT A452 | Auditing |
| ANTH A354 | Culture and Ecology |
| ART A491 | Senior Seminar |

| | |
|------------|--|
| ASTR/ | |
| BIOL A365 | Astrobiology |
| ATA A492 | Air Transportation System Seminar |
| BIOL A378 | Marine Biology |
| BIOL A452 | Human Genome |
| BIOL/CHEM/ | |
| PHYS A456 | Nonlinear Dynamics and Chaos |
| BIOL A489 | Population Genetics and Evolutionary Processes |
| CA A495 | Hospitality Internship |
| CE A438 | Design of Civil Engineering Systems |
| CEL A450 | Civic Engagement Capstone |
| CHEM A441 | Principles of Biochemistry I |
| CIS A326 | Information Age Literacy |
| CIS A376 | Management Information Systems |
| CM A422 | Sustainability in the Built Environment |
| CM A450 | Construction Management Professional Practice |
| CS A470 | Applied Software Development Project |
| CSE A438 | Design of Computer Engineering Systems |
| DH A424 | Community Dental Health II |
| DN A415 | Community Nutrition |
| DNCE A370 | Interdisciplinary Dance Studies: Issues and Methods |
| ECON A492 | Seminar in Economic Research |
| EDFN A300 | Philosophical and Social Context of American Education |
| EDFN A304 | Comparative Education |
| EE A438 | Design of Electrical Engineering Systems |
| ENGL A434 | History of Rhetoric |
| ENGL A478 | Public Science Writing |
| ENVI A470 | Environmental Planning and Problem Solving |
| GEO A460 | Geomatics Design Project |
| GEOG A390A | Topics in Global Geography |
| GEOL A456 | Geoarcheology |
| HIST/INTL/ | |
| PS A325 | Northeast Asia in 21st Century |
| HIST A390A | Themes in World History |
| HIST/ | |
| RUSS A427 | Post-Soviet Culture and Society |
| HNRS A490 | Senior Honors Seminar |
| HS A491 | Health Issues in Alaska |
| HS A492 | Senior Seminar: Contemporary Health Policy |
| HUMS A495B | Human Services Practicum IV |
| INTL A315 | Canada: Nation and Identity |
| JPC A403 | Communications and Media Research |
| JUST A460 | Justice in Crisis |
| JUST A463 | Biobehavioral Criminology |
| LSIC A488A | Capstone Project I: Design and Research |
| LSSS A312 | Individuals, Groups, and Institutions |
| MATH A420 | History of Mathematics |
| ME A438 | Design of Mechanical Engineering Systems |
| MEDT A302 | Clinical Laboratory Education and Management |
| MUS A331 | Form and Analysis |
| NS A411 | Health II: Nursing Therapeutics |
| PEP A384 | Cultural and Psychological Aspects of Health and Physical Activity |
| PHIL A400 | Ethics, Community, and Society |
| PS A492 | Senior Seminar in Politics |
| PSY A370 | Behavioral Neuroscience |
| SOC A488 | Capstone Seminar |
| STAT A308 | Intermediate Statistics for the Sciences |
| SWK A431 | Social Work Practice IV: Integrative Capstone |
| TECH A453 | Capstone Project |
| THR A492 | Senior Seminar |

See *UAOnline* for additional integrative capstone courses.

**** Note:** The 37-credit General Education Requirement, including the 3-credit integrative capstone, is required for graduation after September 2008 for baccalaureate students who were admitted to major or pre-major status under the 2005-2006 UAA Catalog or later

catalogs. (For specifics on catalog year requirements, see the Related Undergraduate Admissions Policies in Chapter 7, Academic Standards and Regulations.)

Concurrent Baccalaureate Programs

Double Majors

Baccalaureate degree-seeking students may graduate (during the same semester) with two majors, provided they have applied for and been accepted in each degree program and that the degree is the same for each major. For example, a student may select two areas from the approved majors within a Bachelor of Arts degree program (such as History and Justice). Students must apply for and be accepted into each major. Students may declare a double major at the time of initial admission to UAA or add a major at a later date through the change of major/degree process. Forms are available from Enrollment Management One-Stop or online at www.uaa.alaska.edu/admissions/forms.cfm. Students must satisfy the General University Requirements, the General Education Requirements for the primary program, both sets of school/college requirements, if applicable, and major program requirements. Students must satisfy the catalog requirements in effect at the time of acceptance into the major(s) or the catalog requirements in effect at the time of graduation.

Multiple Degrees

Baccalaureate degree-seeking students may graduate (during the same semester) with multiple degrees provided they have applied for and been accepted in each degree program. Students must submit a separate Application for Admission and Application for Graduation for each degree they expect to complete. Forms are available at Enrollment Management One-Stop or online at www.uaa.alaska.edu/admissions/forms.cfm. Students must satisfy the catalog requirements in effect at the time of acceptance into the degree program(s) or the catalog requirements in effect at the time of graduation. Baccalaureate degree-seeking students must complete the General University Requirements, the General Education Requirements, school/college requirements, if applicable, all major program requirements, and at least 24 resident credits beyond each degree completed (i.e., if the first degree requires a total of 120 credits, the second requires at least 144 total credits, and the third requires at least 168 total credits, etc.).

Second Baccalaureate Degree

UAA Students

Students who have received a baccalaureate degree from UAA, who return and want to obtain another baccalaureate degree must:

1. Meet admission requirements.
2. Complete at least 24 resident credits after the posting of the previous baccalaureate degree(s) awarded.
3. Complete the school/college requirements, if applicable, and the major program requirements, including any resident and/or upper division requirements, for the second degree.
4. Maintain a cumulative GPA of at least 2.00 (C) at UAA in order to graduate. Some programs may require a higher GPA in the major.

Transfer Students

Students who have received a baccalaureate degree from another regionally accredited college or university and who want to obtain a baccalaureate degree from UAA must:

1. Meet admission requirements.
2. Complete the General University Requirements but not the General Education Requirements.
3. Complete all school/college requirements, if applicable, and the major program requirements.

Interdisciplinary Baccalaureate Degrees

Upon completing at least 15 UAA credits, a student may develop an interdisciplinary BA or BS degree program. The proposed program must differ significantly from established degree programs and must not be a substitute for a regular degree program. Interdisciplinary degree programs are not transferable to other University of Alaska campuses.

To receive a baccalaureate degree in interdisciplinary studies from UAA, the student must meet General University Requirements, General Education Requirements, and school/college requirements as applicable. Major program requirements are established in the interdisciplinary program plan developed by the student in consultation with an advisory committee.

An interdisciplinary baccalaureate program proceeds as follows:

1. The student develops a proposal specifying the degree (BA or BS), title and program content, including recommendations for courses to meet General Education Requirements and school/college requirements as applicable.
2. The student obtains an advisory committee of at least three faculty members from the appropriate academic disciplines. If the interdisciplinary degree program involves more than one school or college, the committee must include a faculty member from each.
3. The student obtains the assistance of one faculty member to chair the advisory committee and serve as the interdisciplinary degree program director.
4. The student presents the proposal for committee review and approval. If the committee supports the proposal, it is forwarded to the appropriate academic dean(s) or director(s).
5. The dean(s) or director(s) review(s) the proposal, committee membership, and recommendation for degree program director. If the dean(s) or director(s) approves(s) the interdisciplinary degree program and committee structure, the degree program plan is forwarded to the Office of the Registrar.
6. If changes are necessary in the degree program plan, they must have written approval of the advisory committee and appropriate dean(s) or director(s).
7. The student works with the advisory committee and the Office of the Registrar to ensure that all degree requirements are met.

COLLEGE OF ARTS AND SCIENCES

The College of Arts and Sciences is dedicated to the principle that an enlightened understanding of the world is fostered by study of the physical environment, cultural values and processes, creative expressions, and systems of thought and discovery. In fulfillment of this educational commitment, the fields of study offered by the college serve two ends: they are intellectually valuable in themselves, and they are an essential complement to other fields of knowledge. The faculty are highly trained and energetic professionals who are here to impart the knowledge and skills of their academic disciplines both to majors within the college and to students in the various professional schools and the community. The formal means of communicating this knowledge and these skills are the courses and degree programs of the college.

The college welcomes applications from students who have just graduated from high school as well as from those who are continuing their higher education, whether to complete an associate's or a baccalaureate degree or to undertake graduate studies. Students who wish to begin work on their degrees at another university or at a junior or community college and intend to transfer credits to the University of Alaska Anchorage should plan their coursework in accordance with the General University Requirements and the requirements of the particular program in which they are interested in earning a degree.

Prospective transfer students, particularly those who have not decided upon a major, should pay special attention to the requirements of programs within the College of Arts and Sciences regarding the applicability of credits toward degrees.

High School Preparation

The following high school courses are recommended but not necessarily required in preparation for admission to the various programs within the College of Arts and Sciences:

Arts

One to two years with emphasis in basic and fundamental courses in the arts with more advanced courses dependent upon students' particular interest.

Computer Science

One to two years. Basic knowledge of computer science recommended for all college-bound students.

English

Four years with emphasis on spelling, writing, grammar, and research skills, such as preparation of bibliographies.

Language

One to two years. Suggested languages: German, Russian, Latin, Japanese, French, Spanish, Chinese or Native languages.

Mathematics

BA candidates: Three years with emphasis on algebra I and II, trigonometry, geometry, analysis.

BS candidates: Four years with emphasis on algebra I and II, trigonometry, geometry, analysis.

Science

BA candidates: Two to three years with emphasis in biology, chemistry, physics, geology and/or earth science.

BS candidates: Three to four years with emphasis in biology, chemistry, physics, geology and/or earth science..

Social Sciences

Two years with emphasis in world history, U.S. history, comparative political theory, current events, geography, cultural anthropology and/or prehistoric archaeology.

College of Arts and Sciences Requirements

To earn a Bachelor of Arts; Bachelor of Science; or Bachelor of Music, Performance, students must complete the CAS requirements shown below, in addition to the General Education Requirements, the General University Requirements, and major program requirements. Students completing an interdisciplinary studies degree in which all academic disciplines represented in their major concentration are within the College of Arts and Sciences must also meet the CAS BA or BS requirements. Students should examine the program descriptions for the major program and consult with an advisor before making final course selections. Some courses may be used to satisfy more than one requirement in a degree program.

Electives

No more than 6 credits in lower division Education-Physical Education (EDPE), and/or Physical Education Professional (PEP), and/or Physical Education and Recreation (PER) courses may be applied toward a BA or BS degree program offered by the College of Arts and Sciences.

Bachelor of Arts

The Bachelor of Arts degree is a liberal arts degree. The basic assumption of a liberal arts degree is that a broad knowledge base will serve the student over a lifetime.

A. Cultural Heritages

- | | |
|--|---|
| 1. Comparative Cultures (ANTH A250) | 3 |
| 2. Western Culture (HIST A101 and HIST A102) | 6 |
| 3. American Culture (HIST A131, HIST A132, PS A101) | 3 |

B. Arts and Letters

- | | |
|---|-----|
| 1. Introduction to Literature (ENGL A121, A301, A302, A305, A306, A307) | 3 |
| 2. Language/Humanities Any two-semester sequence in one of the following humanities sequences or in a language other than English: [AKNS A101-A102 (with same letter suffix), ART A261-A262, ENGL A201-A202, MUS A221-A222*, PHIL A211-A212, PHIL A313-A314, PS A332-A333, THR A311-A312, THR A411-A412] | 6-8 |

*BA Music majors must select courses outside their major.

C. Ways of Knowing

| | |
|---|---|
| (ENGL A120, PHIL A101, PHIL A201, PHIL A301, PHIL A421) | 3 |
|---|---|

D. Social Behavior

| | |
|--|---|
| Choose one of the following not in the major: (ANTH A101, COMM A101, ECON A201, JPC A101, PS A102, PSY A111, SOC A101, SWK/HUMS A106) | 3 |
|--|---|

Bachelor of Science

The requirements of the Bachelor of Science degree are designed to equip students with the technical competencies needed in scientific disciplines.

- | | |
|---|----------|
| A. Mathematics and Statistics (MATH A200 or MATH A272) (STAT A253 or STAT A307) | 3-4 4 |
| B. Computer Programming (CS A109, CS A110, CS A111, CS A201, CS A202, ES A201) | 3 |
| C. Language/Humanities Any two-semester sequence in French, German, Japanese, Russian or Spanish, or one of the following humanities sequences: (ART A261-A262, ENGL A201-A202, MUS A221-A222, PHIL A211-A212, PHIL A313-A314, PS A332-A333, THR A311-A312, THR A411-A412) | 6-8 |
| D. Natural Sciences To be selected from the following list: | 9* |

(ASTR A103, A104
BIOL A102, A103, A111, A112, A113, A114, A115, A116,
CHEM A103/L, A104/L, A105/L, A106/L
GEOL A111, A221
PHYS A123/L, A124/L, A211/L, A212/L)

*The total natural science requirement of each student includes 16 credits (7 credits from the General Education natural science requirement and 9 credits from the CAS Bachelor of Science requirement). These two requirements may be met by any combination of applicable courses that combine to 16 credits. The total must include two laboratory courses and at least 6 credits in each of two disciplines.

Bachelor of Music, Performance

Language Proficiency
Two semesters of oral language study.

8

Bachelor of Fine Arts

The Bachelor of Fine Arts is a professionally oriented program designed to prepare students for careers in art. No additional college requirements.

Bachelor of Liberal Studies

The Bachelor of Liberal Studies (BLS) degree is an interdisciplinary program intended for students who prefer a broad liberal arts and sciences degree rather than a Bachelor of Arts or Bachelor of Science degree in a single discipline. No additional college requirements.

CAS Minor

A minor from the College of Arts and Sciences will consist of a minimum of 18 credits, at least 6 of which will be upper division. Refer to each discipline for specific courses required. Also see Minors policy earlier in this chapter.

The following is the listing of degrees available from the College of Arts and Sciences:

ASSOCIATE OF ARTS

The Associate of Arts (AA) degree provides a solid foundation in mathematics and written and oral communication, the natural and social sciences, the humanities and fine arts. The AA degree prepares students for career advancement and baccalaureate programs and to better understand their world.

Program Outcomes

Students graduating with an AA degree from UAA will be able to:

- Communicate effectively with diverse audiences (individual, group, or public) using a variety of verbal and nonverbal communication strategies;
- Respond effectively to writing assignments using appropriate genres and standard written English;
- Use library and electronic research responsibly and appropriately;
- Identify, describe, and evaluate the aesthetic, historical and philosophical aspects of material culture, including artistic expressions, language, and texts;
- Apply critical thinking skills to identify the premises and conclusions of arguments, evaluate their soundness, and recognize common fallacies;
- Use appropriate mathematical language and symbols to develop and communicate solutions and demonstrate quantitative and analytical skills and knowledge;
- Articulate the fundamentals, developments, and impacts of one or more scientific disciplines and develop and analyze evidence-based conclusions about the natural and social world.

Admission Requirements

Complete the Undergraduate Certificate and Associate Degree Program Admission Requirements located at the beginning of Chapter 7, Academic Standards and Regulations.

General University Requirements

Complete General University Requirements for the Associate of Arts Degrees located at the beginning of this chapter.

Degree Requirements

All courses must be at the 100 level or above. At least 20 credits of the required 60 credits must be at the 200 level. Students intending to complete the AA degree and then continue on to a baccalaureate degree should consult the Advising Note for AA Students Who Plan to Pursue a Baccalaureate Degree below.

Course Requirements

- | | | |
|----|---|---|
| 1. | Oral Communication Skills | 3 |
| | COMM A111 Fundamentals of Oral Communication (3) | |
| | COMM A235 Small Group Communication (3) | |
| | COMM A237 Interpersonal Communication (3) | |
| | COMM A241 Public Speaking (3) | |
| 2. | Written Communication Skills | 6 |
| | ENGL A111 Methods of Written Communication (3) | |
| | <i>and one of the following:</i> | |
| | CIOS A260A Business Communications (3)* | |
| | ENGL A211 Academic Writing About Literature (3) | |
| | ENGL A212 Technical Writing (3) | |
| | ENGL A213 Writing in the Social and Natural Sciences (3) | |
| | ENGL A214 Persuasive Writing (3) | |
| 3. | Humanities and Fine Arts | 9 |
| | Three courses from the GER Classification List. | |
| | At least one course each from the Humanities and Fine Arts areas. | |
| 4. | Mathematical and Natural Sciences | 9 |
| | MATH A105 Intermediate Algebra (3)* | |
| | or | |
| | one course from the Quantitative Skills area of GER Classification List (3) | |
| | Two Natural Science courses from the Natural Science area of the GER Classification List (3+3) (6) | |
| 5. | Social Sciences | 6 |
| | Two Social Sciences courses (from two different disciplines) from the Social Sciences area of GER Classification List | |

Degree Completion Requirements

- | | | |
|------------------------------|-----------|-----------|
| 6. | Electives | 27 |
| Total minimum credits | | 60 |

* Please note: CIOS A260A and MATH A105 do not meet the General Education Requirements for the baccalaureate degree.

Advising Note for AA Students Who Plan to Pursue a Baccalaureate Degree:

AA students who plan to pursue a baccalaureate degree must take care in planning their curriculum. Please see an advisor and take note of the following:

- UAA baccalaureate students are required to complete 12 credits of basic college-level skills from the Oral Communication (3), Written Communication (6), and Quantitative Skills (3) areas of the General Education Classification List prior to completing 60 total degree-applicable credits.
- Students with 60 credits or more who have not completed the baccalaureate 12-credit, basic college-level skills requirement will have one full academic year to fulfill this requirement, after which they will not be allowed to take additional courses as

degree-seeking students. MATH A105 and CIOS A260A do not count toward completing the baccalaureate GER requirements.

- Students who have taken two Natural Science courses as part of their AA program should be aware that a 1-credit science laboratory is required for the baccalaureate degree.
- Students who plan to apply AA credits to a UAA baccalaureate degree, and who know the program or major they are going to transfer into, should consult the General Education Requirements for their specific program or major. Programs often require specific GER courses for their majors. Students planning to transfer should use AA electives to fulfill prerequisites and requirements for their anticipated major.
- Students who plan to apply AA credits to a UAA baccalaureate degree, and who do not know which program or major they wish to pursue, should plan as follows:
 1. Oral Communication Skills 3

| | |
|-----------|--|
| COMM A111 | Fundamentals of Oral Communication (3) |
| COMM A235 | Small Group Communication (3) |
| COMM A237 | Interpersonal Communication (3) |
| COMM A241 | Public Speaking |
 2. Written Communication Skills 6

| | |
|-----------|--|
| ENGL A111 | Methods of Written Communication (3) |
| | <i>and one of the following:</i> |
| ENGL A211 | Academic Writing About Literature (3) |
| ENGL A212 | Technical Writing (3) |
| ENGL A213 | Writing in the Social and Natural Sciences (3) |
| ENGL A214 | Persuasive Writing (3) |
 3. Humanities and Fine Arts 9

| | |
|--|---|
| | One course from the Fine Arts area of the GER Classification List (3) |
| | Two courses from the Humanities area of the GER Classification List (6) |
 4. Mathematical and Natural Sciences 10

| | |
|--|--|
| | One MATH/STAT course from the Quantitative Skills area of GER Classification List (3) |
| | Two natural science courses from the Natural Sciences area of GER Classification List, including a laboratory course (7) |
 5. Social Sciences 6

| | |
|--|---|
| | Two social science courses (from two different disciplines) from the Social Science area of GER Classification List |
|--|---|

ALASKA NATIVE STUDIES

Social Sciences Building (SSB), Room 378, (907) 786-6135

www.uaa.alaska.edu/native

The Alaska Native Studies program provides the student with an introduction to Alaskan Native ways of knowing and seeing the world, an experiential and theoretical exploration of Alaskan Native cultures, and a series of critical perspectives on traditional and contemporary Native experiences and politics in a pluralistic society. Students may select one of two areas to complete the requirements for the minor: a policy focus or a language focus. Both of these areas emphasize the dynamic nature of Alaska Native cultures and the conflict between traditional Native values and those of the dominant Euro-American society. The Alaska Native Studies minor provides a valuable enrichment to any UAA baccalaureate degree.

Minor, Alaska Native Studies

1. Complete the following core courses:

| | | |
|-----------|--|---|
| AKNS A201 | Alaska Native Perspectives | 3 |
| AKNS A492 | Seminar: Cultural Knowledge of Native Elders | 3 |

2. Complete one of the following focus areas:
- A. Policy Focus** 7-9
- AKNS A290 Selected Topics in Alaska Native Studies (1-3)
and/or
AKNS A490 Selected Topics in Alaska Native Studies (1-3)
AKNS/PS A346 Alaska Native Politics (3)
AKNS/PS A411 Tribes, Nations and Peoples (3)
- B. Language Focus** 8
- AKNS A101 Alaska Native Languages I (4)
AKNS A102 Alaska Native Languages II (4)
3. Complete a minimum of 6 credits from the following: (must be other courses than those taken from the above focus areas) 6
- AKNS A101 Alaska Native Languages I (4)
AKNS A102 Alaska Native Languages II (4)
AKNS A109 Alaska Native Language Orthography (4)
AKNS/
DNCE A146 Introduction to Alaska Native Dance (1-2)
AKNS/
MUS A215 Music of Alaska Natives and Indigenous Peoples of Northern Regions (3)
AKNS A290 Selected Topics in Alaska Native Studies (1-3)
AKNS/PS A346 Alaska Native Politics (3)
AKNS/PS A411 Tribes, Nations and Peoples (3)
AKNS A420 Alaska Native Education (3)
AKNS A490 Selected Topics in Alaska Native Studies (1-3)
AKNS A495 Alaska Native Studies Internship (1-3)
ANTH A200 Natives of Alaska (3)
ANTH A427 Ethno-History of Alaska Natives (3)
ANTH A435 Northwest Coast Cultures (3)
ANTH A436 Aleut Adaptations (3)
ART A365 Native Art of Alaska (3)
ENGL A445 Alaska Native Literatures (3)
HIST A341 History of Alaska (3)
JUST A355 Rural Justice (3)
4. A minimum of 19 credits is required for the minor, of which 6 credits must be upper division.

FACULTY

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ANTHROPOLOGY

Beatrice McDonald Hall (BMH), Room 214, (907) 786-6840
<http://anthro.uaa.alaska.edu>

Anthropology is the study of human diversity on a cross-cultural basis, aimed at achieving both scientific and humanistic education goals. Anthropology is comprised of four sub-fields: sociocultural anthropology, biological anthropology, archaeology and anthropological linguistics. The BA/BS degrees are designed to provide the student with a solid general foundation in the discipline by emphasizing understanding of different cultures and peoples as well as different theories and methodologies. Although there is some opportunity for limited specialization in either archaeology or sociocultural anthropology and in Alaska studies, the department believes that such specialization should be deferred until graduate work.

Honors in Anthropology

The award of honors in Anthropology recognizes outstanding achievement by undergraduate majors in the study of anthropology. To be eligible for departmental honors, a student must satisfy the following requirements:

1. Be a declared Anthropology major.
2. Satisfy all of the requirements for a BA or BS degree in Anthropology.
3. Meet the requirements for Graduation with Honors, as listed in Chapter 7, Academic Standards and Regulations.
4. Earn a grade point average of 3.50 or above in courses specific to the Anthropology major.
5. Complete a senior thesis project (taken as ANTH A499), based on library, laboratory or field research resulting in a substantial, thesis-quality paper defended before the Anthropology faculty. Note: the course may be taken on a one-semester (3-credit) or two-semester (6-credit) basis.

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences Requirements for either a BA or BS degree listed at the beginning of the CAS section.

D. Major Requirements

Bachelor of Arts, Anthropology

1. Complete 36 credits from items 2 through 6, 18 of which must be upper division credits.
2. Complete three of the following core courses (9 credits): 9

| | | |
|-----------|---|--|
| ANTH A202 | Cultural Anthropology (3) | |
| ANTH A205 | Biological Anthropology (3) | |
| ANTH A210 | Introduction to Linguistic Anthropology (3) | |
| ANTH A211 | Fundamentals of Archaeology (3) | |
3. Complete the following courses (6 credits):

| | | |
|-----------|-------------------------|---|
| ANTH A250 | Rise of Civilization | 3 |
| ANTH A410 | History of Anthropology | 3 |
4. Complete three ethnographic area courses (9 credits) from the following: 9

| | | |
|-----------|--|--|
| ANTH A200 | Natives of Alaska (3) | |
| ANTH A325 | Cook Inlet Anthropology (3) | |
| ANTH A335 | Native North Americans (3) | |
| ANTH A336 | Peoples and Cultures of South America (3) | |
| ANTH A338 | Peoples and Cultures of Scandinavia (3) | |
| ANTH A427 | Ethnohistory of Alaska Natives (3) | |
| ANTH A429 | Contemporary Alaska Native Societies (3) | |
| ANTH A434 | Peoples and Cultures of Northeast Asia (3) | |
| ANTH A435 | Northwest Coast Cultures (3) | |
| ANTH A436 | Aleut Adaptations (3) | |
| ANTH A437 | Eskimo Adaptations (3) | |
| ANTH A438 | Tlingit and Haida Adaptations | |
| ANTH A439 | Athabaskan Adaptations (3) | |

Of the following ethnographic area courses which emphasize archaeology, no more than 6 credits can be used to satisfy the ethnographic area requirement:

| | | |
|-----------|--------------------------------|--|
| ANTH A312 | North American Archaeology (3) | |
| ANTH A413 | Peopling of the Americas (3) | |
| ANTH A416 | Arctic Archaeology (3) | |

5. Complete two courses (6 credits) from the following topical/theoretical courses: 6
- ANTH A270 Women in Cross-cultural Perspective (3)
 ANTH A324 Psychological Anthropology (3)
 ANTH A354 Culture and Ecology (3)
 ANTH A360 Anthropology of Art (3)
 ANTH A361 Language and Culture (3)
 ANTH A365 Modern Human Biological Diversity (3)
 ANTH A375 Introduction to Cultural Resource Management (3)
- ANTH A400 Anthropology of Religion (3)
 ANTH A415 Applied Anthropology (3)
 ANTH A425 Archaeology of Identity (3)
 ANTH A432 Hunting and Gathering Societies (3)
 ANTH A445 Evolution of Humans and Disease (3)
 ANTH A455 Medical Anthropology (3)
 ANTH A457 Food and Nutrition: An Anthropological Perspective (3)
- ANTH A460 Peace, War, and Violence: An Anthropological Perspective (3)
 ANTH A476 Ethical Issues in Archaeology (3)
 ANTH A480 Analytical Techniques in Archaeology (3)
 ANTH A481 Museum Studies in Anthropology (3)
 ANTH A482 Historical Archaeology (3)
 ANTH A484 Lithic Technology (3)
 ANTH A485 Human Osteology (3)
 ANTH A486 Applied Human Osteology (3)
- Note: The upper division special topics course (ANTH A490) or independent study courses (ANTH A397, ANTH A497) may be petitioned to satisfy ethnographic area or topical/theoretical course requirements, depending on course content.*
6. Anthropology electives: Any 6 credits in Anthropology 6
7. Complete one statistics course from the following: 3-4
- STAT A252 Elementary Statistics (3)
 STAT A253 Applied Statistics for the Sciences (4)
 STAT A307 Probability and Statistics (4)
8. A minimum of 120 credits is required for the degree, of which 42 credits must be upper division to satisfy General Education Requirements.

Bachelor of Science, Anthropology

1. Complete 36 credits from items 2 through 6, 18 of which must be upper division credits.
2. Complete three of the following core courses: 9
- ANTH A202 Cultural Anthropology (3)
 ANTH A205 Biological Anthropology (3)
 ANTH A210 Introduction to Linguistic Anthropology (3)
 ANTH A211 Fundamentals of Archaeology (3)
3. Complete the following courses: 6
- ANTH A250 Rise of Civilization (3)
 ANTH A410 History of Anthropology (3)
4. Complete three ethnographic area courses from the following: 9
- ANTH A200 Natives of Alaska (3)
 ANTH A325 Cook Inlet Anthropology (3)
 ANTH A335 Native North Americans (3)
 ANTH A336 Peoples and Cultures of South America (3)
 ANTH A338 Peoples and Cultures of Scandinavia (3)
 ANTH A427 Ethnohistory of Alaska Natives (3)
 ANTH A429 Contemporary Alaska Native Societies (3)
 ANTH A434 Peoples and Cultures of Northeast Asia (3)
 ANTH A435 Northwest Coast Cultures (3)
 ANTH A436 Aleut Adaptations (3)
 ANTH A437 Eskimo Adaptations (3)
 ANTH A438 Tlingit and Haida Adaptations
 ANTH A439 Athabaskan Adaptations (3)

Of the following ethnographic area courses which emphasize archaeology, no more than 6 credits can be used to satisfy the ethnographic area requirement:

- ANTH A312 North American Archaeology (3)
 ANTH A413 Peopling of the Americas (3)
 ANTH A416 Arctic Archaeology (3)
5. Complete two courses from the following topical/theoretical courses: 6
- ANTH A270 Women in Cross-cultural Perspective (3)
 ANTH A324 Psychological Anthropology (3)
 ANTH A350 Survey of the Primates (3)
 ANTH A354 Culture and Ecology (3)
 ANTH A360 Anthropology of Art (3)
 ANTH A361 Language and Culture (3)
 ANTH A365 Modern Human Biological Diversity (3)
 ANTH A375 Introduction to Cultural Resource Management (3)
- ANTH A400 Anthropology of Religion (3)
 ANTH A415 Applied Anthropology (3)
 ANTH A425 Archaeology of Identity (3)
 ANTH A432 Hunting and Gathering Societies (3)
 ANTH A445 Evolution of Humans and Disease (3)
 ANTH A450 Human Evolution (3)
 ANTH A455 Medical Anthropology (3)
 ANTH A457 Food and Nutrition: An Anthropological Perspective (3)
- ANTH A460 Peace, War, and Violence: An Anthropological Perspective (3)
 ANTH A476 Ethical Issues in Archaeology (3)
 ANTH A480 Analytical Techniques in Archaeology (3)
 ANTH A481 Museum Studies in Anthropology (3)
 ANTH A482 Historical Archaeology (3)
 ANTH A484 Lithic Technology (3)
 ANTH A485 Human Osteology (3)
 ANTH A486 Applied of Human Osteology (3)
- Note: The upper division special topics course (ANTH A490) or independent study courses (ANTH A397, ANTH A497) may be petitioned to satisfy ethnographic area or topical/theoretical course requirements, depending on course content.*
6. Anthropology Electives: 6
 Any six courses in Anthropology.
7. Complete one statistics course from the following: 4
- STAT A253 Applied Statistics for the Sciences (4)
 or
 STAT A307 Probability and Statistics (4)
8. A minimum of 120 credits is required for the degree, of which 42 credits must be upper division to satisfy General Education Requirements.

Minor, Anthropology

Students majoring in another subject who wish to minor in Anthropology, must complete the following requirements. A total of 18 credits is required for the minor, 6 of which must be upper division.

1. Select two courses (6 credits) from the following: 6
- ANTH A101 Introduction to Anthropology (3)
 ANTH A202 Cultural Anthropology (3)
 ANTH A205 Biological Anthropology (3)
 ANTH A210 Introduction to Linguistic Anthropology (3)
 ANTH A211 Fundamentals of Archaeology (3)
 ANTH A250 Rise of Civilization (3)
2. Complete at least one course (3 credits) from either the ethnographic area or the topical/theoretical area, as specified above for majors in Anthropology. 3
3. Complete three courses (9 credits) of Anthropology electives. 9

FACULTY

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ART

Fine Arts Building (ARTS), Room 302A, (907) 786-1783
<http://art.uaa.alaska.edu>

The aim of the Department of Art is to prepare and empower students to use their artistic abilities to make a difference in society. A comprehensive multi-studio approach encourages independent thinking, strengthens creativity, and develops a knowledge of the critical and historical aspects of art.

Students acquire technical skills and gain confidence to work with a variety of materials while exploring and evaluating a broad heritage of past and contemporary art and design.

Program Outcomes

Students graduating with a Bachelor of Arts or Bachelor of Fine Arts will be able to demonstrate:

1. Effective communication and fiscal skills to be a practicing artist as applied to art proposals, exhibitions, and business matters.
2. The expression of ideas in a cohesive body of work.
3. Critical thinking, writing and research skills allowing the discovery of original approaches to creative problem solving.
4. Mastery of techniques, composition, and the use of materials.

Students choose from several areas of study:

- Bachelor of Arts, Art
- Bachelor of Fine Arts, Art
- Minor in Art
- Minor in Art Education
- Continuing Education

The Bachelor of Arts and the Bachelor of Fine Arts are accredited by the National Association of Schools of Art and Design.

Students must note the following:

1. Some courses do not apply to degree programs.
2. Some courses may be taken for repeat credit.
3. Many Art courses require completion of certain prerequisite Art courses. Non-Art majors who wish to enroll in an Art class without first having completed the recommended prerequisites are free to do so with appropriate instructor permission, but may find the classroom experience difficult or unrewarding.
4. Art majors must obtain pre-registration approval from Art faculty for upper division Art coursework undertaken each semester.

Bachelor of Arts, Art

A. General University Requirements

Complete the General University Requirements for Baccalaureate Degrees in the front of this chapter. A maximum of 60 credits in Art may be applied toward the degree. Transfer students who are candidates for the BA degree with a major in Art must complete a minimum of 18 Art credits in residence.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees in the front of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences requirements in the front of this chapter.

D. Major Requirements

Lower Division Art (27 credits)

1. Complete the following core courses:

| | | |
|----------|---------------------------|---|
| ART A105 | Beginning Drawing | 3 |
| ART A111 | Two-Dimensional Design | 3 |
| ART A113 | Three-Dimensional Design | 3 |
| ART A205 | Intermediate Drawing | 3 |
| ART A261 | History of Western Art I | 3 |
| ART A262 | History of Western Art II | 3 |
2. Choose one two-dimensional course, one three-dimensional course, and one course from either list to total 9 credits:

Two-Dimensional Area: 3-6

| | |
|----------|---|
| ART A112 | Color Design (3) |
| ART A212 | Beginning Watercolor (3) |
| ART A213 | Beginning Painting (3) |
| ART A215 | Beginning Printmaking (3) |
| ART A224 | Beginning Photography (3) |
| ART A252 | Beginning Graphic Design and Illustration (3) |
| ART A257 | Digital Art and Design I (3) |
| ART A271 | Beginning Surface Design (3) |
| ART A273 | Beginning Woven Forms (3) |

Three-Dimensional Area: 3-6

| | |
|----------|---|
| ART A201 | Beginning Handbuilt Ceramics (3) |
| ART A202 | Beginning Wheelthrown Ceramics (3) |
| ART A209 | Beginning Metalsmithing and Jewelry (3) |
| ART A211 | Beginning Sculpture (3) |
| ART A270 | Beginning Alaska Native Art (3) |
| ART A272 | Beginning Fiber Structures (3) |

Upper Division Studio Art (15 credits)

3. Complete a total of 15 credits from the studio areas listed below, with a minimum of 9 credits from any one area:

| | |
|------------------------------|-------------------|
| Ceramics | Drawing |
| Digital Art & Graphic Design | Fibers |
| Jewelry/Metalsmithing | Painting |
| Photography | Printmaking |
| Sculpture | Alaska Native Art |

Upper Division Art History (6 credits)

4. Select 6 credits from the following: 6

| | |
|-----------|-----------------------------------|
| ART A360A | History of Non-Western Art I (3) |
| ART A360B | History of Non-Western Art II (3) |
| ART A361 | History of Graphic Design (3) |
| ART A362 | History of Modern Art (3) |
| ART A363 | History of Contemporary Art (3) |
| ART A364 | Italian Renaissance Art (3) |
| ART A366 | Asian Art (3) |
| ART A367 | History of Photography (3) |
| ART A492 | Art History Seminar (3) |

Miscellaneous Requirements (21 credits)

5. Complete the following:

| | | |
|-----------|---|----|
| ART A203 | Introduction to Art Education | 3 |
| ART A491 | Senior Seminar (Capstone) (fall semesters only) | 3 |
| PHIL A401 | Aesthetics | 3 |
| | Upper division general electives | 15 |

At least 6 of the 12 elective credits must have a prefix other than ART.

- A total of 120 credits is required for the degree, of which 42 credits must be upper division. A total of 60 credits in ART may be applied to the degree.

Bachelor of Fine Arts, Art

The Bachelor of Fine Arts degree is a professionally oriented program designed to prepare students for careers in art. Enrollment in the BFA program is recommended only for those students willing to make the considerable commitment of time and energy necessary to achieve professional competence in their primary area of studio emphasis. Students desiring to enter the BFA program should request a copy of the current program policy from the department.

Admission Requirements

Complete the Baccalaureate Degree Programs Admission Requirements at the beginning of this chapter. Admission into the BFA program, withdrawal from it, and granting of the degree are done at the discretion of the BFA Committee.

Students admitted into the BFA program must complete a minimum of 24 Art credits (upper or lower division courses) in residence at UAA after acceptance into the BFA program.

Transfer Students need a minimum of 12 resident Art credits that must be completed in the primary area of studio emphasis, and a minimum of 3 resident Art credits completed in the secondary area of studio emphasis.

Applicants for admission into the BFA program must meet the following minimum requirements:

- Applicants must have been officially admitted to UAA as a declared pre-major in the BFA program.
- Applicants must have completed all lower division Art major courses in the Foundation Core and the Beginning Studio categories required for the BFA degree.
- Applicants must have been enrolled at UAA for at least one semester prior to application to the full major status in the BFA program.
- Applicants must meet minimum academic GPA requirements of: 2.50 overall coursework and 3.00 overall Art coursework.

BFA Requirements

All materials must be submitted to the Department of Art at least two weeks prior to the BFA Committee's scheduled application review:

- Application for admission into the BFA program.
- Letter of intent stating objectives and qualifications in relation to either the BA in Art or BFA in Art degree programs.
- Copies of all college transcripts.
- A "Projected Plan of Study" signed by the College of Arts & Sciences Academic Advisor for the Fine Arts area.
- Portfolio of 15-20 pieces of studio work in primary and secondary concentrations showing technical skills, design abilities, and a potential for developing a conceptual vision. Applicants must submit work for consideration in digital formats (preferred) or slides. Applications will be reviewed only in the fall semester. Admission decisions are determined by a consensus of BFA Committee members in October.

Academic Progress

To graduate with a BFA in Art students must have met the following GPA requirements:

- A minimum overall major GPA of 3.00 in the major.
- A minimum GPA of 3.50 in the primary area of studio emphasis.
- A minimum cumulative GPA of 2.50 in all university coursework.

Semester Reviews

The progress of all BFA candidates will be reviewed a minimum of once a semester by the BFA Committee.

Thesis Project and Capstone Course

With approval, upon completion of all studio courses in the student's primary and secondary areas of emphasis, BFA candidates will enroll in ART A491 Senior Seminar offered fall semesters only, and ART A499 Thesis offered spring semesters only. ART A491 meets the capstone requirement for the GER. Students enrolled in the BFA program must submit their thesis proposal for approval during the fall semester of the academic year. Once the BFA Committee has reviewed and accepted the thesis proposals, candidates will be granted permission to register for ART A499 Thesis. During ART A499 Thesis students will complete a body of work that will culminate in a formal exhibition. BFA students enrolled in ART A499 Thesis will meet with the BFA Committee a minimum of twice a semester.

The BFA Committee's evaluation of the student's thesis project will be based on content, presentation, and the degree of success in visual realization of the written proposal. At least 10 slides or digital images of the student's thesis will be furnished to the Department of Art. These images must be acceptable to the BFA Committee and will become the property of the Department of Art. The slides or digital images must be received by the department before a grade for ART A499 Thesis is awarded.

Exhibitions and Presentations

BFA candidates will generally participate in the BFA Group Show to be held in the Kimura Gallery. All aspects of the thesis exhibition must be approved by the BFA Committee. Works will be selected by the BFA Committee. The BFA Group Show will be held during the spring semester each year. Graduating BFA students are invited, but not required, to donate one work of art to UAA's permanent collection. Acceptance of donated student work is left to the discretion of the BFA Committee. Prior to completing all BFA requirements, the student is responsible for submitting an Application for Graduation to obtain the degree.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for Baccalaureate Degrees in the front of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees in the front of this chapter.

C. College of Arts and Sciences Requirements

There are no additional college requirements for the BFA degree.

D. Major Requirements

Complete the following required Art courses with a minimum cumulative GPA of 3.00 in the major and a minimum cumulative GPA of 3.50 in the primary area of studio emphasis. A minimum cumulative GPA of 2.50 in all university coursework is required to graduate. A maximum of 84 credits in Art may be applied toward the degree.

Foundation Core Courses (24 credits)

- Complete the following core courses:

| | | |
|----------|--------------------------------|---|
| ART A105 | Beginning Drawing | 3 |
| ART A111 | Two-Dimensional Design | 3 |
| ART A112 | Color Design | 3 |
| ART A113 | Three-Dimensional Design | 3 |
| ART A205 | Intermediate Drawing | 3 |
| ART A261 | History of Western Art I | 3 |
| ART A262 | History of Western Art II | 3 |
| ART A307 | Life Drawing and Composition I | 3 |

Beginning Studio Electives (9 credits)

- Choose one course from the two-dimensional list and one course from the three-dimensional list, and one course from either list to total 9 credits:

| | |
|------------------------------|---|
| Two-Dimensional Area: | 3-6 |
| ART A212 | Beginning Watercolor (3) |
| ART A213 | Beginning Painting (3) |
| ART A215 | Beginning Printmaking (3) |
| ART A224 | Beginning Photography (3) |
| ART A252 | Beginning Graphic Design and Illustration (3) |
| ART A257 | Digital Art and Design I (3) |
| ART A271 | Beginning Surface Design (3) |
| ART A273 | Beginning Woven Forms (3) |

| | |
|--------------------------------|---|
| Three-Dimensional Area: | 3-6 |
| ART A201 | Beginning Handbuilt Ceramics (3) |
| ART A202 | Beginning Wheelthrown Ceramics (3) |
| ART A209 | Beginning Metalsmithing and Jewelry (3) |
| ART A211 | Beginning Sculpture (3) |
| ART A272 | Beginning Fiber Structures (3) |

Art History (9 credits)

| | | |
|----|--|-----------------------------------|
| 3. | Select three courses from the following: | 9 |
| | ART A360A | History of Non-Western Art I (3) |
| | ART A360B | History of Non-Western Art II (3) |
| | ART A361 | History of Graphic Design (3) |
| | ART A362 | History of Modern Art (3) |
| | ART A363 | History of Contemporary Art (3) |
| | ART A364 | Italian Renaissance Art (3) |
| | ART A366 | Asian Art (3) |
| | ART A367 | History of Photography (3) |
| | ART A492 | Art History Seminar (3) |

Primary Studio Concentration (18 credits)

Select **Primary** and **Secondary** Studio Concentrations from the following:

| | |
|------------------------------|-------------|
| Ceramics | Drawing |
| Digital Art & Graphic Design | Fibers |
| Jewelry/Metalsmithing | Painting |
| Photography | Printmaking |
| Sculpture | |

| | | |
|----|--|------------------------------|
| 4. | Select a primary studio concentration from the list above and complete the following studio courses in the same concentration: | |
| | 200 level | Beginning studio course 3 |
| | <i>Note: Students must choose a beginning course in their emphasis. Exception: students with a drawing concentration may choose from any 200 level two-dimensional class listed under Beginning Studio Electives.</i> | |
| | 300 level | Intermediate studio course 6 |
| | 400 level | Advanced studio course 6 |

| | | |
|----|---|-----------------------------------|
| 5. | Select a support course from following (3 credits): | 3 |
| | ART A390 | Selected Topics in Studio Art (3) |
| | ART A490 | Selected Topics in Studio Art (3) |
| | ART A498 | Individual Research (1-3) |
| | or other by permission of advisor | |

Secondary Studio Concentration (9 credits)

| | | |
|----|--|-----------------------------------|
| 6. | Select a secondary studio concentration from the list and complete the following studio courses in the same concentration: | |
| | 200 level | Beginning studio course 3 |
| | <i>Note: Must be other than a course selected to fill the beginning studio electives listed above.</i> | |
| | 300 level | Intermediate studio course 3 |
| 7. | Select a support course from following (3 credits): | 3 |
| | 300 level | Intermediate studio course (3) |
| | 400 level | Advanced studio course (3) |
| | ART A390 | Selected Topics in Studio Art (3) |
| | ART A490 | Selected Topics in Studio Art (3) |
| | ART A498 | Individual Research (1-3) |

Thesis Requirements (6 credits)

| | | |
|----|---------------------------------|---|
| 8. | Complete the following courses: | |
| | ART A491 | Senior Seminar (<i>fall semesters only</i>) 3 |
| | ART A499 | Thesis (<i>spring semesters only</i>) 3 |

Additional Requirements (12 credits)

| | | |
|-----|---|---------------------------------|
| 9. | ART A203 | Introduction to Art Education 3 |
| 10. | PHIL A401 | Aesthetics 3 |
| 11. | Art electives (6 credits) | 6 |
| | Complete 6 credits of electives selected from art history, art education or art studio courses. | |
| 12. | A total of 121 credits is required for the degree, of which 42 credits must be upper division. A total of 84 credits in ART may be applied to the degree. | |
| 13. | A total of 121 credits is required for the degree, of which 42 credits must be upper division. A total of 84 credits in ART may be applied to the degree. | |

Minor, Art

Students majoring in another subject who wish to minor in Art must complete the following requirements. A total of 18 credits is required for the minor, 6 credits of which must be upper division.

| | |
|--------------------------------|--|
| Art History (6 credits) | |
| | ART A261 History of Western Art I 3 |
| | ART A262 History of Western Art II 3 |
| Design (3 credits) | 3 |
| | ART A111 Two-Dimensional Design (3) |
| | ART A113 Three-Dimensional Design (3) |
| Drawing (3 credits) | 3 |
| | ART A105 Beginning Drawing (3) |
| | ART A205 Intermediate Drawing (3) |
| | ART A305 Advanced Drawing (3) |
| | ART A307 Life Drawing and Composition I (3) |
| | ART A405 Experimental Drawing (3) |
| | ART A407 Life Drawing and Composition II (3) |
| Studio (6 credits) | |
| | Studio emphasis courses 6 |

Minor, Art Education

Students majoring in Art or in another subject must complete the following sequence of six courses for a minor in Art Education. A total of 18 credits is required for the minor of which 6 credits must be upper division

| | |
|----------|--|
| ART A203 | Introduction to Art Education 3 |
| ART A204 | History and Philosophy of Art Education 3 |
| ART A303 | Curriculum Planning and Interpretation in Art 3 |
| ART A304 | Art Experience: Social, Cultural, and Educational Perspectives 3 |
| ART A403 | Arts and Technology 3 |
| ART A404 | Diversity and Visual Culture 3 |

FACULTY

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DIGITAL ART

Kenai Peninsula College

156 College Road, Soldotna, AK 99669, (907) 262-0300, (877) 262-0330

www.kpc.alaska.edu

Contact: Celia Anderson, (907) 262-0361, IFCRA@uaa.alaska.edu or

Jayne Jones, (907) 262-0374, IFJMJ@uaa.alaska.edu

Advising for this program is only available from the Art faculty at Kenai Peninsula College. Please call (907) 262-0359 or (877) 262-0330 for more information.

The Associate of Applied Science in Digital Art is currently only offered at Kenai Peninsula College. Graduates of this two-year program at Kenai Peninsula College will be knowledgeable in digital camera operation and imaging software, quality printing techniques, and available industry services. Students develop skills that are applicable to either the digital arts industry or the creation of fine art.

The program is designed so that graduates:

- Are prepared for entry-level positions, able to advance in their careers, or integrate digital skills for personal artistic expression.
- Can successfully integrate into a more advanced, specialized digital art program.
- Are well versed in a variety of digital tools and can adapt easily to new technological advances.
- Use judgmental skills to create and edit expressive visual imagery.
- Utilize knowledge of art history as taught in core curriculum to help create and assess effective design.
- Develop unique design solutions and work easily with restrictions of a given job assignment.
- Can contribute in a professional manner within a digital art environment or related field.

Theory will be presented and opportunities for practice will enable students to:

- Effectively utilize a variety of the following digital resources and art tools to create images for commercial, design, fine art applications or personal use:
 - Digital/ film cameras
 - Imaging and design software
 - Film and flatbed scanners
 - Printers
 - Service bureaus
- Create expressive imagery and evaluate its effectiveness through the critiquing process.
- Draw on their knowledge of historical and contemporary art in the development of their own work.
- Identify and achieve competence in art and craft appropriate for advancement to a more specialized degree.
- Conceptualize ideas and develop unique solutions to design problems.
- Demonstrate professional skills applicable to the creative arts workplace.

The Digital Art degree graduate will be prepared for entry-level positions in the photographic industry and graphic arts support services. Possibilities include entry-level assistantships for commercial or corporate photography studios, professional internships, lab assistants, production assistants or entry-level positions in small businesses. The Associate of Applied Science in Digital Art is a launchpad to a professional application or to further education in a specialized digital art program.* Students wishing to earn a Bachelor of Arts in Art with UAA will need to complete all applicable General Education and College of Arts and Sciences Requirements for Baccalaureate Degrees. The majority of art core course requirements will be satisfied (see Advising below).

*Transfer of credits for institutions outside the UAA system is not guaranteed. Each university and college makes its decision autonomously. The student should have a strong portfolio and be knowledgeable in their areas of concentration.

Advising

It is particularly important for students to meet with their advisor each semester for the purpose of reviewing their academic progress and planning enrollment in future courses. AAS students who intend to pursue a baccalaureate degree should consult a faculty or academic advisor for appropriate course selections.

Many of the Digital Art program courses require students to demonstrate a level of computer competency evidenced by completion of a course using one or more of the following applications: word processing, spreadsheets, databases, and communications, or an introductory course in data processing, microcomputers or image editing.

It is the student's responsibility to design their course of study with Digital Art faculty in the Department of Art at Kenai Peninsula College to ensure all prerequisites and computer competencies have been met and that the university and major degree requirements are understood and followed.

Associate of Applied Science, Digital Art

Admission Requirements for Degree Completion

Satisfy the Admission to Certificate and Associate Degree Program Requirements in Chapter 7, Academic Standards and Regulations.

Graduation Requirements

Students are required to make a presentation of portfolio work before the Digital Art Program Advisory Board in their graduating semester.

Students must complete the following graduation requirements:

A. General University Requirements

1. Complete the General University Requirements for Associate Degree Programs located at the beginning of this chapter.
2. Complete the Associate of Applied Science General Degree Requirements (15 credits) located at the beginning of this chapter.

B. Major Requirements

Complete the following Digital Art core courses (18 Credits):

| | | |
|----------|---------------------------|---|
| ART A105 | Beginning Drawing | 3 |
| ART A111 | Two-Dimensional Design | 3 |
| ART A112 | Color Design | 3 |
| ART A257 | Digital Art and Design I | 3 |
| ART A261 | History of Western Art I | 3 |
| ART A262 | History of Western Art II | 3 |

Digital Arts Specialty: Areas of Concentration

1. *Digital Photography Concentration (27 Credits Total):*

| | | |
|----------|---------------------------------|---|
| ART A220 | Digital Imaging for Photography | 3 |
| ART A225 | Beginning Photography - Digital | 3 |
| ART A228 | Art as a Profession | 3 |
| ART A323 | Color Photography | 3 |
| ART A325 | Digital Media for Photography | 3 |
| ART A367 | History of Photography | 3 |

Digital Photography Concentration Electives

(9 Credits Minimum); suggested electives:

| | | |
|-----------|--------------------------------|---|
| ART A113 | Three-Dimensional Design (3) | 9 |
| ART A205 | Intermediate Drawing (3) | |
| ART A213 | Beginning Painting (3) | |
| ART A215 | Beginning Printmaking (3) | |
| ART A224 | Beginning Photography (3) | |
| ART A295V | Internship/Visual Art (1-3) | |
| ART A324 | Intermediate Photography (3) | |
| BA A166 | Small Business Management (3) | |
| BA A260 | Marketing Practices (3) | |
| BA A264 | Personal Selling (3) | |
| JPC A101 | Media and Society (3) | |
| JPC A201 | Reporting and Writing News (3) | |

| | | |
|-----------|---|----|
| JPC A211 | Visual Literacy (3) | |
| | or | |
| 2. | <i>Darkroom/Digital Concentration (27 Credits Total):</i> | |
| ART A220 | Digital Imaging for Photography | 3 |
| ART A224 | Beginning Photography | 3 |
| ART A228 | Art as a Profession | 3 |
| ART A323 | Color Photography | 3 |
| ART A324 | Intermediate Photography | 3 |
| ART A325 | Digital Media for Photography | 3 |
| | <i>Darkroom/ Digital Photography Concentration Electives (9 credits minimum):</i> | 9 |
| ART A113 | Three-Dimensional Design (3) | |
| ART A205 | Intermediate Drawing (3) | |
| ART A213 | Beginning Painting (3) | |
| ART A215 | Beginning Printmaking (3) | |
| ART A225 | Beginning Photography - Digital (3) (recommended) | |
| ART A295V | Internship/Visual Art (1-3) | |
| ART A367 | History of Photography (3) | |
| BA A166 | Small Business Management (3) | |
| BA A260 | Marketing Practices (3) | |
| BA A264 | Personal Selling (3) | |
| JPC A101 | Media and Society (3) | |
| JPC A201 | Reporting and Writing News (3) | |
| JPC A211 | Visual Literacy (3) | |
| | Total Minimum Credits | 60 |

Special Note: Program may take longer than two years depending upon scheduling and availability of classes.

FACULTY

Celia Anderson, Associate Professor, IFCRA@uaa.alaska.edu
Jayne Jones, Assistant Professor, IFJM@uaa.alaska.edu

BIOLOGICAL SCIENCES

ConocoPhillips Integrated Sciences Building (CPSB), Room 101P,
(907) 786-4770

<http://biology.uaa.alaska.edu>

The WWAMI/Biomedical program may be found at
<http://biomed.uaa.alaska.edu>.

Biology is the science concerned with the study of living organisms. It encompasses a vast range of biological disciplines, from the study of microbes and molecular biology to the study of plants, animals and the environment. The undergraduate program in the Biological Sciences includes courses that provide students with a broad understanding of both traditional and modern biological sciences. These courses are suitable as preparation for professional degrees, teaching, or careers in government or industry. Both the Bachelor of Arts and the Bachelor of Science degrees are available for undergraduates. A Master of Science degree program in Biological Sciences as well as a joint UAA-UAF Doctor of Science degree program is available for students already holding a baccalaureate degree.

A program of study in the biological sciences requires completion of a basic science core curriculum in the chemical, physical and mathematical sciences as well as required and elective courses in the biological sciences. Two general divisions are recognized in the biology program: the cell-molecular and the organismal-ecology-evolution areas. The cell-molecular area focuses on preprofessional sciences for students wishing to pursue careers in medicine, dentistry, and veterinary medicine, or who wish to attend graduate school. The organismal-ecology-evolution area is a more diversified curriculum emphasizing environmental, organismal, evolutionary, and general biological sciences preparatory for graduate school or for employment in the private or public sector. Students are strongly encouraged to consult with their academic advisors within the Department of Biological Sciences to determine which electives best suit their programmatic needs and career requirements.

The Bachelor of Arts and the Bachelor of Science degree programs require a total of 124-125 credits for graduation and can be completed in four years by students who have had adequate high school preparation in math and sciences. Refer to the beginning of this chapter for recommended high school courses.

Program Objectives and Expected Outcomes

Objectives

The curriculum of the UAA Biological Sciences program is designed to produce graduates who have:

1. A basic knowledge of the principles relating to the biological sciences with an emphasis in either molecular or organismal biology.
2. The ability to think critically, dissect problems, and offer solutions.
3. Developed written and oral communications skills consistent with a career in biological sciences.
4. Developed sufficient competency in knowledge and skills to obtain employment as an entry-level biologist and be able to progress professionally within the discipline.
5. Developed a mental attitude that learning is a lifetime occupation to maintain relevancy in the biological profession.

Outcomes

In keeping with the objectives, it is expected that graduates of the Biological Sciences program will have the ability to:

1. Apply their knowledge of general biology to the workplace or higher education pursuits.
2. Accept challenges and think through problems until solutions are derived and effectively communicate the solutions to supervisors.
3. Design and conduct projects that include fieldwork, laboratory analyses, and interpretation in the discipline.
4. Recognize that education does not stop at graduation, but looks to continuing education as a professional responsibility.

Community Service Courses

The department offers a wide range of community service courses as a service to the people in the Anchorage area and extended campuses who wish to become more knowledgeable about the science of biology and how it relates to them. Unless noted otherwise in the course description, community service courses do not satisfy either core requirements or elective credit towards any degree programs in the biological sciences. All are offered as demand warrants.

| | |
|-----------|----------------------------------|
| BIOL A074 | Field Natural History |
| BIOL A075 | Local Flora |
| BIOL A100 | Human Biology |
| BIOL A124 | Biota of Alaska: Selected Topics |
| BIOL A126 | Birds in Field and Laboratory |

Departmental Honors in Biology

Undergraduate Biological Science majors may be recognized for exceptional performance by earning departmental honors in Biology. In order to receive honors in biology, a student must meet each of the following requirements:

1. Meet the requirements for Graduation with Honors as listed in Chapter 7, Academic Standards and Regulations.
2. Meet the requirements for a BA/BS degree in Biological Sciences.
3. Earn a grade point average of 3.50 or above in the major requirements.
4. During the senior year of their academic program, the student must gain faculty approval for and complete, with a grade of B or better, a senior thesis research project, with enrollment in BIOL A499 Senior Thesis. Biological Science faculty members must approve the project proposal and final written report.

Bachelor of Arts, Biological Sciences

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Academic Progress

To graduate with a BA in Biological Sciences, the student must complete all courses covered under Major Requirements for a BA in Biological Sciences with a grade of C or better. All prerequisites for Biology courses must be completed with a grade of C or better. Students who audit a course in Biology or who are unable to earn a grade of C or better in the course may repeat the course. Students repeating a course in the Department of Biological Sciences are required to complete all components of that course during the semester in which the course is retaken. When repeating a course with a lecture and laboratory component, both components must be repeated.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section.

D. Major Requirements

- Complete these required core courses:

| | | |
|-------------|--|-----|
| BIOL A115/L | Fundamentals of Biology I with Laboratory | 4 |
| BIOL A116/L | Fundamentals of Biology II with Laboratory | 4 |
| BIOL A242/L | Fundamentals of Cell Biology with Laboratory | 4 |
| BIOL A252/L | Principles of Genetics with Laboratory | 4 |
| BIOL A310/L | Principles of Physiology with Laboratory (4) | 3-4 |
| | or | |
| BIOL A316 | Introduction to Plant Physiology (3) | |
| | or | |
| BIOL A415 | Comparative Animal Physiology (3) | |
| BIOL A492 | Undergraduate Seminar | 1 |
| CHEM A105 | General Chemistry I | 3 |
| CHEM A105L | General Chemistry I Laboratory | 1 |
| CHEM A106 | General Chemistry II | 3 |
| CHEM A106L | General Chemistry II Laboratory | 1 |
- It is recommended that students complete 8 credits from the following:

| | | |
|------------|----------------------------------|--|
| GEOL A111 | Physical Geology (4) | |
| GEOL A221 | Historical Geology (4) | |
| | or | |
| PHYS A123 | Basic Physics I (3) | |
| | and | |
| PHYS A123L | Basic Physics I Laboratory (1) | |
| PHYS A124 | Basic Physics II (3) | |
| | and | |
| PHYS A124L | Basic Physics II Laboratory (1) | |
| | or | |
| PHYS A211 | General Physics I (3) | |
| | and | |
| PHYS A211L | General Physics I Laboratory (1) | |

- | | | |
|------------|-----------------------------------|--|
| PHYS A212 | General Physics II (3) | |
| | and | |
| PHYS A212L | General Physics II Laboratory (1) | |

- Complete 15-17 credits of upper division program electives from the following areas:

| | |
|-------------------|-----|
| Ecology | 3-4 |
| Microbiology | 4-5 |
| Biology electives | 8 |

- A total of 124 credits is required for the degree, of which 42 credits must be upper division.

Bachelor of Science, Biological Sciences

The Bachelor of Science degree includes a single core program of coursework with two areas of study. Completing courses from the cellular and molecular biology area prepares students for professional careers in areas such as medicine, dentistry and veterinary science. Completing courses from the organismal, ecology, and evolutionary area prepares students for careers in environmental, organismal, and evolutionary biology. A wide selection of electives is available to all students, including courses offered under BIOL A394 and BIOL A490, which are selected topics courses. It is imperative that students consult their academic advisors within the Department of Biological Sciences to determine which electives are most appropriate to their career interests. Some of these elective courses are offered periodically, depending on demand. Refer to course descriptions to identify these courses.

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Academic Progress

To graduate with a BS in Biological Sciences, the student must complete all courses covered under Major Requirements for a BS in Biological Sciences with a grade of C or better. All prerequisites for Biology courses must be completed with a grade of C or better. Students who audit a course in Biology or who are unable to earn a grade of C or better in the course may repeat the course. Students repeating a course in the Department of Biological Sciences are required to complete all components of that course during the semester in which the course is retaken. When repeating a course with a lecture and laboratory component, both components must be repeated.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section.

D. Major Requirements

- Some major requirements may also be used to satisfy the College of Arts and Sciences BS requirements.
- Complete these required support courses (39 credits):

| | | |
|------------|---------------------------------|---|
| CHEM A105 | General Chemistry I | 3 |
| CHEM A105L | General Chemistry I Laboratory | 1 |
| CHEM A106 | General Chemistry II | 3 |
| CHEM A106L | General Chemistry II Laboratory | 1 |
| CHEM A321 | Organic Chemistry I | 3 |
| CHEM A322 | Organic Chemistry II | 3 |

| | | |
|------------|--|---|
| CHEM A323L | Organic Chemistry Laboratory | 2 |
| MATH A200 | Calculus I | 4 |
| MATH A201 | Calculus II | 4 |
| PHYS A123 | Basic Physics I (3) | 8 |
| PHYS A123L | Basic Physics I Laboratory (1) and | |
| PHYS A124 | Basic Physics II (3) | |
| PHYS A124L | Basic Physics II Laboratory (1) or | |
| PHYS A211 | General Physics I (3) | |
| PHYS A211L | General Physics I Laboratory (1) and | |
| PHYS A212 | General Physics II (3) | |
| PHYS A212L | General Physics II Laboratory (1) | |
| STAT A253 | Applied Statistics for the Sciences (4) | 4 |
| | or | |
| STAT A307 | Probability and Statistics (4) | |
| STAT A308 | Intermediate Statistics for the Sciences* | 3 |

**It is recommended that STAT A308 be taken. Students may substitute STAT A308 with 3 upper division Biological Sciences credits. STAT A308 is an integrated capstone course.*

3. Complete Biological Sciences core courses (32-33 credits):

| | | |
|-------------|---|-----|
| BIOL A115/L | Fundamentals of Biology I with Laboratory | 4 |
| BIOL A116/L | Fundamentals of Biology II with Laboratory | 4 |
| BIOL A242/L | Fundamentals of Cell Biology with Laboratory | 4 |
| BIOL A252/L | Principles of Genetics with Laboratory | 4 |
| BIOL A271/L | Principles of Ecology with Laboratory | 4 |
| BIOL A308 | Principles of Evolution | 3 |
| BIOL A310/L | Principles of Physiology with Laboratory (4) | 3-4 |
| | or | |
| BIOL A316 | Introduction to Plan Physiology (3) or | |
| BIOL A415 | Comparative Animal Physiology (3) | |
| BIOL A340 | General Microbiology | 5 |
| BIOL A492 | Undergraduate Seminar | 1 |

4. Complete 11-12 credits of upper division program electives from the following list: 11-12

Note: Preprofessional students may substitute CHEM A441-A442 Principles of Biochemistry and CHEM A443 Biochemistry Laboratory for 8 upper division biology credits.

- a. Recommended electives in cellular and molecular biology:

Cellular-Molecular

| | |
|--------------------|----------------------------------|
| BIOL A451 | Applied Microbiology (3) |
| BIOL A452 | Human Genome* (3) |
| BIOL A461 | Molecular Biology (3) |
| BIOL A461L | Molecular Biology Laboratory (1) |
| BIOL A462 | Virology (3) |
| BIOL/ CHEM A471 | Immunochemistry (4) |
| BIOL A488 | Developmental Biology (4) |

Zoology

| | |
|-----------|---|
| BIOL A415 | Comparative Animal Physiology (3) |
| BIOL A487 | Comparative Anatomy of Vertebrates (4) |

Techniques

| | |
|-----------|---|
| BIOL A403 | Microtechnique (4) |
| BIOL A495 | Instructional Practicum: Laboratory (1) |

- b. Recommended elective courses in organismal, ecology and evolutionary biology:

Botany

| | |
|-----------|--------------------------------------|
| BIOL A316 | Introduction to Plant Physiology (3) |
| BIOL A331 | Systematic Botany (4) |
| BIOL A333 | Biology of Non-Vascular Plants (4) |
| BIOL A334 | Biology of Vascular Plants (4) |
| BIOL A479 | Physiological Plant Ecology (3) |

Zoology

| | |
|-----------|--|
| BIOL A415 | Comparative Animal Physiology (3) |
| BIOL A423 | Ichthyology (4) |
| BIOL A425 | Mammalogy (3) |
| BIOL A426 | Ornithology (4) |
| BIOL A427 | Invertebrate Zoology (4) |
| BIOL A487 | Comparative Anatomy of Vertebrates (4) |

Ecology-Systems

| | |
|-----------|--|
| BIOL A309 | Biogeography (3) |
| BIOL A373 | Conservation Biology (3) |
| BIOL A378 | Marine Biology (3) |
| BIOL A430 | Marine Mammal Biology (4) |
| BIOL A441 | Animal Behavior (4) |
| BIOL A445 | Plant-Herbivore Ecology (4) |
| BIOL A450 | Microbial Ecology (3) |
| BIOL A477 | Tundra and Taiga Ecosystems (3) |
| BIOL A478 | Biological Oceanography (4) |
| BIOL A479 | Physiological Plant Ecology (3) |
| BIOL A489 | Population Genetics and Evolutionary Processes* (3) |

Marine Biology

| | |
|-----------|-----------------------------|
| BIOL A378 | Marine Biology (3) |
| BIOL A423 | Ichthyology (4) |
| BIOL A427 | Invertebrate Zoology (4) |
| BIOL A430 | Marine Mammal Biology (4) |
| BIOL A478 | Biological Oceanography (4) |

Techniques

| | |
|-----------|---|
| BIOL A403 | Microtechnique (4) |
| BIOL A495 | Instructional Practicum: Laboratory (1) |

- c. Special topics, independent study and individual research (credits vary):

| | |
|-------------------------|--|
| BIOL/CHEM/ PHYS A456 | Nonlinear Dynamics and Chaos (3) |
| BIOL A490 | Selected Lecture Topics in Biology (1-3) |
| BIOL A490L | Selected Laboratory Topics in Biology (1-3) |
| BIOL A497 | Independent Study in Biology (1-12) |
| BIOL A498 | Individual Research (1-6) |
| BIOL A499 | Senior Thesis (3) |

**Integrative capstone courses*

5. A total of 122-125 credits is required for the degree, of which 42 credits must be upper division.

Bachelor of Science, Natural Sciences

The Department of Biological Sciences also oversees the Bachelor of Science in Natural Sciences. This curriculum emphasizes the interrelationships among the sciences. A program of study in the Natural Sciences requires that students select an option within the degree, and complete all courses required within the option, as well as sufficient science elective courses to meet minimum unit requirements for graduation. Students accepted into this flexible degree program select one of three options: the General Sciences Option is designed for students who are interested in understanding the interrelationships among various scientific fields, or in teaching science at the secondary level. The Pre-Health Professions Option is designed to meet the admission requirements of specific professional schools in medicine, dentistry, and veterinary medicine. The Environmental Sciences Option is designed to prepare students for graduate school or for employment in the private or public sector.

For a complete program description see the Natural Sciences section of this chapter.

Minor, Biological Sciences

Students majoring in another subject who wish to minor in Biological Sciences must complete the following requirements. A total of 28 credits is required for the minor, 12 of which must be upper division.

| | | |
|-------------|--|----|
| BIOL A115/L | Fundamentals of Biology I with Laboratory | 4 |
| BIOL A116/L | Fundamentals of Biology II with Laboratory | 4 |
| BIOL A242/L | Fundamentals of Cell Biology with Laboratory | 4 |
| BIOL A252/L | Principles of Genetics with Laboratory | 4 |
| | Upper division Biological Sciences electives | 12 |

FACULTY

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CHEMISTRY

ConocoPhillips Integrated Sciences Building (CPSB), Room 101,
 (907) 786-1238
<http://chem.uaa.alaska.edu>

Chemistry is the science concerned with substances and their properties, composition, and reactions. Recent advances in chemistry have exerted a profound influence on the progress of medicine, agriculture, industry, and commerce.

The undergraduate courses in Chemistry offered at UAA are designed primarily to provide a broad knowledge of the field as a part of the program of liberal education offered by the College of Arts and Sciences. They are also designed to provide a substantial foundation in chemistry for students interested in post-graduate studies in chemistry or the other sciences, preparation for professional degrees, teaching, or a career in government or industry. Students majoring in Chemistry will meet basic course requirements in inorganic, analytical, organic, physical chemistry and biochemistry.

The biochemistry option is designed for students who prefer a more biologically oriented approach to chemistry. During the past 25 years, biochemistry has become a central scientific discipline linking the chemical, physical, and biological sciences. By applying the concepts

and methods of chemistry to the problems of biology, biochemists have made great progress in explaining life in chemical terms.

High School Preparation

The Bachelor of Science in Chemistry with options in Chemistry or Biochemistry is a four-year baccalaureate program which assumes a proper high school preparation. Consult the College of Arts and Sciences list of recommended preparatory courses in all disciplines. The specific coursework which a freshman student must have mastered for admission to the Chemistry program without a deficiency includes:

| | |
|--|----------|
| English | 4 years |
| Mathematics | |
| Algebra | 2 years |
| <i>(This must have included at least complex numbers, logarithms, quadratic functions, inequalities and absolute values, plus conic sections).</i> | |
| Geometry | 1 year |
| Trigonometry | 1/2 year |
| Natural Sciences | |
| Physics | 1 year |
| <i>(This must cover mechanics, thermodynamics, electricity and magnetism, and optics).</i> | |
| Chemistry | 1 year |
| <i>(This must cover elementary laboratory procedures, introduction to atoms and molecules, chemical reactions, equilibrium, and an introduction to chemical calculations).</i> | |

It is strongly recommended that students graduating from high school without the preparation indicated above enroll in available non-science courses during the summer session to make up deficiencies so that they can begin the fall semester with the correct sequence of the freshman Chemistry curriculum. If this is not done, it will be necessary to carry heavier course loads or take more than eight semesters to complete the degree. Students are reminded that it is imperative for them to regularly (at least once per semester) consult a departmental advisor to evaluate their progress through the program of study.

Honors in Chemistry

The Department of Chemistry awards departmental honors in Chemistry to undergraduate students who show exceptional performance in all their coursework. To graduate with honors students must:

1. Satisfy all requirements for a Bachelor of Science degree in Chemistry.
2. Meet the requirements for Graduation with Honors as listed in Chapter 7, Academic Standards and Regulations.
3. Maintain a minimum GPA of 3.50 in Chemistry classes.
4. Complete, with distinction, a written assignment in the style of a chemical journal based on the research performed in CHEM A498.
5. Notify the Departmental Honors Committee in writing at the time they file their Application for Graduation with the Office of the Registrar that they intend to graduate with departmental honors.

Bachelor of Science, Chemistry

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Academic Progress

In order to graduate with a BS in Chemistry, all courses covered under Major Requirements for a BS in Chemistry must be completed with a grade of C or better.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section.

D. Major Requirements

Students are strongly encouraged to talk to a faculty advisor in the Chemistry Department to ensure that the necessary math and science courses are taken in the first two years of study.

- Students working toward a degree in Chemistry can choose one of two options:

Chemistry Option (82-83 credits)

Complete the following required courses:

| | | |
|------------|-----------------------------------|---|
| BIOL A115 | Fundamentals of Biology I | 4 |
| CHEM A105 | General Chemistry I | 3 |
| CHEM A105L | General Chemistry I Laboratory | 1 |
| CHEM A106 | General Chemistry II | 3 |
| CHEM A106L | General Chemistry II Laboratory | 1 |
| CHEM A212 | Quantitative Analysis | 5 |
| CHEM A253 | Principles of Inorganic Chemistry | 3 |
| CHEM A321 | Organic Chemistry I | 3 |
| CHEM A322 | Organic Chemistry II | 3 |
| CHEM A323L | Organic Chemistry Laboratory | 2 |
| CHEM A331 | Physical Chemistry I | 3 |
| CHEM A332 | Physical Chemistry II | 3 |
| CHEM A333L | Physical Chemistry Laboratory | 2 |
| CHEM A434 | Instrumental Methods | 4 |
| CHEM A441 | Principles of Biochemistry I | 3 |
| CHEM A453 | Advanced Inorganic Chemistry | 5 |
| CHEM A492 | Undergraduate Seminar (1) | 2 |
| CHEM A498 | Individual Research (3) | 6 |
| MATH A200 | Calculus I | 4 |
| MATH A201 | Calculus II | 4 |
| MATH A202 | Calculus III | 4 |
| MATH A314 | Linear Algebra | 3 |
| PHYS A211 | General Physics I | 3 |
| PHYS A211L | General Physics I Laboratory | 1 |
| PHYS A212 | General Physics II | 3 |
| PHYS A212L | General Physics II Laboratory | 1 |

Upper Division Elective (choose one of the following) 3-4

| | | |
|-----------|-------------------------------------|--|
| BIOL A310 | Principles of Physiology (3) | |
| BIOL A415 | Comparative Animal Physiology (4) | |
| BIOL A461 | Molecular Biology (3) | |
| CHEM A442 | Principles of Biochemistry II (3) | |
| CHEM A450 | Environmental Chemistry (3) | |
| CHEM A456 | Non-linear Dynamics and Chaos (3) | |
| CHEM A460 | Chemical Ecotoxicology (3) | |
| CHEM A471 | Immunochemistry (4) | |
| GEOL A321 | Mineralogy (4) | |
| GEOL A360 | Geochemistry (3) | |
| GEOL A460 | Environmental Geochemistry (3) | |
| MATH A302 | Ordinary Differential Equations (3) | |
| MATH A422 | Partial Differential Equations (3) | |
| PHYS A303 | Modern Physics (3) | |
| PHYS A320 | Simulation of Physical Systems (3) | |
| PHYS A403 | Quantum Mechanics (3) | |
| PHYS A413 | Statistical Methods (3) | |

Biochemistry Option (86-87 credits)

Complete the following required courses:

| | | |
|-----------|----------------------------|---|
| BIOL A115 | Fundamentals of Biology I | 4 |
| BIOL A116 | Fundamentals of Biology II | 4 |

| | | |
|---|-----------------------------------|---|
| BIOL A242 | Fundamentals of Cell Biology | 4 |
| BIOL A252 | Principles of Genetics | 4 |
| <i>Upper Division Biology (choose one of the following)</i> 3-4 | | |
| BIOL A310 | Principles of Physiology (3) | |
| or | | |
| BIOL A415 | Comparative Animal Physiology (4) | |
| or | | |
| BIOL A461 | Molecular Biology (3) | |
| CHEM A105 | General Chemistry I | 3 |
| CHEM A105L | General Chemistry I Laboratory | 1 |
| CHEM A106 | General Chemistry II | 3 |
| CHEM A106L | General Chemistry II Laboratory | 1 |
| CHEM A253 | Principles of Inorganic Chemistry | 3 |
| CHEM A212 | Quantitative Analysis | 5 |
| CHEM A321 | Organic Chemistry I | 3 |
| CHEM A322 | Organic Chemistry II | 3 |
| CHEM A323L | Organic Chemistry Laboratory | 2 |
| CHEM A331 | Physical Chemistry I | 3 |
| CHEM A434 | Instrumental Methods | 4 |
| CHEM A441 | Principles of Biochemistry I | 3 |
| CHEM A442 | Principles of Biochemistry II | 3 |
| CHEM A443 | Biochemistry Laboratory | 2 |
| CHEM A492 | Undergraduate Seminar (1) | 2 |
| CHEM A498 | Individual Research (3) | 6 |
| MATH A200 | Calculus I | 4 |
| MATH A201 | Calculus II | 4 |
| MATH A202 | Calculus III | 4 |
| PHYS A211 | General Physics I | 3 |
| PHYS A211L | General Physics I Laboratory | 1 |
| PHYS A212 | General Physics II | 3 |
| PHYS A212L | General Physics II Laboratory | 1 |

- A total of 120-126 credits is required for the degree, of which 42 credits must be upper division.

Minor, Chemistry

Students majoring in another subject who wish to minor in Chemistry must complete the following requirements. A total of 24 credits is required for the minor.

| | | |
|------------|---|---|
| CHEM A105 | General Chemistry I | 3 |
| CHEM A105L | General Chemistry I Laboratory | 1 |
| CHEM A106 | General Chemistry II | 3 |
| CHEM A106L | General Chemistry II Laboratory | 1 |
| CHEM A212 | Quantitative Analysis | 5 |
| CHEM A321 | Organic Chemistry I | 3 |
| CHEM A322 | Organic Chemistry II | 3 |
| CHEM A323L | Organic Chemistry Laboratory | 2 |
| CHEM A311 | Physical Chemistry: A Biological Orientation (3) | 3 |
| or | | |
| CHEM A331 | Physical Chemistry I (3) | |

FACULTY

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COMMUNICATION

www.uaa.alaska.edu/communication

Communication and Discourse Studies

Administration/Humanities Building (ADM), Room 262, (907) 786-4390

www.uaa.alaska.edu/cds

Communication and Human Behavior

Social Sciences Building (SSB), Room 352, (907) 786-4345

www.uaa.alaska.edu/chb

The study of communication provides students with an understanding of how individuals create and interpret verbal and nonverbal messages. The Department of Communication is divided into two units: Communication and Discourse Studies, and Communication and Human Behavior. Each unit offers a body of courses focusing upon different contexts of communication and different approaches to the study of this complex field.

The minor in Communication introduces students to communication theory and practical experience in particular areas of communication, for example interpersonal communication or public communication. The minor develops understanding and skills which are valuable in a variety of different majors and professions.

Minor, Communication

Students majoring in another subject who wish to minor in Communication must complete the following requirements. A total of 18 credits is required for the minor.

Select 9 credits from the following: 9

COMM A101 Introduction to Human Communication (3)

COMM A111 Fundamentals of Oral Communication (3)

COMM A235 Small Group Communication (3)

COMM A237 Interpersonal Communication (3)

COMM A241 Public Speaking (3)

Select 9 credits from the following: 9

COMM A236 Interviewing (3)

COMM A305 Intercultural Communication (3)

COMM A320 Argumentation and Debate (3)

COMM A340 Nonverbal Communication (3)

COMM A346 Oral Interpretation of Literature (3)

COMM A360 Competitive Debating (3)

COMM A380 Theories of Human Communication (3)

COMM A390 Selected Topics in Communication (6)

COMM A412 Persuasion (3)

FACULTY

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Communication and Human Behavior:

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COMPUTER SCIENCE

Social Sciences Building (SSB), Room 154, (907) 786-1744/786-4824

www.math.uaa.alaska.edu

The Department of Mathematical Sciences offers courses covering the major areas of computer science. These courses constitute the basis for an undergraduate major that prepares students for a variety of professional and technical careers in business; industry; and government, or for graduate work leading to advanced degrees. In addition, the department offers courses for students from other fields that will use computer science as a tool in their own areas.

The department offers two degrees in computer science: the Bachelor of Arts in Computer Science, and the Bachelor of Science in Computer

Science. The BA degree gives the student the opportunity to obtain a liberal arts background while the BS program gives the student the opportunity to pursue a sciences background. The BS degree is recommended for those seeking to pursue a graduate degree in computer science.

Both degrees prepare the student to pursue a professional career in the computing field and are based on the 2001 computing curriculum guidelines developed by the Association for Computing Machinery (ACM) and the ABET Inc.'s Computing Accreditation Commission (CAC). The core of both degrees emphasizes broad fundamental principles of computer science and teaches the student the necessary skills to develop solutions using current or future technology. The core topics include computer programming, systems organization, software engineering, databases, and theory. Upon completion of the core topics, the student may select electives that explore specific areas of computer science, such as computer graphics, architecture, or intelligent systems.

Honors in Computer Science

Students majoring in Computer Science are eligible to graduate with departmental honors if they satisfy the following requirements:

1. Meet the requirements for Graduation with Honors as listed in Chapter 7 of this UAA catalog.
2. Meet the requirements for a BA/BS degree in Computer Science.
3. Earn a grade point average of 3.50 or above in the major requirements.
4. Complete a minimum of 12 upper division credits required for the major in residence.

Bachelor of Arts, Computer Science

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences Requirements for a BA degree listed at the beginning of the CAS section.

D. Major Requirements

1. Complete the following core courses (33 credits)

| | | |
|---------|--|---|
| CS A201 | Programming Concepts I | 3 |
| CS A202 | Programming Concepts II | 3 |
| CS A221 | Computer Organization and Assembly Programming | 3 |
| CS A320 | Operating Systems | 3 |
| CS A330 | Algorithms and Data Structures | 3 |
| CS A331 | Programming Language Concepts | 3 |
| CS A342 | Networks | 3 |
| CS A351 | Automata, Algorithms, and Complexity | 3 |
| CS A360 | Database Systems | 3 |
| CS A401 | Software Engineering | 3 |
| CS A470 | Applied Software Development Project (3) | 3 |
| | or | |
| CS A495 | Internship Project (3) | |

- Complete the following required support courses (13-14 credits):

| | | |
|-----------|---|-----|
| ENGL A312 | Advanced Technical Writing (3) | 3 |
| | or | |
| ENGL A414 | Research Writing (3) | |
| MATH A200 | Calculus I (4) | 3-4 |
| | or | |
| MATH A272 | Applied Calculus (3) | |
| MATH A231 | Introduction to Discrete Mathematics | 3 |
| STAT A253 | Applied Statistics for the Sciences (4) | 4 |
| | or | |
| STAT A307 | Probability and Statistics (4) | |
- Complete an additional 15 upper division credits in Computer Science, Mathematics (excluding MATH A420 and MATH A495), or Statistics. Nine of these credits must be in Computer Science. A maximum of 3 credits of CS A395 may be applied to degree requirements.
- A grade of C or higher must be received in all MATH, CS, and STAT courses required to satisfy the above program requirements.
- All Computer Science majors must take a standardized test of knowledge of computer science approved by the Computer Science faculty for the purpose of evaluating program effectiveness. There is no minimum score required for graduation. This test will normally be taken during the senior year.
- Students are encouraged to develop their program with a Computer Science advisor.
- A total of 120 credits is required for the degree, of which 42 credits must be upper division.

Bachelor of Science, Computer Science

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences Requirements for a BS degree listed at the beginning of the CAS section.

D. Major Requirements

- Complete the following core courses (37 credits):

| | | |
|------------|--|---|
| CS A201 | Programming Concepts I | 3 |
| CS A202 | Programming Concepts II | 3 |
| CS A221 | Computer Organization and Assembly Programming | 3 |
| CS/EE A241 | Computer Hardware Concepts | 4 |
| CS A320 | Operating Systems | 3 |
| CS A330 | Algorithms and Data Structures | 3 |
| CS A331 | Programming Language Concepts | 3 |
| CS A342 | Networks | 3 |
| CS A351 | Automata, Algorithms, and Complexity | 3 |
| CS A360 | Database Systems | 3 |
| CS A401 | Software Engineering | 3 |

| | | |
|---------|--|---|
| CS A470 | Applied Software Development Project (3) | 3 |
| | or | |
| CS A495 | Internship Project (3) | |

- Complete the following required support courses (26 credits):

| | | |
|-------------|--------------------------------------|---|
| MATH A200 | Calculus I | 4 |
| MATH A201 | Calculus II | 4 |
| MATH A231 | Introduction to Discrete Mathematics | 3 |
| STAT A307 | Probability and Statistics | 4 |
| PHYS A123/L | Basic Physics I (4) | 4 |
| | or | |
| PHYS A211/L | General Physics I (4) | |
| PHYS A124/L | Basic Physics II (4) | 4 |
| | or | |
| PHYS A212/L | General Physics II (4) | |
| ENGL A312 | Advanced Technical Writing (3) | 3 |
| | or | |
| ENGL A414 | Research Writing (3) | |
- Complete an additional 12 upper division credits in Computer Science, Mathematics (excluding MATH A420 and MATH A495), or Statistics. Nine of these credits must be in Computer Science. A maximum of 3 credits of CS A395 may be applied to degree requirements.
- A grade of C or higher must be received in all MATH, CS, and STAT courses required to satisfy the above program requirements.
- All Computer Science majors must take a standardized test of knowledge of computer science approved by the Computer Science faculty for the purpose of evaluating program effectiveness. There is no minimum score required for graduation. This test will normally be taken during the senior year.
- Students are encouraged to develop their program with a Computer Science advisor.
- A total of 120 credits is required for the degree, of which 42 credits must be upper division.

Minor, Computer Science

Students majoring in another subject who wish to minor in Computer Science must complete the following requirements:

- Complete the five required courses:

| | | |
|-----------|--|---|
| CS A101 | Introduction to Computer Science | 3 |
| CS A201 | Programming Concepts I | 3 |
| CS A202 | Programming Concepts II | 3 |
| CS A221 | Computer Organization and Assembly Programming | 3 |
| MATH A231 | Introduction to Discrete Mathematics | 3 |
- Complete 9 credits of upper division Computer Science courses.
- A total of 24 credits is required for the minor.

FACULTY

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ENGLISH

Administration/Humanities Building (ADM), Room 101, (907) 786-4355

<http://english.uaa.alaska.edu/>

The programs offered by the Department of English provide an opportunity for a truly liberal education, one that encourages both self-discovery and an exploration of enduring ideas. The curriculum

includes courses in composition, rhetoric, literature, linguistics, and thinking strategies. The composition program provides courses that fulfill the university's General Education Requirement in written communication. More advanced writing courses offer opportunities for students to develop skills in electronic communication, disciplinary writing, professional writing, and research.

Students who major in English choose one of three options: literature, rhetoric and language, or education. The literature option focuses on significant examples of literature from different periods and genres, as well as the social and cultural forces that shape them. The rhetoric and language option focuses on rhetorical strategies and techniques of composition, emphasizing historical and theoretical perspectives in contemporary settings. The education option prepares students for teaching literature and writing at the middle school and secondary levels as well as for admission to UAA's Master of Arts in Teaching program.

All three options prepare majors to conduct research in the discipline and to write for a variety of purposes and audiences. In addition, all three options offer the opportunity to earn honors in English.

The Literature minor enhances the experience of students majoring in other subjects by providing a study of significant authors and literary works, as well as by developing skills in writing and critical analysis.

The Professional Writing minor prepares students to interpret and present complex information in a readable form to various audiences using a variety of media, including written words, illustrations, digital multimedia, online help systems, websites, and videos. The minor develops strong language, visual, and analytical skills, as well as aptitude for technical information, particularly in the industry in which students plan to work: computer science, engineering, medicine, aerospace, or business.

The Linguistics minor is designed for non-English majors who wish to build a foundation in linguistic studies for complementary majors, such as Anthropology and Languages, and for those who are interested in the study and teaching of languages. The minor includes two introductory courses and four elective courses which are offered through the Anthropology and English departments. Most courses emphasize the structure of the English language.

For information on English placement tests, transfer credits, petition procedures, or special registration, contact the English Department.

Honors in English

The Department of English recognizes exceptional undergraduate students by awarding them departmental honors in English. Honors in English may be coordinated with the UAA Honors Program. To graduate with departmental honors, the student must be a declared English major, satisfy all requirements for a BA degree in English (literature, rhetoric, or education option):

1. Meet the requirements for Graduation with Honors as listed in Chapter 7, Academic Standards and Regulations.
2. Maintain a GPA of 3.50 in all courses in the English major.
3. Complete 6 credits of the following 400-level topics courses with a grade of A:

| | |
|-----------|---|
| ENGL A403 | Topics in Autobiography (3) |
| ENGL A404 | Topics in Women's Literature (3) |
| ENGL A429 | Major Authors (3) |
| ENGL A440 | Topics in Comparative Literature (3) |
| ENGL A444 | Topics in Native Literatures (3) |
| ENGL A490 | Topics in Language and Literature (1-3) |
| ENGL A491 | Topics in Composition and Rhetoric (3) |
4. Complete ENGL A499 English Honors Thesis, with a grade of A in the judgment of two faculty readers. The thesis must be completed under the guidance of a member of the English faculty and should be 30-40 pages in length. Students are encouraged to enroll concurrently in ENGL A414 Research Writing.

Bachelor of Arts, English

Admission Requirements

Complete the Baccalaureate Degree Programs Admission Requirements at the beginning of Chapter 7, Academic Standards and Regulations.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for Baccalaureate Degrees located at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences requirements listed at the beginning of the CAS section.

D. Major Requirements

Students working toward a degree in English may choose from three options: literature, rhetoric and language, or education.

1. Complete the following core courses (15 credits):

| | | |
|-----------|-------------------------------------|---|
| ENGL A201 | Masterpieces of World Literature I | 3 |
| ENGL A202 | Masterpieces of World Literature II | 3 |
| ENGL A351 | Poetry | 3 |
| ENGL A434 | History of Rhetoric | 3 |
| ENGL A435 | History of Criticism | 3 |

2. Complete one of the following options:

Literature Option (24 credits)

Complete 3 credits from national literature: 3

| | |
|-----------|--|
| ENGL A301 | Literature of Britain I (3) |
| ENGL A302 | Literature of Britain II (3) |
| ENGL A305 | National Literatures in English (3) |
| ENGL A306 | Literature of the United States I (3) |
| ENGL A307 | Literature of the United States II (3) |

Complete 3 credits from each period: 9

Early

| | |
|-----------|-----------------------------------|
| ENGL A310 | Ancient Literature (3) |
| ENGL A315 | Survey of Medieval Literature (3) |
| ENGL A320 | Renaissance Literature (3) |

Middle

| | |
|-----------|-------------------------------|
| ENGL A325 | Neoclassical Literature (3) |
| ENGL A330 | Literature of Romanticism (3) |
| ENGL A340 | The Victorian Period (3) |

Late

| | |
|-----------|--|
| ENGL A343 | Modern and Contemporary Literature (3) |
| ENGL A440 | Topics in Comparative Literature (3) |

Complete 3 credits from genre: 3

| | |
|-----------|---------------------------------|
| ENGL A361 | The Novel (3) |
| ENGL A363 | Short Story (3) |
| ENGL A371 | Narrative Nonfiction (3) |
| ENGL A381 | Drama (3) |
| ENGL A383 | Film Interpretation (3) |
| ENGL A391 | Genres of Subject and Theme (3) |

Complete 6 credits from specialized studies: 6

| | |
|----------------------------------|-----------------------------------|
| ENGL A424 | Shakespeare (3) |
| <i>and one of the following:</i> | |
| ENGL A403 | Topics in Autobiography (3) |
| ENGL A404 | Topics in Women's Literatures (3) |
| ENGL A429 | Major Authors (3) |
| ENGL A444 | Topics in Native Literatures (3) |

ENGL A445 Alaska Native Literatures (3)
Complete 3 credits upper division English or Creative Writing and Literary Arts elective: 3

Rhetoric and Language Option (24 credits)

Complete 6 credits from nature of language:

LING A101 The Nature of Language 3
LING A201 Intermediate Grammar 3

Complete 6 credits from advanced composition: 6

ENGL A311 Advanced Composition (3)
ENGL A312 Advanced Technical Writing (3)
ENGL A313 Professional Writing (3)
ENGL A414 Research Writing (3)

Complete 3 credits from applied linguistics: 3

ENGL A450 Linguistics and English Language Teaching (3)
ENGL A487 Standard Written English (3)
ENGL A495 Internship in Professional Writing (1-6)

Complete 3 credits from rhetoric and language theory: 3

ENGL A475 Modern Grammar (3)
ENGL A476 History of English Language (3)
ENGL A491 Topics in Composition and Rhetoric (3)

Complete 6 credits upper division elective:

One upper division Rhetoric course 3
One upper division English or Creative Writing and Literary Arts elective 3

Education Option (24 credits)

Complete 12 credits from reading & literature: 12

ENGL A424 Shakespeare (3)*
and one of the following:
ENGL A361 The Novel (3)
ENGL A363 Short Story (3)
ENGL A371 Narrative Nonfiction (3)
ENGL A381 Drama* (3)
ENGL A383 Film Interpretation* (3)
ENGL A391 Genres of Subject and Theme (3)

and one of the following:

ENGL A306 Literature of the United States I (3)
ENGL A307 Literature of the United States II (3)

and one of the following:

ENGL A305 National Literatures in English (3)
ENGL A343 Modern and Contemporary Literature (3)

ENGL A440 Topics in Comparative Literature (3)
ENGL A444 Topics in Native Literatures (3)
ENGL A445 Alaska Native Literatures (3)

Complete 3 credits from language & composition: 3

ENGL A311 Advanced Composition (3)
ENGL A312 Advanced Technical Writing (3)
ENGL A313 Professional Writing (3)
ENGL A414 Research Writing (3)
ENGL A491 Topics in Composition and Rhetoric (3)

Complete 9 credits from language development & analysis: 9

LING A201 Intermediate Grammar (3)
ENGL A450 Linguistics and English Language Teaching (3)

and one of the following: 3

ENGL A475 Modern Grammar (3)
ENGL A476 History of English Language (3)
ENGL A487 Standard Written English (3)

*Recommended course

3. A total of 120 credits is required for the degree, of which 42 credits must be upper division.

Minor, English

The Department of English offers a minor in English with an emphasis in literature, linguistics, or professional writing. A total of 18 credits is required for the minor.

Students majoring in another subject who wish to minor in English must complete the following requirements.

Linguistics Emphasis

- Complete these required courses (6 credits): 6
LING A101 The Nature of Language (3)
LING A201 Intermediate Grammar (3)
- Complete 12 credits from the following: 12
ANTH A210 Introduction to Linguistic Anthropology (3)
ANTH A361 Language and Culture (3)
ENGL A450 Linguistics and English Language Teaching (3)
ENGL A475 Modern Grammar (3)
ENGL A476 History of English Language (3)
ENGL A487 Standard Written English (3)
ENGL A490 Topics in Language and Literature (1-3)*

*Counts for Linguistics Minor only when focus is on language.

Literature Emphasis

ENGL A201 Masterpieces of World Literature I 3
ENGL A202 Masterpieces of World Literature II 3
ENGL A351 Poetry 3
ENGL A424 Shakespeare 3
ENGL A435 History of Criticism 3
Upper division English elective 3

Professional Writing Emphasis

One of the following: 3
ENGL A212 Technical Writing (3)
ENGL A213 Writing in the Social and Natural Sciences (3)
ENGL A214 Persuasive Writing (3)

Two of the following: 6
ENGL A311 Advanced Composition (3)
ENGL A312 Advanced Technical Writing (3)
ENGL A313 Professional Writing (3)

One of the following: 3
ENGL A414 Research Writing (3)
ENGL A495 Internship in Professional Writing (1-6)

And both of the following:
ENGL A434 History of Rhetoric 3
Upper division elective approved by the English Department 3

Minor, Creative Writing and Literary Arts

Students who wish to minor in Creative Writing and Literary Arts must complete the following requirements:

- CWLA A260 Introduction to Creative Writing 3
- One the following: 3
CWLA A352 Writers' Workshop: Poetry (3)
CWLA A362 Writers' Workshop: Fiction (3)
CWLA A372 Writers' Workshop: Nonfiction (3)
CWLA A382 Writers' Workshop: Drama and Screenwriting (3)
- One of the following: 3
ENGL A351 Poetry (3)
ENGL A361 The Novel (3)
ENGL A363 Short Story (3)
ENGL A371 Narrative Nonfiction (3)
ENGL A381 Drama (3)
ENGL A383 Film Interpretation (3)

4. One 300- or 400-level literature course. 3
5. One of the following: 3
 - CWLA A452 Advanced Writers' Workshop: Poetry (3)
 - CWLA A462 Advanced Writers' Workshop: Fiction (3)
 - CWLA A472 Advanced Writers' Workshop: Nonfiction (3)
 - CWLA A482 Advanced Writers' Workshop: Drama and Screenwriting (3)
6. One 300- or 400-level workshop (in a different genre) or one of the following: 3
 - CWLA A259 Short Format Introduction to Creative Writing (repeatable twice with a change in subtitle) (1-3)
 - CWLA A260 Introduction to Creative Writing (repeatable once) (3)
 - ENGL A495 Internship in Professional Writing (1-6)
7. A total of 18 credits is required for the minor.

FACULTY

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ENVIRONMENT & SOCIETY

Beatrice McDonald Hall (BMH), Room 213 (907) 786-6049
www.uaa.alaska.edu/ges

Environmental problems and society's responses to the challenges presented by a changing environment are some of the most pressing issues facing our modern world. The interdisciplinary degree in Environment & Society prepares students to be informed citizens and for careers in environmental advocacy, policy setting and analysis, education, urban and resource planning, and graduate studies in a variety of disciplines.

The curriculum in the Environment & Society degree program will educate students about the fundamental role of interconnected, natural/living systems in supporting life and social well-being and the key threats to these systems and the challenges society faces in meeting these threats. In addition, students are exposed to the key methods and tools they will need to engage as professionals and citizens to promote the long-term health and vitality of ecological, social, economic, and cultural systems and to make informed decisions about environmental issues.

Curriculum in the Environment & Society major, as well as other coursework offered by the Department of Geography and Environmental Studies, places an emphasis on community engagement and the development of advanced skills in public science writing.

In addition to a Bachelor of Arts and a Bachelor of Science in Environment & Society, minors in Environmental Studies and in Geography are also offered.

Program Outcomes

The specific educational outcomes that support the program objectives are to produce graduates who are able to:

- Describe the fundamental role of natural/living systems in supporting life and social well-being and the key threats to these systems.
- Explain the central importance of interconnections and relationships among people and the natural world in understanding the environmental and related challenges facing society.
- Apply appropriate methods and tools to engage as professionals and citizens to promote the long-term health and vitality of ecological, social, economic, and cultural systems.
- Demonstrate the ability to think critically about the relative merits of arguments, to anticipate consequences of actions, and to make informed decisions about environmental issues.

Bachelor of Arts, Environment & Society

Bachelor of Science, Environment & Society

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements listed at the beginning of this chapter.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements of Baccalaureate degrees listed at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate degrees listed at the beginning of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences Requirements for either a BA or BS degree listed at the beginning of the CAS section.

D. Major Requirements

1. Complete the following departmental core courses (11 credits)

| | | |
|------------|---|---|
| ENVI A211 | Environmental Science: Systems and Processes | 3 |
| ENVI A211L | Environmental Science: Systems and Processes Laboratory | 1 |
| ENVI A212 | Living on Earth: People and the Environment | 3 |
| ENVI A470 | Environmental Planning and Problem Solving | 4 |
2. Complete the following interdisciplinary core courses (22 credits)

| | | |
|----------------|--|---|
| BIOL A373 | Conservation Biology | 3 |
| CEL A292 | Introduction to Civic Engagement (3-9) | 3 |
| CEL A395 | Civic Engagement Internship | 3 |
| ECON A210 | Environmental Economics and Policy | 3 |
| ENGL A478 | Public Science Writing | 3 |
| ENVI/PHIL A303 | Environmental Ethics | 3 |
| GIS A268 | Elements of Geographic Information Systems (GIS) | 4 |
3. Complete 9-11 credits from one of the following emphases: 9-11

Life Science and Environment Emphasis

| | |
|------------|--|
| BIOL A271 | Principles of Ecology (4) |
| BIOL A309 | Biogeography (3) |
| BIOL A331 | Systematic Botany (4) |
| BIOL A378 | Marine Biology (3) |
| BIOL A477 | Tundra and Taiga Ecosystems (3) |
| BIOL A490* | Selected Lecture Topics in Biology (3) |

Natural Science and Environment Emphasis:

| | |
|------------|--|
| BIOL A490* | Selected Lecture Topics in Biology (3) |
| CHEM A450 | Environmental Chemistry (3) |
| GEOL A115 | Environmental Geology (3) |
| GEOL A340 | Hydrogeology (3) |
| GEOL A350 | Geomorphology (4) |
| GEOL A455 | Permafrost (3) |
| GEOL A457 | Soil Genesis and Classification (4) |
| GEOL A460 | Environmental Geochemistry (3) |

Society and Environment Emphasis:

| | |
|-----------|------------------------------------|
| ANTH A354 | Culture and Ecology (3) |
| ECON A435 | Natural Resource Economics (3) |
| LSSS A311 | People, Places, and Ecosystems (3) |
| SOC A307 | Demography (3) |
| SOC A309 | Urban Sociology (3) |
| SOC A404 | Environmental Sociology (3) |

* To be taken under the topic title "Environmental and Ecological Applications of Geographic Information Systems (GIS)".

A total of 120 credits is required for the degree, of which 42 credits must be upper division.

Minor, Environmental Studies**

Students majoring in another subject who wish to minor in Environmental Studies must complete the following requirements. At least 20 credits are required for the minor.

- Complete the following required core courses (11 credits):

| | | |
|------------|---|---|
| ENVI A211 | Environmental Science: Systems and Processes | 3 |
| ENVI A211L | Environmental Science: Systems and Processes Laboratory | 1 |
| ENVI A212 | Living on Earth: People and the Environment | 3 |
| ENVI A470 | Environmental Planning and Problem Solving | 4 |
- Complete three of the following courses, with at least one from each list 9-11

List A

| | |
|------------|--|
| BIOL A271 | Principles of Ecology (4) |
| BIOL A373 | Conservation Biology (3) |
| BIOL A490* | Selected Lecture Topics in Biology (3) |
| CHEM A450 | Environmental Chemistry (3) |
| GEOL A115 | Environmental Geology (3) |
| GIS A268 | Elements of Geographic Information Systems (GIS) (4) |
| GIS A370 | GIS and Remote Sensing for Natural Resources (3) |

List B

| | |
|-----------|--|
| ANTH A354 | Culture and Ecology (3) |
| CEL A292 | Introduction to Civic Engagement (3) |
| CEL A395 | Civic Engagement Internship (3) |
| ECON A210 | Environmental Economics and Policy (3) |
| ENGL A478 | Public Science Writing (3) |
| ENVI/ | |
| PHIL A303 | Environmental Ethics (3) |
| LSSS A311 | People, Places, and Ecosystems (3) |
| SOC A404 | Environmental Sociology |

*To be taken under the topic title "Environmental and Ecological Applications of Geographic Information Systems (GIS)."

** Not available to Environment & Society majors.

Minor, Geography

Students majoring in another subject who wish to minor in Geography must complete the following requirements. At least 19 credits are required for the minor.

- Complete the following required core courses: (10 credits)

| | | |
|-----------|---|---|
| GEOG/ | | |
| INTL A101 | Local Places/Global Regions: An Introduction to Geography | 3 |
| GEOG A111 | Earth Systems: Elements of Physical Geography | 3 |
| GIS A268 | Elements of Geographic Information Systems (GIS) | 4 |
- Complete one of the following options: (9 Credits)
 - Nine credits of upper division GEOG
 - LSSS A311 and 6 credits of upper division GEOG

GEOGRAPHY AND ENVIRONMENTAL STUDIES FACULTY

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GEOLOGICAL SCIENCES

ConocoPhillips Integrated Sciences Building (CPSB), Room 101,
 (907) 786-4940

www.uaa.alaska.edu/geology

Geology is the science that studies planet Earth. The geological sciences incorporate areas of study in:

- Earth materials including mineralogy, petrology, sedimentology and stratigraphy, volcanology, ore deposits, and structure;
- Geologic Earth history including historical geology and paleontology;
- Earth surface processes including geomorphology, soils, paleoclimatology, glacial geology, and permafrost; and
- Earth's environmental systems including hydrogeology, environmental geochemistry and geophysics. The curriculum is designed to provide students with a solid understanding of the geological sciences to prepare them for graduate studies, government and industry employment, and teaching. A Bachelor of Science degree in Geological Sciences is available for undergraduates.

The Geological Sciences faculty is highly motivated to transmit their knowledge and passion for the geological sciences and focus on combining classroom education with laboratory and field work. Students who enjoy working outdoors, have a strong scientific background, and are interested in earth processes will find the geological sciences a rewarding area of study.

The program in Geological Sciences requires completion of a basic science curriculum in chemical, physical, and mathematical sciences in addition to core and elective courses in geological sciences. The undergraduate degree in geology offers two tracks: general geology or environmental geology. The general geology track includes core geology courses with upper division course electives. The environmental geology track requires core

geology courses plus upper division electives that focus on environmental topics including environmental geochemistry, hydrogeology, and soils. Students are strongly encouraged to consult with Geologic Sciences faculty to choose the direction of study suiting their goals.

The Bachelor of Science in Geological Sciences program requires a minimum of 120 credits for graduation. It can be completed in four years by students who have adequate high school preparation in the sciences and math. Consult the College of Arts and Sciences list of recommended preparatory courses in all disciplines.

Program Objectives and Expected Outcomes

The curriculum of the UAA Geological Sciences program is designed to produce graduates who:

1. Have a basic knowledge of the principles related to the geological sciences with either an emphasis in environmental geology or general geology;
2. Have an understanding of how to think scientifically and apply their knowledge to solve geologic problems;
3. Have sufficient competence to obtain employment as an entry-level geologist or environmental geologist, and be able to progress professionally within the discipline and are prepared for advanced study;
4. Have a fundamental understanding of Alaskan geology and environmental problems in Alaska;
5. Are able to communicate their ideas; and
6. Are prepared for and understand the need for continued professional development throughout their careers.

In keeping with the objectives, it is expected that graduates of the UAA Geological Sciences program will have:

1. An ability to apply their knowledge of general geology and/or environmental geology;
2. An ability to accept challenges and think through problems until they are solved;
3. An ability to design and conduct projects that include field work, laboratory analyses and interpretation in their area of emphasis;
4. Experience in field geology in Alaska;
5. An ability to communicate effectively; and
6. A recognition of the need for, and ability to pursue, lifelong learning.

Honors in Geological Sciences

The Department of Geological Sciences offers recognition to students who demonstrate exceptional promise in the science by awarding them with departmental honors in Geological Sciences. To graduate with departmental honors, the student must be a declared Geological Sciences major and meet the following requirements:

1. Satisfy all requirements for a BS degree in Geological Sciences.
2. Maintain a cumulative GPA of 3.50.
3. Complete 6 credits of GEOL A499 Senior Thesis or 3 credits of GEOL A498 Directed Research and 3 credits of GEOL A499 Senior Thesis in Geological Sciences with a grade of B or better.
4. Students intending to graduate with departmental honors must notify the Departmental Honors Committee, in writing, on or before the date they file their Application for Graduation with the Office of the Registrar.

Bachelor of Science, Geological Sciences

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Academic Progress

In order to graduate with a BS in Geological Sciences, all courses covered under Major Requirements for a BS in Geological Sciences must be completed with a grade of C or better. Students who audit a course in Geological Sciences or who are unable to earn a grade of C or better in the course may repeat the course. All prerequisites for Geological Sciences courses must be completed with a grade of C or better.

Please consult the undergraduate academic advisor in the Department of Geological Sciences to obtain a student handbook for the Geological Sciences major.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees located at the beginning of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section of this catalog.

D. Major Requirements

1. Some major requirements may also be used to satisfy the College of Arts and Sciences BS requirements.

2. Complete these required support courses (24 credits):

| | | |
|-------------|---|---|
| CHEM A105/L | General Chemistry I | 4 |
| CHEM A106/L | General Chemistry II | 4 |
| PHYS A123/L | Basic Physics I | 4 |
| PHYS A124/L | Basic Physics II | 4 |
| MATH A200 | Calculus I | 4 |
| STAT A253 | Applied Statistics for the Sciences (4) | 4 |
| | or | |
| STAT A307 | Probability and Statistics (4) | |

Note: Math A201 Calculus II is highly recommended for students majoring in Geological Sciences.

3. Complete Geological Sciences core curriculum courses (40 credits):

| | | | |
|----|---|-----------------------------------|---|
| a. | Complete the following required courses | 34 | |
| | GEOL A111 | Physical Geology | 4 |
| | GEOL A221 | Historical Geology | 4 |
| | GEOL A321 | Mineralogy | 4 |
| | GEOL A322 | Igneous and Metamorphic Petrology | 4 |
| | GEOL A335 | Structural Geology | 4 |
| | GEOL A350 | Geomorphology | 4 |
| | GEOL A360 | Geochemistry | 3 |
| | GEOL A310 | Professional Practices in Geology | 3 |
| | GEOL A452 | Sedimentology and Stratigraphy | 4 |

- b. Complete a minimum of 6 credits of the following required field courses

| | | |
|------------|---|---|
| GEOL A480* | Geologic Field Methods (3) | 6 |
| GEOL A481* | Alaska Field Investigations (3) Geology Field Camp (3-6) | |

**GEOL A480 and GEOL A481 are offered through UAA. Geology Field Camps are offered through other accredited academic institutions and must be approved by the Department of Geological Sciences. Credits must be transferable to UAA from the academic institution that is offering the course and must be completed with at least a minimum grade of 2.00.*

3. Students must select one of the following tracks in the Geological Sciences. Students may complete both tracks, but may not use the same courses to fulfill the requirements in each track.

a. General Geological Sciences Track (13-14 credits)

| | |
|--|--|
| Complete 13-14 credits of the following: | 13-14 |
| GEOL A320 | Volcanology (3) |
| GEOL A325 | Geology of Ore Deposits (3) |
| GEOL A340 | Hydrogeology (3) |
| GEOL A380 | Anchorage Field Studies (3) |
| GEOL A381 | Kenai Peninsula Field Studies (3) |
| GEOL A382 | Geologic Field Studies (3) |
| GEOL A421 | Invertebrate Paleontology (4) |
| GEOL A454 | Glacial and Quaternary Geology (3) |
| GEOL A455 | Permafrost (3) |
| GEOL A456 | Geoarcheology (3) |
| GEOL A457 | Soil Genesis and Classification (4) |
| GEOL A460 | Environmental Geochemistry (3) |
| GEOL A475 | Environmental Geophysics (3) |
| GEOL A480** | Geologic Field Methods (3) |
| GEOL A481** | Alaska Geologic Field Investigations (3) |
| GEOL A482 | Geologic Field Investigations (3) |
| GEOL A490 | Advanced Topics in Geology (1-4) |
| GEOL A492 | Geology Seminar (1) |
| GEOL A495 | Geology Internship (1-3) |
| GEOL A498 | Student Research (1-6) |
| GEOL A499 | Senior Thesis (3) |

**GEOL A480 and GEOL 481 may be applied toward recommended electives if they are not being applied to satisfy the core curriculum credits.

b. Environmental Geological Sciences Track (13-14 credits)

| | | |
|-----|---|--|
| 1.a | Complete the following 3 required credits: | |
| | GEOL A340 | Hydrogeology 3 |
| 1.b | Complete at least 6 additional credits from the following | 6 |
| | GEOL A454 | Glacial and Quaternary Geology (3) |
| | GEOL A455 | Permafrost (3) |
| | GEOL A457 | Soil Genesis and Classification (4) |
| | GEOL A460 | Environmental Geochemistry (3) |
| | GEOL A475 | Environmental Geophysics (3) |
| | GEOL A495 | Geology Internship (1-3) |
| 2.a | Complete at least 4 elective credits from the following: | 4 |
| | GEOL A320 | Volcanology (3) |
| | GEOL A325 | Geology of Ore Deposits (3) |
| | GEOL A380 | Anchorage Field Studies (3) |
| | GEOL A381 | Kenai Peninsula Field Studies (3) |
| | GEOL A382 | Geologic Field Studies (3) |
| | GEOL A421 | Invertebrate Paleontology (4) |
| | GEOL A454 | Glacial and Quaternary Geology (3) |
| | GEOL A455* | Permafrost (3) |
| | GEOL A456 | Geoarcheology (3) |
| | GEOL A457* | Soil Genesis and Classification (4) |
| | GEOL A460* | Environmental Geochemistry (3) |
| | GEOL A475* | Environmental Geophysics (3) |
| | GEOL A480^ | Geologic Field Methods (3) |
| | GEOL A481^ | Alaska Geologic Field Investigations (3) |
| | GEOL A482 | Geologic Field Investigations (3) |
| | GEOL A490 | Advanced Topics in Geology (1-4) |
| | GEOL A492 | Geology Seminar (1) |

| | |
|------------|--------------------------|
| GEOL A495* | Geology Internship (1-3) |
| GEOL A498 | Student Research (1-6) |
| GEOL A499 | Senior Thesis (3) |

^ GEOL A480 and GEOL A481 may be applied toward recommended electives if they are not being applied to satisfy the core curriculum credits.

* GEOL A455, GEOL A457, GEOL A460, GEOL A475, and GEOL A495 may be applied toward the recommended electives if they are not being applied to satisfy the requirements under B.1.a. and B.1.b. for the Environmental Geosciences Track.

5. A minimum of 120 credits is required for the degree, of which 42 must be upper division credits.

Minor, Geological Sciences

Students majoring in another subject who wish to minor in Geological Sciences must complete the following requirements. Completion of a minimum of 18 credits is required for the minor, 8 of which must be upper division.

| | | |
|-----------|--|-----------|
| GEOL A111 | Physical Geology | 4 |
| GEOL A221 | Historical Geology | 4 |
| | Upper division Geological Sciences electives | 8 |
| | Other Geological Sciences electives | 2 or more |

FACULTY

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HISTORY

Administration/Humanities Building (ADM), Room 147, (907) 786-1539

www.uaa.alaska.edu/history

History as a subject in its broadest sense is all that human beings have thought and done. Knowledge of history is the principal means by which humans discover and preserve their collective identity, for through such knowledge we gain a clear view of our limitations and a glimpse of our potential.

History as an intellectual discipline examines and interprets the documentary records of human activity, records that are often fragmentary and incomplete. As a discipline, history is both a science and an art; it requires an intricate balance of scientific technique and creative imagination to weave fragments of evidence into an intelligent account of human experience.

Honors in History

The award of honors in History recognizes distinguished achievement by undergraduate majors in the study and writing of history.

To be eligible for departmental honors a student must satisfy the following requirements:

1. Be a declared History major.
2. Satisfy all the requirements for a BA degree in History.
3. Meet the requirements for Graduation with Honors as listed in Chapter 7, Academic Standards and Regulations.
4. Maintain a grade point average of 3.50 or above in courses specific to the History major.
5. Complete HIST A377 Historiography with a grade of A.
6. Complete HIST A477 Senior Seminar paper with a grade of A.

Honors designees in History must submit a typographically correct, formal copy of their senior paper to the department for deposit in the

departmental archives. This must be done before graduation day of the year in which the paper is completed.

Bachelor of Arts, History

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

**The department recommends that its majors complete GEOG A101 to satisfy part of the CAS social science requirement.*

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section.

D. Major Requirements

- Complete the following survey courses:

| | | |
|-----------|-----------------------------|---|
| HIST A101 | Western Civilization I | 3 |
| HIST A102 | Western Civilization II | 3 |
| HIST A131 | History of United States I | 3 |
| HIST A132 | History of United States II | 3 |
- Complete 6 credits of non-Western History courses: 6

| | | |
|-----------------------|--|--|
| HIST A121 | East Asian Civilization I (3) | |
| HIST A122 | East Asian Civilization II (3) | |
| HIST A320 | The Rise, Fall, and Reinvention of the Samurai (3) | |
| HIST A321 | Modern China (3) | |
| HIST A322 | Modern Japan (3) | |
| HIST A323 | Communist China (3) | |
| HIST/INTL/ PS A325 | Northeast Asia in 21st Century (3) | |
| HIST A330 | Russia in East Asia (3) | |
| HIST A390A | Themes in World History*(3) | |

** May be repeated once with a change in subtitle.*
- Complete 15 credits of upper division History electives 15
Note: Only 3 credits of HIST A444 may be applied to a major in History.
Note: GEOG/HIST A345 Across This Land and GEOG A415 Anglo-Saxons and Vikings are cross-listed with History and may be counted toward the upper division electives requirement for majors.
- Complete HIST A377 Historiography: The Uses and Abuses of History 3
- Complete HIST A477 Senior Seminar. 3
- A total of 120 credits is required for the degree, of which 42 credits must be upper division.

Minor, History

A total of 18 credits is required for the minor, 9 of which must be upper division.

- HIST A101 Western Civilization I (3) 6
and
HIST A102 Western Civilization II (3)
or

- | | | |
|-----------|-----------------------------------|---|
| HIST A131 | History of United States I (3) | |
| | and | |
| HIST A132 | History of United States II (3) | |
| 2. | Upper division History electives* | 9 |
| 3. | History elective, any level | 3 |

**Note: Only 3 credits of HIST A444 may be applied to a minor in History.*

FACULTY

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Kelly Shannon, Assistant Professor

INTERNATIONAL STUDIES

Administration/Humanities Building (ADM), Room 262, 786-1509
www.uaa.alaska.edu/intl

The International Studies program at UAA prepares students to be global citizens in an interdependent world. International and intercultural understanding and competency are essential in all aspects of life and work, and this program seeks to prepare students to be contributing members of the international community.

The interdisciplinary Bachelor of Arts in International Studies provides students with the analytical skills and cross-cultural sensitivities required of informed, global citizens. Core courses introduce students to different modes of enquiry and understanding and provide the foundation for a comparative approach to issues across regions, societies, and cultures. Coursework in a specific track focuses the student on a particular language and region. The program capstone requires students to apply acquired analytical skills and modes of enquiry across regions, societies, and cultures in a comparative examination of various topics.

To further develop their global competence, students majoring in International Studies will have the option to participate in study abroad or an approved internship. Students must petition to fulfill major requirements with study abroad or internship credits.

Students who complete a bachelor's of International Studies will gain an understanding of the challenges and complexities of cross-cultural interactions in an increasingly interconnected world. Students will experience different ways of viewing and questioning the world as expressed in primary sources, as well as the complexities of a specific area (Russian, Northeast Asia, Europe, Canada) informed by multiple perspectives.

Honors in International Studies

Students majoring in International Studies are eligible to graduate with honors if they satisfy the following requirements:

- Meet the requirements for Graduation with Honors as listed in Chapter 7, Academic Standards and Regulations.
- Meet the requirements for a Bachelor of Arts in International Studies.
- Maintain a grade point average of 3.80 or above in courses applicable to the degree requirements.
- Complete the program capstone course (GEOG A390A, HIST A390A, or PHIL A400) with an honor grade (A).

Bachelor of Arts, International Studies

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees located at the beginning of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences Bachelor of Arts Requirements listed at the beginning of the CAS section.

D. Major Requirements

Note 1: Courses which may be used to meet GER and/or CAS BA requirements are designated by an asterisk () after their numbers. Courses in the GER lists for Tier 2 social sciences and humanities requirements may be used to fulfill both International Studies requirements and GER Tier 2 requirements in social sciences and humanities.*

Note 2: Topics, selected topics, studies in, and senior seminar courses, i.e., courses with changing topics and content and approved for a particular semester are posted on the International Studies Website under "Courses and Registration".

- Complete 18 credits of required core courses

| | |
|---|---|
| Introductory Survey | 3 |
| (May be used to fulfill both an International Studies degree requirement and the Tier 2 GER social sciences requirement.) | |
| GEOG/ INTL A101* Local Places/Global Regions: An Introduction to Geography (3) | |
| Social Sciences Selection | 6 |
| (Courses below that are also listed in the list for Tier 2 GER social sciences may be used to fulfill both an International Studies degree requirement and the Tier 2 GER social sciences requirement.) | |
| ANTH A250* The Rise of Civilization (3) | |
| EDFN A304* Comparative Education (3) | |
| JUST A365 Comparative Justice Systems (3) | |
| PS A102* Introduction to Political Science (3) | |
| PS A301 Comparative Political Economy (3) | |
| PS A321 International Relations (3) | |
| Humanities and Fine Arts Selection | 6 |
| ART A262* History of Western Art II (3) | |
| ENGL A202* Masterpieces of World Literature II (3) | |
| ENGL A343 Modern and Contemporary Literature (3) | |
| PHIL A212* History of Philosophy II (3) | |
| PHIL A313* Eastern Philosophy and Religion (3) | |
| PHIL A314* Western Religions (3) | |
| THR A312* Representative Plays II (3) | |
| Capstone Course Selection | 3 |
| GEOG A390A* Topics in Global Geography (3) | |
| or | |
| HIST A390A* Themes in World History (3) | |
| or | |
| PHIL A400* Ethics, Community, and Society (3) | |

- Complete four semesters of college-level language appropriate to track (101-102, 201-202, or higher) 16
- Complete 12 credits as specified in one of the tracks below

Russia Track (Language: Russian)

| | |
|--|---|
| HIST A330 Russia in East Asia | 3 |
| Russia Elective Course Selection | 9 |
| ANTH A434 Peoples and Cultures of Northeast Asia (3) | |
| ART A492 Art History Seminar (<i>with topic 20th Century Russian Art: Symbolist Developments-Perestroika and Beyond</i>) (3) | |
| GEOG A344 The Slavic World (3) | |
| GEOG A447 The Silk Road (3) | |
| HIST A423 Medieval Russian History (3) | |
| HIST A424 Imperial Russian History (3) | |
| HIST A425 History of the Soviet Union (3) | |
| HIST/ RUSS A427* Post-Soviet Culture and Society (3) | |
| HIST A477 Senior Seminar (<i>with approved topic</i>) (3) | |
| HIST A486 Studies in Modern Europe (<i>with approved topic</i>) (3) | |
| PS A492* Senior Seminar in Politics (<i>with approved topic</i>) (3) | |
| RUSS A390 Selected Topics in Advanced Russian (3) | |
| RUSS A490A Selected Topics in Russian Culture (1-3) | |
| RUSS A490B Selected Topics in Russian Culture in Translation (1-3) | |
| THR A490 Selected Topics in Performance (<i>with topic Modern Russian Drama: Gogol to the Present</i>) (3) | |
| THR A492* Senior Seminar (<i>with approved topic</i>) (3) | |
| Any course with the appropriate focus and approved by academic petition for the category. For example, a topics course that focuses on Russia. (3) | |

Northeast Asia Track (Language: Chinese or Japanese)

| | |
|---|---|
| INTL/HIST/ PS A325* Northeast Asia in 21st Century | 3 |
| Northeast Asia Elective Course Selection | 9 |
| ANTH A434 Peoples and Cultures of Northeast Asia (3) | |
| ART A366 Asian Art (3) | |
| HIST A320 The Rise, Fall, and Reinvention of the Samurai (3) | |
| HIST A321 Modern China (3) | |
| HIST A322 Modern Japan (3) | |
| HIST A323 Communist China (3) | |
| HIST A330 Russia in East Asia (3) | |
| HIST A477 Senior Seminar (<i>with approved content</i>) (3) | |
| JPN A310 Selected Topics in Advanced Japanese (<i>with approved content</i>) (3) | |
| PHIL A313* Eastern Philosophy and Religion (3) | |
| PS A492* Senior Seminar in Politics (<i>with approved content</i>) (3) | |
| THR A492* Senior Seminar (<i>with approved topic</i>) (3) | |
| Any course with the appropriate focus and approved by academic petition for the category. For example, a topics course that focuses on China or Japan (3) | |

Europe Track (Language: French, German, Spanish)

| | |
|---|---|
| HIST A316 Twentieth Century Europe | 3 |
| European Elective Course Selection | 9 |
| ART A362 History of Modern Art (3) | |

| | | |
|--------------------|---|--|
| ART A363 | History of Contemporary Art (3) | |
| ECON/ HIST A360 | Modern Economic History (3) | |
| ENGL A343 | Modern and Contemporary Literature (3) (<i>if not taken as a core course</i>) | |
| ENGL A440 | Topics in Comparative Literature (<i>with approved topic</i>) (3) | |
| FREN A310 | Selected Topics: Literary Trends and traditions (<i>with approved topic</i>) (3) | |
| FREN A432 | Studies of Literature and Culture (<i>with approved topic</i>) (3) | |
| GEOG A344 | The Slavic World (3) | |
| GER A310 | Selected Topics: Literary Trends and Traditions (<i>with approved topic</i>) (3) | |
| GER A490 | Selected Topics in German Literature (<i>with approved topic</i>) (3) | |
| HIST A314 | Nineteenth Century Europe (3) | |
| HIST A411 | History of Modern Germany (3) | |
| HIST A477 | Senior Seminar (<i>with approved topic</i>) (3) | |
| HIST A486 | Studies in Modern Europe (3) | |
| PHIL A314* | Western Religions (3) | |
| PS A311* | Comparative Politics (3) | |
| PS A333* | History of Political Philosophy II: Modern (3) | |
| SPAN A432 | Studies in Literature and Culture (<i>with approved topic</i>) (3) | |
| SPAN A490 | Selected Topics in Hispanic Culture and Civilization (<i>with approved topic</i>) (3) | |
| THR A412* | History of Theatre II | |
| THR A492* | Senior Seminar (<i>with approved topic</i>) (3) | |

Any course with the appropriate focus and approved by academic petition for the category. For example, a topics course that focuses on Europe. (3)

Canada Track (Language: French)

| | | |
|---|--|---|
| INTL A315* | Canada: Nation and Identity | 3 |
| Canada Elective Course Selection | | 9 |
| ANTH A416 | Arctic Archeology (3) | |
| ANTH A435 | Northwest Coast Cultures (3) | |
| ANTH A437 | Eskimo Adaptations (3) | |
| ANTH A439 | Athabaskan Adaptations (3) | |
| ENGL A305* | National Literatures in English (3) | |
| ENGL A371 | Narrative Nonfiction (<i>with approved content</i>) (3) | |
| FREN A432 | Studies in Literature and Culture (<i>with approved topic</i>) (3) | |
| GEOG/ HIST A345 | Across this Land: The Historical Geography of North America (3) | |
| GEOG A443 | Northwest Passage: The Changing Canadian North (3) | |
| THR A492* | Senior Seminar (<i>with approved topic</i>) (3) | |

Any course with the appropriate focus and approved by academic petition for the category. For example, a topics course that focuses on Canada. (3)

- A total of 120 credits is required for the degree, of which 42 credits must be upper division, and 46 credits earned to meet the requirements of the major as specified above.

Minor, International North Pacific Studies

Students majoring in another subject and wishing to minor in International North Pacific Studies must complete the following requirements:

- Complete the following courses: 9
 - INTL A315* Canada: Nation and Identity (3)
 - INTL/HIST/
PS A325* Northeast Asia in 21st Century (3)
 - HIST A330 Russia in East Asia (3)
- Complete 8 credits of a language appropriate to the Canada, Northeast Asia, or Russia track of the Bachelor of Arts in International Studies. 8
- Complete one elective course from either the Canada, Northeast Asia, or Russia tracks of the Bachelor of Arts in International Studies. 3
- A total of 20 credits is required for the minor.

Minor, Canadian Studies

Students majoring in another subject and wishing to minor in Canadian Studies must complete the following requirements:

- Complete the following course: 3
 - INTL A315* Canada: Nation and Identity
- Complete 8 credits of a language appropriate to the Canada track of the Bachelor of Arts in International Studies. 8
- Complete three elective courses from the Canada track of the Bachelor of Arts in International Studies. 9
- A total of 20 credits is required for the minor.

FACULTY

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JOURNALISM AND PUBLIC COMMUNICATIONS

Professional Studies Building (PSB), Room 203, (907) 786-4180
<http://jpc.uaa.alaska.edu>

The Department of Journalism and Public Communications (JPC) offers an undergraduate program leading to the Bachelor of Arts with concentrations in Journalism, Strategic Communications, Telecommunications and Film, Digital Graphics and Design, and Integrated Media.

The Department of Journalism and Public Communications is nationally accredited by the Accrediting Council on Education in Journalism and Mass Communications (ACEJMC). The department places great emphasis on preparing graduates for careers in professional communications and media industries.

Department courses examine the role of the media in society and explore contemporary social, ethical, and legal issues related to journalism, professional communications, and media industries. The program emphasizes broad scholarship in the liberal arts. This type of scholarship is essential for preparation in professional communications and media industries, which require journalists and communications practitioners to possess a wide range of knowledge.

Mission

The mission of the Department of Journalism and Public Communications is to prepare students for professional careers and graduate study and to give them a thorough understanding and appreciation of the vital role that free expression and mass communication play in a global society.

Through its research, creative activities, and community engagement, the department also strives to meet Alaska's communication needs. Our goal is to contribute to the development of the economic and social environment of the state, with an emphasis on the Southcentral region served by the University of Alaska Anchorage.

The department aims to foster in its students a strong resolve to make the flow of news and information more accurate, informative, complete, fair, and ethical. To accomplish this goal, the department seeks to teach students theory, skills, and ethical principles of journalism and professional communications that will endure as fundamentals in a world where the methods of conveying information are undergoing significant change.

Students graduating from this program will have developed and demonstrated:

- Expressive characteristics enabling them to visually realize their ideas and to create a body of work illustrating their creative analogical abilities.
- Conceptual characteristics enabling them to develop qualitative work that is consistent with their ideas, exhibits original concepts, illustrates growth, and articulates concepts in creative ways.
- Formal characteristics enabling them to illustrate a technical mastery of the use of materials, a grasp of composition and formal elements and an appreciation for risk-taking.
- Abilities to articulate ideas in relationship to orally based critical discourse in the classroom.

Honors in Journalism and Public Communications

Students majoring in Journalism and Public Communications are eligible to graduate with department honors if they satisfy all of the following requirements:

- Meet the requirements for a BA degree in Journalism and Public Communications;
- Maintain a grade point average of 3.50 in JPC courses; and
- Complete JPC A492, JPC Senior Seminar with grade of A or B.

Note: Department honors are awarded by the faculty in Journalism and Public Communications.

Bachelor of Arts, Journalism and Public Communications

Admission Requirements

Submit a Declared Major form for department approval. Students are accepted into JPC for a BA in Journalism, Strategic Communications, Telecommunications and Film, or Integrated Media.

Graduation Requirements

A. General University Requirements

Complete the General University Requirements for Baccalaureate degrees found in the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate degrees found at the beginning of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences Requirements for Bachelor of Arts degrees found at the beginning of this chapter. Note that 81 credits must be outside the major; 66 of those credits must be in the liberal arts as approved by JPC faculty (liberal arts courses are normally found in the College of Arts and Sciences); and 42 credits must be 300- and 400-level courses.

D. Major Requirements

Complete 126 credits for the degree: 45 credits must be JPC credits.

Matriculation in Department of Journalism and Public Communications

- Complete four Journalism and Public Communications core courses with a grade of C or better 12

| | |
|----------|--|
| JPC A201 | Reporting and Writing News (3) |
| JPC A202 | First Amendment and Media Ethics (3) |
| JPC A203 | Writing and Producing for Electronic Media (3) |
| JPC A204 | Information Gathering (3) |

Note: JPC A201 and JPC A204 should be taken in the same semester, followed by JPC A202 and JPC A203 the next semester. JPC A204 is the prerequisite for most 300- and 400-level courses.

- Complete one of the following JPC 200-level elective courses: 3

| | |
|----------|---------------------|
| JPC A211 | Visual Literacy (3) |
| JPC A212 | Copy Editing (3) |
| JPC A213 | Digital Imaging (3) |
- Complete one of the following JPC 300-level elective courses: 3

| | |
|----------|---|
| JPC A312 | History of Alaska Media (3) |
| JPC A313 | Movies and the First Amendment (3) |
| JPC A314 | Documentary Filmmakers and Filmmaking (3) |
- Complete one of the following JPC 400-level elective courses: 3

| | |
|----------|---|
| JPC A404 | Global Media and Communications Systems (3) |
| JPC A405 | Communications and Media Theories (3) |
| JPC A413 | Communications Law (3) |
- Complete JPC research course: 3

| | |
|----------|---------------------------------------|
| JPC A403 | Communications and Media Research (3) |
|----------|---------------------------------------|
- Complete 21 JPC elective credits to fulfill one of the following JPC concentration areas; one course (3 credits) may be taken in any JPC concentration area.

Journalism Concentration 21

- | | |
|----------|--------------------------------------|
| JPC A342 | Photojournalism (3) |
| JPC A343 | Radio News Reporting (3) |
| JPC A344 | Television News Reporting (3) |
| JPC A345 | Web Design (3) |
| JPC A346 | Magazine Content Creation (3) |
| JPC A442 | Multimedia Journalism (3) |
| JPC A443 | Enterprise Reporting (3) |
| JPC A444 | Specialty Reporting (3) |
| JPC A445 | Magazine Editing & Production I (3) |
| JPC A446 | Magazine Editing & Production II (3) |
| JPC A492 | JPC Senior Seminar (3) |

| | | |
|---|---|-----------|
| JPC A495 | JPC Practica and Internships (1-6) | |
| JPC A497 | Independent Study (1-6) | |
| Strategic Communications Concentration | | 21 |
| JPC A362 | Principles of Strategic Communications (3) | |
| JPC A363 | Research Methods for Strategic Communications (3) | |
| JPC A366 | Planning and Writing for Strategic Communications (3) | |
| JPC A368 | Commercial Photography (3) | |
| JPC A369 | Design for Publications (3) | |
| JPC A462 | Corporate Communications (3) | |
| JPC A463 | Crisis Communications (3) | |
| JPC A464 | Development Communications (3) | |
| JPC A465 | Strategic Communications Campaigns I (3) | |
| JPC A466 | Strategic Communications Campaigns II (3) | |
| JPC A492 | JPC Senior Seminar (3) | |
| JPC A495 | JPC Practica and Internships (1-6) | |
| JPC A497 | Independent Study (1-6) | |

| | | |
|--|---|-----------|
| Telecommunications & Film Concentration | | 21 |
| JPC A382 | Digital Audio Production (3) | |
| JPC A383 | TV Studio Production (3) | |
| JPC A384 | Digital Video Production (3) | |
| JPC A385 | Scriptwriting for Film and Television (3) | |
| JPC A482 | TV Post-Production (3) | |
| JPC A483 | Broadcast Graphics (3) | |
| JPC A484 | Documentary Film Production I (3) | |
| JPC A485 | Documentary Film Production II (3) | |
| JPC A486 | Independent Film Production I (3) | |
| JPC A487 | Independent Film Production II (3) | |
| JPC A492 | JPC Senior Seminar (3) | |
| JPC A495 | JPC Practica and Internships (1-6) | |
| JPC A497 | Independent Study (1-6) | |

Integrated Media Concentration **21**

This option prepares students for careers in a changing media world, which involves a blend of print, broadcast and online media. Students may combine courses in any JPC option areas to fulfill 21 elective credits in the Integrated Media concentration. The following three courses are required for the Integrated Media option:

| | |
|----------|---------------------------|
| JPC A213 | Digital Imaging (3) |
| JPC A345 | Web Design (3) |
| JPC A442 | Multimedia Journalism (3) |

Note: Only JPC juniors and seniors with a 3.25 GPA may enroll in JPC Practica and Internships. JPC practica require an approved academic plan and the approval of the appropriate JPC media advisor or UAA-based workplace supervisor. JPC internships require the approval of the director of JPC internships.

Minor, Journalism and Public Communications

For a JPC minor, students need six courses of which JPC A201 and JPC A203 are required. The remaining 12 credits may be taken from any JPC courses. Eighteen credits are required for the minor.

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LANGUAGES

Administration/Humanities Building (ADM), Room 287, (907) 786-4037
www.uaa.alaska.edu/languages

Studying languages prepares a student to live and work in an increasingly interdependent world in which contact with other cultures is frequent and the appreciation and respect for linguistic and cultural diversity is important. The Department of Languages offers a Bachelor of Arts degree, a minor in a single language, and courses that fulfill CAS and GER requirements.

The Bachelor of Arts in Languages affords students the option of concentrating on one emphasis language (Option I), or of studying an emphasis language in combination with a second language (Option II). These options and the student's selection of courses from outside the department to fulfill major requirements, reflect the diverse context in which students live and work, and recognize the inherent multidisciplinary nature of language study. This flexibility also allows students to select a program most suited to their educational and career goals.

The Department of Languages offers French, German, Japanese, Russian, and Spanish as emphasis languages, with additional lower division courses in American Sign Language (ASL), Chinese, Korean, and Latin. First-year courses begin building the foundations of language learning: listening, speaking, reading, and writing. Since language can only be understood within a cultural context, studying culture is included from the first semester. In courses beyond the first year, students expand and refine their language skills and further develop their cultural knowledge.

As an integral part of their education, the department recommends that all students majoring in Languages study abroad in a country of their target language(s). UAA offers a variety of opportunities for study abroad. For a full description of study abroad opportunities through UAA, students should refer to the International Study Abroad Coordinator in the Office of International Affairs. Students wishing to apply study abroad credit toward a Languages degree must petition to satisfy major and/or minor requirements with study abroad experience. The department may require post-program examinations. The department highly recommends that students discuss their study abroad plans with their academic advisor prior to participation.

Honors in Languages

The Department of Languages recognizes exceptional undergraduate students by awarding them departmental honors in Languages. To graduate with departmental honors, students must be declared Languages majors and meet the following requirements:

1. Meet the requirements for Graduation with Honors as listed in Chapter 7, Academic Standards and Regulations;
2. Satisfy all requirements for a BA degree in Languages;
3. Maintain an overall UAA GPA of 3.50 with a 3.85 in the major;
4. Notify their departmental advisor in writing at least two semesters prior to graduation of intent to graduate with departmental honors;
5. Receive an honors score (90 percent) (based upon criteria established by the department) on a comprehensive examination in the language(s) of focus; the comprehensive examination must be completed at least one semester prior to graduation.

Bachelor of Arts, Languages

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Academic Progress

No course in which a grade below C has been received will count toward the major or minor.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section.

D. Major Requirements

- Students working toward a degree in Languages may choose from two options:

Option I: Single Language

- Choose an emphasis language from French, German, Japanese, Russian, or Spanish.
- Complete one of the following four courses: 3

| | | |
|-----------|--|--|
| ENGL A311 | Advanced Composition (3) | |
| ENGL A435 | History of Criticism (3) | |
| LING A101 | The Nature of Language (3) | |
| LSSS A111 | Cultural Foundations of Human Behavior (3) | |
- Complete the following four courses in the emphasis language (16 credits):

| | | |
|------|------------------|---|
| A201 | Intermediate I* | 4 |
| A202 | Intermediate II* | 4 |
| A301 | Advanced I | 4 |
| A302 | Advanced II | 4 |

*Japanese courses have the same course number but different titles: JPN A201 Second Year Japanese I and JPN A202 Second Year Japanese II.

- Complete 12 credits of approved upper division electives in or related to the emphasis language or culture, at least 9 of which must be taught in the emphasis language (contact Language Program Coordinator for list of approved courses taught in English). 12
- Complete an additional 6 credits of emphasis language approved electives in or related to the emphasis language or culture, but which must be upper division if taught in the emphasis language (contact department for list of approved courses taught in English). 6

Option II: Dual Languages

- Choose an emphasis language from French, German, Japanese, Russian, or Spanish; and a second language from among those, ASL, or Chinese.
- Complete one of the following four courses: 3

| | | |
|-----------|--|--|
| ENGL A311 | Advanced Composition (3) | |
| ENGL A435 | History of Criticism (3) | |
| LING A101 | The Nature of Language (3) | |
| LSSS A111 | Cultural Foundations of Human Behavior (3) | |
- Complete the following four courses in the emphasis language (16 credits):

| | | |
|------|------------------|---|
| A201 | Intermediate I* | 4 |
| A202 | Intermediate II* | 4 |
| A301 | Advanced I | 4 |
| A302 | Advanced II | 4 |

*Chinese and Japanese courses have the same course number but different titles, respectively: CHIN A201 Second Year Chinese I and CHIN A202 Second Year Chinese II; JPN A201 Second Year Japanese I and JPN A202 Second Year Japanese II.

- Complete 9 credits of approved upper division electives in or related to the emphasis language or culture, at least 6 of which must be taught in the emphasis language (contact Language Program Coordinator for list of approved courses taught in English). 9
 - Complete 8 credits beyond A102 in the second language. 8
- Students must petition to substitute study abroad language courses for certain major requirements.
 - Students may not earn a major and a minor in the same language.
 - Students must take at least 6 upper division credits, in the respective emphasis language, in courses numbered higher than A302 physically in residence at UAA.
 - A total of 120 credits is required for the degree, of which 42 credits must be upper division.

Language Credit by Placement

An accepted, degree-seeking UAA student who has completed in residence one of the Department of Languages UAA catalog courses (A102-A301) with a grade of B or better is eligible to receive credit for the two immediately preceding courses, if any, up to a total of 8 credits not to exceed the level of A202. Language Credit by Placement is limited to one time per language. This policy does not apply to credit earned through Credit by Examination, the College Board Advanced Placement Examination Program, nor to special topics (-93), independent study (-97), the course A302, or Department of Languages literature or culture courses. In order to receive credit the student must complete the appropriate form in the Office of the Registrar and pay an administrative fee.

Minor, Languages

Students who wish to minor in languages must complete the following requirements: a total of 19 credits taught in the target language at or above the 200 level with at least 11 credits being upper division. Credits must be in one discipline chosen from the following languages:

French
German
Japanese
Russian
Spanish

FACULTY

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LIBERAL STUDIES

Social Sciences Building (SSB), Room 343, (907) 786-1707
<http://liberalstudies.uaa.alaska.edu>

The Bachelor of Liberal Studies (BLS) degree is an interdisciplinary program that provides both significant breadth across a variety of fields, meaningful depth in a single field, and the interconnections and integration among fields that allow a fuller comprehension of the modern world. It is intended for those students who prefer a broad liberal arts and sciences degree, rather than a Bachelor of Arts or Bachelor of Science

degree in a single discipline. This may include students with particularly wide or still uncertain personal or career interests, or those who intend to become elementary education teachers, for whom the program has been designed specifically to incorporate the relevant state of Alaska standards and those of the National Council for Accreditation of Teacher Education (NCATE). Students wishing a career as elementary teachers should plan on pursuing the post-baccalaureate program in elementary teacher preparation following graduation with a BLS.

Other students selecting the BLS may, with proper advising, wish to pursue professional graduate education in law or other fields. While with the proper discipline area concentration a BLS graduate may pursue graduate study in a particular discipline area, students who plan to attend graduate school in a specific area are generally advised to take a disciplinary major. Many of the courses comprising the BLS are also included as the arts and sciences content component of the Bachelor of Arts in Elementary Education, offered by the College of Education for those students desiring an undergraduate route to certification as an elementary teacher.

Bachelor of Liberal Studies

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. Major Requirements

Courses marked with an asterisk (*) fulfill UAA General Education Requirements. Courses in bold face are also included in the Bachelor of Arts in Elementary Education, offered by the College of Education. Students must complete the following requirements and meet with a BLS or CAS advisor prior to entering their junior year and file an approved program of study form with the department. Forms and approved disciplinary areas can be found at <http://liberalstudies.uaa.alaska.edu>, or by contacting the department at (907) 786-1707.

1. Communications and Writing Skills

| | | |
|------------|------------------------------------|---|
| COMM A111* | Fundamentals of Oral Communication | 3 |
| ENGL A111* | Methods of Written Communication | 3 |
| ENGL A214* | Persuasive Writing | 3 |

2. Liberal Studies Integrated Sciences (LSIS) Core

| | | |
|------------|---|---|
| LSIS A101* | Discoveries in Science | 1 |
| LSIS A102* | Origins: Earth-Solar System-Life | 5 |
| LSIS A201* | Life on Earth | 5 |
| LSIS A202* | Concepts and Processes: Natural Sciences | 5 |

3. Mathematical Skills

| | | |
|--|--|-----|
| MATH A107 or MATH A108 or MATH A109 or MATH A172 or MATH A200 or MATH A201 or MATH A272* | | 3-6 |
| STAT A252 | Elementary Statistics (3) | 3-4 |
| | or | |
| STAT A253* | Applied Statistics for the Sciences (4) | |

4. Liberal Studies Social Sciences (LSSS) Core

| | | |
|--------------|---|---|
| AKNS/PS A411 | Tribes, Nations and Peoples | 3 |
| LSSS A111 | Cultural Foundations of Human Behavior | 3 |

| | | |
|------------|--|---|
| PSY | Complete one course in psychology (recommend PSY A111* General Psychology or PSY A150* Lifespan Development) | 3 |
| ANTH A250* | The Rise of Civilization | 3 |
| LSSS A311 | People, Places, and Ecosystems | 3 |
| LSSS A312 | Individuals, Groups, and Institutions | 3 |

5. Liberal Studies Humanities Core

| | | |
|------------|---|-----|
| | Complete one course from GER fine arts list* | 3 |
| | Complete an approved Elective in studio art, performing art or creative writing (Must be different from course used for the fine arts General Education Requirement). | 3 |
| HIST A355 | Major Themes in US History | 3 |
| HUM A211* | Introduction to Humanities I | 3 |
| HUM A212* | Introduction to Humanities II | 3 |
| ENGL A202* | Masterpieces of World Literature II | 3 |
| | Complete a two semester sequence of a language, American Sign Language, or Alaska Native Studies Language course (same language both semesters)*. | 6-8 |
| | Literature Elective | 3 |
| | Complete an approved upper division literature elective. (Must be different from courses used for the humanities/fine arts General Education Requirements). | |

6. Liberal Studies Integrative Core

| | | |
|------------|--|---|
| LSIC/ | | |
| PHIL A231 | Truth, Beauty, and Goodness | 3 |
| LSIC A331 | Power, Authority, and Governance | 3 |
| LSIC A332 | Science, Technology, and Culture | 3 |
| LSIC A488A | Capstone Project I: Design and Research | 3 |
| LSIC A488B | Capstone Project II: Analysis and Presentation | 3 |
| LSIC A392 | Seminar in Liberal Studies | 1 |

7. Two Discipline Area Concentration

- 18
- Twelve credits in one discipline, of which 9 credits must be at the upper division level (see approved list of disciplines at <http://liberalstudies.uaa.alaska.edu> and);
 - Nine additional credits in a second discipline of which 3 credits must be at the upper division level (see approved list of disciplines at <http://liberalstudies.uaa.alaska.edu>). For example, 12 credits in Political Science and 9 credits in English.

8. **Electives** 7
9. A total of 120-124 credits is required for the degree, of which 42 credits must be upper division.

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MATHEMATICS

Social Sciences Building (SSB), Room 154, (907) 786-1744/786-4824
www.math.uaa.alaska.edu

The Department of Mathematical Sciences offers a Bachelor of Science degree and a Bachelor of Arts degree in Mathematics. Each degree has two options: the Traditional Option and the Secondary Teaching Preparation Option.

The Traditional Option in the baccalaureate degree programs in Mathematics offer an excellent foundation for any career involving theoretical or applied mathematics. Well-trained mathematicians are in demand in many sectors of society including business, finance, education, computing, and government. The Traditional Option also prepares a student for graduate study in the mathematical sciences. Both the Traditional Option (with appropriately chosen electives) and the Secondary Teaching Preparation Option satisfy NCATE standards, and prepare a student to teach mathematics at the high school level.

In addition, the Department of Mathematical Sciences offers courses and programs for those students who wish to:

- Obtain an Associate of Applied Science degree
- Obtain an Associate of Arts degree
- Obtain a variety of certificates
- Study mathematics for use in another discipline
- Improve job-related mathematics skills
- Study mathematics for self-interest

Honors in Mathematics

Students majoring in Mathematics are eligible to graduate with departmental honors if they satisfy the following requirements:

- Meet the requirements for Graduation with Honors as listed in Chapter 7, Academic Standards and Regulations.
- Meet the requirements for a BA/BS degree in Mathematics.
- Earn a grade point average of 3.50 or above in the major requirements.
- Complete a minimum of 12 upper division credits required for the major in residence.

Bachelor of Arts, Mathematics

Admission Requirements

Complete the Baccalaureate Degree Programs Admission Requirements listed in Chapter 7, Academic Standards and Regulations.

Graduation Requirements

Students must complete the following graduation requirements.

A. General University Requirements

Complete the General University Requirements for Baccalaureate degrees listed at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section.

D. Major Requirements

Students pursuing a Bachelor of Arts degree in Mathematics may choose from two options:

- Complete the following core courses (28 Credits)

| | | |
|-----------|--|---|
| CS A109 | Computer Programming (Languages Vary) (3) | 3 |
| | or | |
| CS A110 | Java Programming (3) | |
| | or | |
| CS A111 | Visual Basic.Net Programming (3) | |
| | or | |
| CS A201 | Programming Concepts I (3) | |
| MATH A200 | Calculus I | 4 |
| MATH A201 | Calculus II | 4 |
| MATH A202 | Calculus III | 4 |
| MATH A215 | Introduction to Mathematical Proofs | 3 |

| | | |
|-----------|--------------------------------|---|
| MATH A303 | Introduction to Modern Algebra | 3 |
| MATH A314 | Linear Algebra | 3 |
| STAT A307 | Probability and Statistics | 4 |

- Complete one of the following options:

Traditional Option (21 Credits)

| | | |
|-----------|--------------------------------------|---|
| MATH A302 | Ordinary Differential Equations | 3 |
| MATH A321 | Analysis of Several Variables | 3 |
| MATH A324 | Advanced Calculus | 3 |
| MATH A410 | Introduction to Complex Analysis (3) | 3 |

or

| | | |
|-----------|------------------------------------|--|
| MATH A422 | Partial Differential Equations (3) | |
|-----------|------------------------------------|--|

- Complete three additional courses from the following list: MATH A305, MATH A306, MATH A371, MATH A407, MATH A408, MATH A410, MATH A420, MATH A422, MATH A426, MATH A490A*, MATH A490B*, STAT A308, STAT A402, STAT A403, STAT A404, STAT A405, STAT A407, STAT A408.

**A maximum of 6 credits of MATH A490A and/or MATH A490B may be applied to the degree requirements.*

- All Mathematics majors must take a standardized test of knowledge of mathematics approved by the Mathematics faculty for the purpose of evaluating program effectiveness. There is no minimum score required for graduation. This test will normally be taken during the senior year.
- A total of 120 credits is required for the degree, of which 42 credits must be upper division.

Secondary Teaching Preparation Option (15 Credits)

The Secondary Teaching Preparation Option is intended for students interested in pursuing Secondary Teacher Certification to teach mathematics at the middle school and high school level. To obtain Secondary Teacher Certification, an approved Teacher Preparation Program must be successfully completed through the College of Education. Students choosing the Secondary Teacher Preparation Option should obtain advising from an academic advisor in the College of Education no later than the beginning of the junior year.

| | | |
|-----------|----------------------------|---|
| MATH A305 | Introduction to Geometries | 3 |
| MATH A306 | Discrete Methods | 3 |
| MATH A420 | History of Mathematics | 3 |

- Complete two additional courses from the following list: MATH A302, MATH A321, MATH A324, MATH A371, MATH A407, MATH A408, MATH A410, MATH A422, MATH A426, , MATH A490A*, MATH A490B*, STAT A308, STAT A402, STAT A403, STAT A404, STAT A405, STAT A407, STAT A408.

**A maximum of 6 credits of MATH A490A and/or MATH A490B may be applied to the degree requirements.*

- All Mathematics majors must take a standardized test of knowledge of mathematics approved by the Mathematics faculty for the purpose of evaluating program effectiveness. There is no minimum score required for graduation. This test will normally be taken during the senior year.
- A total of 120 credits is required for the degree, of which 42 credits must be upper division.

Bachelor of Science, Mathematics

Admission Requirements

Complete the Baccalaureate Degree Programs Admission Requirements listed at Languages Vary the beginning of this chapter.

Graduation Requirements

Students must complete the following graduation requirements.

A. General University Requirements

Complete the General University Requirements for Baccalaureate degrees listed at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed in Chapter 7, Academic Standards and Regulations.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section.

D. Major Requirements

Students pursuing a Bachelor of Science in Mathematics may choose from two options:

- Complete the following core courses (28 Credits)

| | | |
|-----------|---|---|
| CS A109 | Computer Programming (Languages Vary) (3) | 3 |
| | or | |
| CS A110 | Java Programming (3) | |
| | or | |
| CS A111 | Visual Basic .Net Programming (3) | |
| | or | |
| CS A201 | Programming Concepts I (3) | |
| MATH A200 | Calculus I | 4 |
| MATH A201 | Calculus II | 4 |
| MATH A202 | Calculus III | 4 |
| MATH A215 | Introduction to Mathematical Proofs | 3 |
| MATH A303 | Introduction to Modern Algebra | 3 |
| MATH A314 | Linear Algebra | 3 |
| STAT A307 | Probability and Statistics | 4 |

- Complete one of the following options:

Traditional Option (21 Credits)

| | | |
|-----------|--------------------------------------|---|
| MATH A302 | Ordinary Differential Equations | 3 |
| MATH A321 | Analysis of Several Variables | 3 |
| MATH A324 | Advanced Calculus | 3 |
| MATH A410 | Introduction to Complex Analysis (3) | 3 |

- or
- | | | |
|-----------|------------------------------------|---|
| MATH A422 | Partial Differential Equations (3) | 3 |
|-----------|------------------------------------|---|
- Complete three additional courses from the following list: MATH A305, MATH A306, MATH A371, MATH A407, MATH A408, MATH A410, MATH A420, MATH A422, MATH A426, MATH A490A*, MATH A490B*, STAT A308, STAT A402, STAT A403, STAT A404, STAT A405, STAT A407, STAT A408,

*A maximum of 6 credits of MATH A490A and/or MATH A490B may be applied to the degree requirements.

- All Mathematics majors must take a standardized test of knowledge of mathematics approved by the Mathematics faculty for the purpose of evaluating program effectiveness. There is no minimum score required for graduation. This test will normally be taken during the senior year.
- A total of 120 credits is required for the degree, of which 42 credits must be upper division.

Secondary Teaching Preparation Option (15 Credits)

The Secondary Teaching Preparation Option is intended for students interested in pursuing Secondary Teacher Certification to teach mathematics at the middle school and high school level. To obtain Secondary Teacher Certification, an approved Teacher Preparation Program must be successfully completed through the College of Education. Students choosing the Secondary Teaching Preparation Option should obtain advising from an academic advisor in the College of Education no later than the beginning of the junior year.

| | | |
|-----------|----------------------------|---|
| MATH A305 | Introduction to Geometries | 3 |
|-----------|----------------------------|---|

| | | |
|-----------|------------------------|---|
| MATH A306 | Discrete Methods | 3 |
| MATH A420 | History of Mathematics | 3 |

- Complete two additional courses from the following list: MATH A302, MATH A321, MATH A324, MATH A371, MATH A407, MATH A408, MATH A410, MATH A422, MATH A426, MATH A490A*, MATH A490B*, STAT A308, STAT A402, STAT A403, STAT A404, STAT A405, STAT A407, STAT A408.

*A maximum of 6 credits of MATH A490A and/or MATH A490B may be applied to the degree requirements.

- All Mathematics majors must take a standardized test of knowledge of mathematics approved by the Mathematics faculty for the purpose of evaluating program effectiveness. There is no minimum score required for graduation. This test will normally be taken during the senior year.
- A total of 120 credits is required for the degree, of which 42 credits must be upper division.

Minor, Mathematics

Students majoring in another subject who wish to minor in Mathematics must complete the following requirements. A total of 18 credits is required for the minor, 6 of which must be approved upper division Mathematics credits.

| | | |
|-----------|--|---|
| MATH A200 | Calculus I | 4 |
| MATH A201 | Calculus II | 4 |
| MATH A202 | Calculus III | 4 |
| | Approved upper division Mathematics electives* | 6 |

*A maximum of 6 credits of MATH A490A and/or MATH A490B may be applied to the degree requirements.

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MUSIC

Fine Arts Building (ARTS), Room 302, (907) 786-1595
<http://music.uaa.alaska.edu>

The Department of Music is dedicated to providing leadership in the musical arts for the state of Alaska. This is accomplished through teaching, performance, recordings, composition, publication, community outreach, and other creative and service-oriented endeavors related to the field of music. At the institutional level, the Department of Music, as a unit of the College of Arts and Sciences, provides a vital liberal arts link for the University of Alaska Anchorage.

The Department of Music exerts intellectual, pedagogic, and creative leadership at the college, pre-college, and community levels. Its music degree programs foster excellence in the preparation of music students for graduate school, teacher training, or other careers in music. Music faculty and programs also serve as an important community resource in the training of pre-college talent. In addition, the Department seeks to serve the lifelong learning component of the university mission in that

it supports courses needed for professional development and offers the community access to opportunities for continuing education.

The Department of Music offers three degree programs: Bachelor of Arts, Music; Bachelor of Music, Performance; and Bachelor of Music, Music Education Emphasis. A minor in Music is also available.

The Bachelor of Arts, Music is a curriculum planned for those desiring a broad liberal arts education with a concentration in music. Students pursuing this degree sample courses of their choosing in each of the major academic areas while still having time to strengthen understanding and performance in their chosen musical area.

The Bachelor of Music, Performance is a professional music degree. Students focus on the development of skills, concepts, and sensitivities essential for success as a performing musician. Students work to achieve a high level of technical competence in their performing area while gaining a broad knowledge of music theory, history and literature.

The Bachelor of Music, Music Education Emphasis degree is a four-year program that provides initial training for a career in teaching music. This professional music degree is followed by a one-year Master of Arts in Teaching program, which completes the requirements for the initial teaching certificate in music K-12. Contact the College of Education for more information: <http://ed.uaa.alaska.edu/mat>.

Honors in Music

The Department of Music recognizes students who demonstrate exceptional promise in their discipline by awarding them departmental honors in Music upon graduation. To graduate with honors, the student must:

1. Be a declared Music major.
2. Meet all requirements for the Bachelor of Arts, Music; the Bachelor of Music, Performance; or the Bachelor of Music, Music Education Emphasis degree.
3. Maintain a cumulative grade point average of 3.50 or higher in all Music courses applicable to the degree.
4. Meet the requirements for Graduation with Honors listed in Chapter 7, Academic Standards and Regulations. These include:
 - a. A cumulative grade point average of 3.50 or higher in all college work attempted at both UAA and at all other accredited institutions attended and for all courses used to fulfill the degree program.
 - b. Completion of at least 30 academic credits at this institution.
5. Complete MUS A462, which includes a senior recital, with a grade of B or above.

Note: Bachelor of Arts Music majors may, upon successful completion of MUS A262 with a grade of A, offer an honors performance for faculty adjudicators selected by the department chair and the candidate.

6. Receive an honors score (based on criteria established by the department) on a comprehensive examination for majors.

Bachelor of Arts, Music

Bachelor of Music, Performance

Bachelor of Music, Music Education Emphasis

Admission Requirements: All Majors

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations. Students who declare a Music major and who qualify for admission to baccalaureate study are given pre-major status. Declaring a major in Music assumes evidence of musicianship and performance ability. To demonstrate music skills, all incoming freshmen and transfer students are required to complete an audition/performance examination and music theory placement examination prior to their first semester. This assists faculty in determining each student's readiness for entry into juried private

lessons, ensembles, and academic music classes. Students judged not ready for juried private lessons will be required to complete non-juried private lessons to build performance skills. To develop prerequisite understanding of music theory, those students not ready for theory and sightsinging/eartraining courses will be required to complete MUS A111 Fundamentals of Music. Upon completion of the performance evaluation, advisors will assist students in planning a first year of study best suited to their needs.

Academic Progress: All Majors

Upon successful completion of one semester of juried private lessons (MUS A161), students file a Change of Degree Form to move from pre-major to major status. At the end of the sophomore year, all music majors must demonstrate a satisfactory level of proficiency of performance on their applied instrument in order to advance to upper division courses. A student may elect to continue private instruction at the 200 level in attempting to pass requirements for admission to upper division study. Students must also have completed a music technical training workshop and must have demonstrated proficiency in all aspects of recital technical support.

MUS A154D Functional Piano IV, and the piano proficiency examination by jury must be passed prior to completion of 60 credits in the program. Music majors may not enroll in certain upper division music courses until this jury examination is passed. See Music degree listings for specific requirements.

Graduation Requirements: All Majors

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

Note: Total credits for graduation may increase unless students select at least 3 credits of upper division courses in fulfillment of GER/CAS requirements.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences Requirements for either a BA or BM, Performance degree, listed at the beginning of the CAS section. (There are no additional requirements for the BM, Music Education Emphasis degree).

D. Major Requirements: All Majors

1. Complete the following required courses:

| | | |
|-----------|-----------------------------------|---|
| MUS A131 | Music Theory I | 3 |
| MUS A132 | Music Theory II | 3 |
| MUS A133 | Sightsinging and Ear Training I | 2 |
| MUS A134 | Sightsinging and Ear Training II | 2 |
| MUS A154D | Functional Piano IV | 1 |
| MUS A221 | History of Music I | 3 |
| MUS A222 | History of Music II | 3 |
| MUS A231 | Music Theory III | 3 |
| MUS A232 | Music Theory IV | 3 |
| MUS A233 | Sightsinging and Ear Training III | 2 |
| MUS A234 | Sightsinging and Ear Training IV | 2 |
| MUS A280 | Basic Conducting | 2 |
| MUS A331 | Form and Analysis | 3 |
2. All Music majors enrolled in juried private music lessons must, during each semester of enrollment:
 - a) Perform in at least one student recital;
 - b) Stand for jury finals;
 - c) Participate in an appropriate ensemble. See the ensemble requirements specific to each degree below;

- d) Attend department-approved recitals and concerts which provide a variety of musical experiences and expand the curriculum. A minimum attendance requirement is set by the department each semester; failure to meet this number will lower by one letter the grade assigned for private lessons.
3. Music majors may not enroll in certain upper division academic courses (MUS A331, MUS A422-A424, or MUS A431-A432, for example) or in upper division private lessons (MUS A361) until they have passed the Piano Proficiency examination by jury.

E. Additional Major Requirements: Bachelor of Arts, Music

1. Private lessons on your major instrument: 4
MUS A161, MUS A162; MUS A261, MUS A262
2. Ensemble 10
Five semesters of ensembles are required.

Choose the class appropriate to your major instrument:

Voice Majors:

MUS A301B University Singers (2)

Piano Majors:

MUS A302B Chamber Music and Accompanying (2)

Wind Majors:

MUS A303B University Wind Ensemble (2)

Percussion Majors:

MUS A303B University Wind Ensemble (2)

String Majors:

MUS A307B University Sinfonia (2)

Guitar Majors:

MUS A409B University Guitar Ensemble (2)

3. Master Class
Four semesters of Master Class are required.
Choose the class appropriate to your major instrument:
- Wind and String Majors:**
MUS A466 String and Wind Master Class (1)
- Voice, Piano and Guitar Majors:**
MUS A467 Piano Master Class (2)
or
MUS A468 Voice Master Class (2)
or
MUS A469 Guitar Master Class (2)
- Percussion Majors:**
MUS A408B University Percussion Ensemble (2)
4. Sixty-seven credits must be completed outside of Music.
5. A total of 120 credits is required for the degree, of which 42 credits must be upper division.

F. Additional Major Requirements: Bachelor of Music, Performance

1. Private lessons on your major instrument: 16
MUS A161 - A162
MUS A261 - A262
MUS A361 - A362
MUS A461 - A462
2. Ensemble 16

Choose the class appropriate to your major instrument:

Voice Majors:

MUS A301B University Singers (2)

Wind Majors:

MUS A303B University Wind Ensemble (2)

Percussion Majors:

MUS A303B University Wind Ensemble (2)

String Majors:

MUS A307B University Sinfonia (2)

Piano Majors:

MUS A302B Chamber Music and Accompanying (2) *to total 12*
and

MUS A301B University Singers (2) *to total 4*
or

MUS A303B University Wind Ensemble (2)
or

MUS A307B University Sinfonia (2)

Guitar Majors:

MUS A409B University Guitar Ensemble (2) *to total 12*
and

MUS A301B University Singers (2) *to total 4*
or

MUS A303B University Wind Ensemble (2)
or

MUS A307B University Sinfonia (2)

3. Chamber Ensemble 2-4
Wind, Voice and String majors only must meet a two-semester small ensemble requirement. This requirement is fulfilled by performing on your major instrument in one of these courses:
MUS A302, MUS A313, MUS A365, MUS A407, MUS A408 or MUS A409.

Note: Credits completed will vary from 2 to 4, depending upon which courses are selected.

4. Master Class
Eight semesters of Master Class are required.
Choose the class appropriate to your major instrument:

Wind and String Majors:

MUS A466 String and Wind Master Class (1)

Voice, Piano and Guitar Majors:

MUS A467 Piano Master Class (2)

or

MUS A468 Voice Master Class (2)

or

MUS A469 Guitar Master Class (2)

Percussion Majors:

MUS A408B University Percussion Ensemble (2)

5. Conducting: 2
MUS A381 Choral Conducting (2)
or
MUS A382 Instrumental Conducting (2)
6. Upper division Elective Credits: 12
Select from these 3-credit courses:
MUS A421 Music in the Baroque Period (3)
MUS A422 Music in the Classical Period (3)
MUS A423 Music in the Romantic Period (3)
MUS A424 Music in the 20th Century (3)
MUS A431 Counterpoint (3)
MUS A432 Orchestration (3)
7. Students seeking a Bachelor of Music, Performance degree must complete a half recital their junior year and a full recital their senior year. Students must demonstrate in these recitals the ability to perform a program of artistic merit satisfactorily in public.
8. It is required that students select any two courses 8
(8 credits) of oral language to satisfy the CAS, BM Performance degree.
9. A total of 122-130 credits is required for the degree, of which 42 credits must be upper division.

G. Additional Major Requirements: Bachelor of Music, Music Education Emphasis

1. Private lessons on your major instrument: 16
 MUS A161 - A162
 MUS A261 - A262
 MUS A361 - A362
 MUS A461 - A462
2. Ensemble 16
 Choose the class appropriate to your major instrument:
Voice Majors:
 MUS A301B University Singers (2)
Wind Majors:
 MUS A303B University Wind Ensemble (2)
Percussion Majors:
 MUS A303B University Wind Ensemble (2)
String Majors:
 MUS A307B University Sinfonia (2)
Piano Majors:
 MUS A302B Chamber Music and Accompanying (2) *to total 12 and*
 MUS A301B University Singers (2) *to total 4 or*
 MUS A303B University Wind Ensemble (2) *or*
 MUS A307B University Sinfonia (2)
Guitar Majors:
 MUS A409B University Guitar Ensemble (2) *to total 12 and*
 MUS A301B University Singers (2) *to total 4 or*
 MUS A303B University Wind Ensemble (2) *or*
 MUS A307B University Sinfonia (2)
3. Chamber Ensemble 2-4
 Wind, Voice and String majors only must meet a two-semester, small ensemble requirement. This requirement is fulfilled by performing on your major instrument in one of these courses:
 MUS A302 Chamber Music and Accompanying (2)
 MUS A313 Opera Workshop (2)
 MUS A365 Chamber Ensemble (1)
 MUS A407 Jazz Combo (2)
 MUS A408B University Percussion Ensemble (2)
 MUS A409B University Guitar Ensemble (2)
Note: Credits completed will vary from 2 to 4, depending upon which courses are selected.
4. Master Class 8
 Four or eight semesters of Master Class are required.
 Choose the class appropriate to your major instrument:
Wind and String Majors:
 MUS A466 String and Wind Master Class (1)
Voice, Piano and Guitar Majors:
 MUS A467 Piano Master Class (2)
 MUS A468 Voice Master Class (2)
 MUS A469 Guitar Master Class (2)
Percussion Majors:
 MUS A408B University Percussion Ensemble (2)
5. Conducting 2
 MUS A381 Choral Conducting (2)
 or
 MUS A382 Instrumental Conducting (2)
6. Methods and Techniques 12
 MUS A371 Brass Methods and Techniques (2)

- | | | |
|----------|---|--|
| MUS A372 | Woodwind Methods and Techniques (2) | |
| MUS A373 | String Methods and Techniques (2) | |
| MUS A374 | Voice Methods and Techniques (2) | |
| MUS A375 | Percussion Methods and Techniques (2) | |
| MUS A376 | Elementary Music Methods and Techniques (2) | |
7. Music History Elective (select from): 3
 MUS A421 Music in the Baroque Period (3)
 MUS A422 Music in the Classical Period (3)
 MUS A423 Music in the Romantic Period (3)
 MUS A424 Music in the 20th Century (3)
 8. Orchestration 3
 MUS A432 Orchestration
 9. Students seeking a Bachelor of Music, Music Education Emphasis degree must complete a half recital during their senior year. Students must demonstrate in this recital the ability to satisfactorily perform a program of artistic merit in public.
 10. It is recommended that students select HIST A341 as a GER social science course.
 11. A total of 128-130 credits is required for the degree, of which 42 credits must be upper division.
 12. Students seeking certification in Music K-12 must complete a one-year, Master of Arts in Teaching (MAT) program. Admission to the program is limited.
 13. UAA's graduate application for admission into the MAT program must be completed either by March 1 for admission to the program the following summer or by October 1 for admission to the program the following spring.
 14. Students seeking music certification must have completed all requirements for the Bachelor of Music, Music Education Emphasis degree with a 3.00 GPA or better for admission to the MAT program.
 15. Students must take the PRAXIS I and the PRAXIS II in music for admission to the MAT program.
 16. Students seeking certification should contact the College of Education for an application packet and a detailed description of the MAT program.

Minor, Music

Students majoring in another subject who wish to minor in music must complete the following requirements. Nineteen credits are required for the minor, 8 of which must be upper division.

- | | | | |
|----|---|------------------------------------|-----|
| 1. | MUS A111 | Fundamentals of Music (3) | 6 |
| | | or | |
| | MUS A131 | Music Theory I (3) | |
| | | or | |
| | MUS A132 | Music Theory II (3) | |
| 2. | MUS A121 | Music Appreciation (3) | 3 |
| | | or | |
| | MUS A221 | History of Music I (3) | |
| | | or | |
| | MUS A222 | History of Music II (3) | |
| 3. | Private Lessons | | 2-4 |
| | MUS A161-A162 | (1-2) | |
| | To complete this requirement, students must successfully pass two jury exams, one at the end of each semester of study. | | |
| 4. | Master Class | | 2/4 |
| | Two semesters of master class are required; credits vary. | | |
| | Choose the class appropriate to your major instrument: | | |
| | MUS A408B | University Percussion Ensemble (2) | |
| | MUS A466 | String and Wind Master Class (1) | |
| | MUS A467 | Piano Master Class (2) | |
| | MUS A468 | Voice Master Class (2) | |
| | MUS A469 | Guitar Master Class (2) | |

5. Ensemble

4/6

Choose the ensemble appropriate to your major instrument:

| | |
|-----------|------------------------------------|
| MUS A301B | University Singers (2) |
| MUS A302B | Chamber Music and Accompanying (2) |
| MUS A303B | University Wind Ensemble (2) |
| MUS A307B | University Sinfonia (2) |
| MUS A409B | University Guitar Ensemble (2) |

FACULTY

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NATURAL SCIENCES

ConocoPhillips Integrated Sciences Building (CPSB), Room 101P,

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The undergraduate program in Natural Sciences is founded on a curriculum that emphasizes the interrelationships among the sciences. A program of study in the Natural Sciences requires that students select an option within the degree and complete all courses required within the option, as well as sufficient science elective courses to meet minimum unit requirements for graduation.

Students accepted into this flexible degree program select one of three options: the General Sciences Option is designed for students who are interested in understanding the interrelationships among various scientific fields, or in teaching science at the secondary level. The Pre-Health Professions Option is designed to meet the admission requirements of specific professional schools in medicine, dentistry, and veterinary medicine. The Environmental Sciences Option is designed to prepare students for graduate school or for employment in the private or public sector.

The Natural Sciences program is administered by the Department of Biological Sciences. Upon acceptance to the major the student will be assigned an academic advisor from the Department of Biological Sciences in accordance with the student's declared option, and students are strongly encouraged to consult with their academic advisors to determine which electives best suit their career requirements.

**Bachelor of Science,
Natural Sciences****Admission Requirements**

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations. Declare the major (see Major Requirements) and select one of 3 options: General Sciences, Pre-Health Professions or Environmental Sciences.

Academic Progress

To graduate with a BS in Natural Sciences, the student must complete all courses covered under Major Requirements for a BS in Natural Sciences with a grade of C or better. All prerequisites for courses used to meet the Natural Sciences degree requirements must be completed with a grade of C or better. Students who audit a course intended to meet the Natural Sciences degree requirements or who are unable to earn a grade of C or better in the course may repeat the course. Students repeating a course in the Department of Biological Sciences are required to complete all components of that course during the semester in which the course is retaken. When repeating a course with a lecture and laboratory component, both components must be repeated.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for all Baccalaureate Degrees located at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees (GERs) listed at the beginning of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences (CAS) Requirements listed at the beginning of the CAS section. It is recommended that MATH A200 or MATH A272, STAT A253 or STAT A307, and the computer programming requirements be completed in the first two years of study.

D. Major Requirements

- To declare the Bachelor of Science in Natural Sciences as their major, students must meet with an advisor and then apply to be accepted into the major. To schedule your advising session, contact the Department of Biological Sciences. At the advising session students are required to:
 - choose one of the three options and
 - file a preliminary program of study with the Department of Biological Sciences.
- It is strongly recommended that any changes to the preliminary program be reviewed by an advisor to ensure that the final program of study will meet all requirements for graduation.
- Students must submit a final Program of Study-Natural Sciences Degree form signed by their advisor to both the Office of the Registrar and the Department of Biological Sciences during the semester prior to the semester in which they plan to graduate. All courses listed in the Program of Study-Natural Sciences Degree form must be approved by the formal advisor before submitting the form to the Office of the Registrar and the Department of Biological Sciences.
- No more than 6 credits may come from courses designated as A495, A499 and A498 combined, with no more than 2 credits from A495.
- No more than 4 credits may be A492, with no more than 2 from the same discipline.
- Courses not listed as approved for the Natural Sciences degree may be considered by petition, which should be signed by an advisor.
- A total of 120-124 credits is required for the degree, of which 42 credits must be upper division.

Note 1: It is suggested that the required science sequences for any option be completed in the first two years of study.

Note 2: Students are encouraged to pay careful attention to prerequisite requirements when designing their program of study.

Note 3: Some courses meet more than one of the requirements (GER, CAS, Major). Consult the beginning of this chapter for information about GERs and the beginning of the CAS section for information about CAS requirements.

Environmental Sciences Option (80 credits)

- Complete the following required courses (30 credits):

| | | |
|-------------|--|---|
| BIOL A115/L | Fundamentals of Biology I with Laboratory | 4 |
| BIOL A116/L | Fundamentals of Biology II with Laboratory | 4 |
| CHEM A105 | General Chemistry I | 3 |
| CHEM A105L | General Chemistry I Laboratory | 1 |
| CHEM A106 | General Chemistry II | 3 |
| CHEM A106L | General Chemistry II Laboratory | 1 |
| GEOL A111/L | Physical Geology with Laboratory | 4 |

- | | | | | | |
|-------------|---|---|--|--|--|
| GEOL A221/L | Historical Geology with Laboratory | 4 | | | |
| ENVI A211 | Environmental Science: Systems and Processes | 3 | | | |
| ENVI A212 | Living on Earth: People and the Environment | 3 | | | |
| 2. | Complete an additional 50 credits of degree electives from the approved course lists for the Environmental Sciences Option. | | | | |
| a. | A minimum of 32 credits must be upper division. | | | | |
| b. | A minimum of 20 credits must come from the following Natural and Physical Sciences Course List for the Environmental Sciences Option: | 20 | | | |
| | ASTR/ | | | | |
| | BIOL A365 | Astrobiology (<i>integrative capstone</i>) (3) | | | |
| | BIOL/ | | | | |
| | GEOL A178 | Fundamentals of Oceanography (3) | | | |
| | BIOL/ | | | | |
| | GEOL A179 | Fundamentals of Oceanography Laboratory (1) | | | |
| | BIOL/ | | | | |
| | CPLX A200 | Introduction to Complexity (3) | | | |
| | BIOL A242 | Fundamentals of Cell Biology (4) | | | |
| | BIOL A252 | Principles of Genetics (4) | | | |
| | BIOL A271 | Principles of Ecology (4) | | | |
| | BIOL A308 | Principles of Evolution (3) | | | |
| | BIOL A309 | Biogeography (3) | | | |
| | BIOL A310 | Principles of Physiology (4) | | | |
| | BIOL A316 | Introduction to Plant Physiology (3) | | | |
| | BIOL A331 | Systematic Botany with Laboratory (4) | | | |
| | BIOL A333 | Biology of Non-Vascular Plants (4) | | | |
| | BIOL A334 | Biology of Vascular Plants (4) | | | |
| | BIOL A340 | General Microbiology (5) | | | |
| | BIOL A373 | Conservation Biology (3) | | | |
| | BIOL A378 | Marine Biology (<i>integrative capstone</i>) (3) | | | |
| | BIOL A403 | Microtechnique (4) | | | |
| | BIOL A415 | Comparative Animal Physiology (3) | | | |
| | BIOL A423 | Ichthyology (4) | | | |
| | BIOL A425 | Mammalogy (3) | | | |
| | BIOL A426 | Ornithology (4) | | | |
| | BIOL A427 | Invertebrate Zoology (4) | | | |
| | BIOL A430 | Marine Mammal Biology (4) | | | |
| | BIOL A441 | Animal Behavior (4) | | | |
| | BIOL A445 | Plant-Herbivore Ecology (4) | | | |
| | BIOL A450 | Microbial Ecology (3) | | | |
| | BIOL A451 | Applied Microbiology (3) | | | |
| | BIOL/CHEM/ | | | | |
| | PHYS A456 | Nonlinear Dynamics and Chaos (<i>integrative capstone</i>) (3) | | | |
| | BIOL A477 | Tundra and Taiga Ecosystems (3) | | | |
| | BIOL A478 | Biological Oceanography (4) | | | |
| | BIOL A479 | Physiological Plant Ecology (3) | | | |
| | BIOL A487 | Comparative Anatomy of Vertebrates (4) | | | |
| | BIOL A489 | Population Genetics and Evolutionary Processes (<i>integrative capstone</i>) (3) | | | |
| | BIOL A490 | Selected Lecture Topics in Biology (1-3) | | | |
| | BIOL A490L | Selected Laboratory Topics in Biology (1-3) | | | |
| | BIOL A492 | Undergraduate Seminar (1) | | | |
| | BIOL A495A | Internship in the Biological Sciences (3) | | | |
| | BIOL A498 | Individual Research (1-6) | | | |
| | BIOL A499 | Senior Thesis (3) | | | |
| | CHEM A212 | Quantitative Analysis (5) | | | |
| | CHEM A253 | Principles of Inorganic Chemistry (3) | | | |
| | CHEM A311 | Physical Chemistry: A Biological Orientation (3) | | | |
| | CHEM A321 | Organic Chemistry I (3) | | | |
| | CHEM A322 | Organic Chemistry II (3) | | | |
| | CHEM A323L | Organic Chemistry Laboratory (2) | | | |
| | CHEM A331 | Physical Chemistry I (3) | | | |
| | CHEM A332 | Physical Chemistry II (3) | | | |
| | CHEM A333L | Physical Chemistry Lab (2) | | | |
| | CHEM A434 | Instrumental Methods (4) | | | |
| | CHEM A441 | Principles of Biochemistry I (<i>integrative capstone</i>) (3) | | | |
| | CHEM A442 | Principles of Biochemistry II (3) | | | |
| | CHEM A443 | Biochemistry Laboratory (2) | | | |
| | CHEM A450 | Environmental Chemistry (3) | | | |
| | CHEM A453 | Advanced Inorganic Chemistry (5) | | | |
| | CHEM A460 | Chemical Ecotoxicology (3) | | | |
| | CHEM A492 | Undergraduate Seminar (1) | | | |
| | CHEM A498 | Individual Research (3) | | | |
| | GEOL A115 | Environmental Geology (3) | | | |
| | GEOL A115L | Environmental Geology Laboratory (1) | | | |
| | GEOL A190 | Introductory Topics in Geology (1-3) | | | |
| | GEOL A320 | Volcanology (3) | | | |
| | GEOL A321 | Mineralogy (4) | | | |
| | GEOL A322 | Igneous and Metamorphic Petrology (4) | | | |
| | GEOL A325 | Geology of Ore Deposits (3) | | | |
| | GEOL A335 | Structural Geology (4) | | | |
| | GEOL A340 | Hydrogeology (3) | | | |
| | GEOL A350 | Geomorphology (4) | | | |
| | GEOL A360 | Geochemistry (3) | | | |
| | GEOL A380 | Anchorage Field Studies (3) | | | |
| | GEOL A381 | Kenai Peninsula Field Studies (3) | | | |
| | GEOL A382 | Geological Field Studies (3) | | | |
| | GEOL A421 | Invertebrate Paleontology (4) | | | |
| | GEOL A450 | Paleoclimatology and Global Change (3) | | | |
| | GEOL A452 | Sedimentology and Stratigraphy (4) | | | |
| | GEOL A454 | Glacial and Quaternary Geology (3) | | | |
| | GEOL A455 | Permafrost (3) | | | |
| | GEOL A456 | Geoarchaeology (<i>integrative capstone</i>) (3) | | | |
| | GEOL A457 | Soil Genesis and Classification (4) | | | |
| | GEOL A460 | Environmental Geochemistry (3) | | | |
| | GEOL A475 | Environmental Geophysics (3) | | | |
| | GEOL A480 | Geological Field Methods (3) | | | |
| | GEOL A481 | Alaskan Field Investigations (3) | | | |
| | GEOL A482 | Geological Field Investigations (3) | | | |
| | GEOL A490 | Advanced Topics in Geology (1-4) | | | |
| | GEOL A492 | Geology Seminar (1) | | | |
| | GEOL A495 | Geology Internship (1-3) | | | |
| | GEOL A498 | Student Research (1-3) | | | |
| | GEOL A499 | Senior Thesis (3) | | | |
| | LSIS A201 | Life on Earth (5) | | | |
| | LSIS A202 | Concepts and Processes: Natural Sciences (5) | | | |
| | PHYS A123 | Basic Physics I* (3) | | | |
| | PHYS A123L | Basic Physics I Laboratory* (1) | | | |
| | PHYS A124 | Basic Physics II* (3) | | | |
| | PHYS A124L | Basic Physics II Laboratory* (1) | | | |
| | PHYS A211 | General Physics I* (3) | | | |
| | PHYS A211L | General Physics I Laboratory* (1) | | | |
| | PHYS A212 | General Physics II* (3) | | | |
| | PHYS A212L | General Physics II Laboratory* (1) | | | |
| | PHYS A303 | Modern Physics (3) | | | |
| | | <i>*Students cannot get credit for both PHYS 123/L and PHYS 211/L or PHYS 124/L and 212/L</i> | | | |
| c. | A minimum of 15 credits must come from the following Math and Computational Skills Course List for the Environmental Sciences Option: | 15 | | | |
| | CS A109 | Computer Programming (Languages Vary) (3) | | | |
| | | or | | | |
| | CS A110 | Java Programming (3) | | | |
| | | or | | | |
| | CS A111 | Visual Basic .NET Programming (3) | | | |
| | | or | | | |
| | CS A201 | Programming Concepts I (3) | | | |
| | CS A202 | Programming Concepts II (3) | | | |
| | CS A304 | Object-Oriented Analysis and Modeling (3) | | | |

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| CS A330 | Algorithms and Data Structures (3) |
| CS A351 | Automata, Algorithms, and Complexity (3) |
| CS A360 | Database Systems (3) |
| CS A385 | Computer Graphics (3) |
| CS A405 | Artificial Intelligence (3) |
| CS A407 | Evolutionary Computing (3) |
| GEO A157 | Analytical and Digital Cartography (3) |
| GEO A167 | Remote Sensing and Image Analysis (3) |
| GEO A248 | Digital Terrain Cartography (3) |
| GEO A257 | Elements of Photogrammetry (3) |
| GEO A359 | Geodesy and Map Projections (3) |
| GEO A459 | Geodetic Geomatics (3) |
| GEO A467 | Analytical and Digital Photogrammetry (3) |
| GIS A268 | Elements of Geographic Information Systems (GIS) (4) |
| GIS A295 | Internship in Geographic Information Systems I (3) |
| GIS A366 | Spatial Information Analysis and Modeling (3) |
| GIS A367 | GIS and Remote Sensing (3) |
| GIS A370 | GIS and Remote Sensing for the Natural Resources (3) |
| GIS A433 | Coastal Mapping (3) |
| GIS A458 | Design and Management of Spatial Information (3) |
| GIS A468 | Integration of Geomatics Technologies (3) |
| GIS A495 | Internship in Geographic Information Systems II (3) |
| MATH A200 | Calculus I (4) |
| | or |
| MATH A272 | Applied Calculus (3) |
| MATH A201 | Calculus II (4) |
| MATH A202 | Calculus III (4) |
| MATH A215 | Introduction to Mathematical Proofs (3) |
| MATH A231 | Introduction to Discrete Mathematics (3) |
| MATH A302 | Ordinary Differential Equations (3) |
| MATH A303 | Introduction to Modern Algebra (3) |
| MATH A305 | Introduction to Geometrics (3) |
| MATH A306 | Discrete Methods (3) |
| MATH A314 | Linear Algebra (3) |
| MATH A321 | Analysis of Several Variables (3) |
| MATH A324 | Advanced Calculus (3) |
| MATH A371 | Stochastic Processes (3) |
| MATH A407 | Mathematical Statistics I (3) |
| MATH A408 | Mathematical Statistics II (3) |
| MATH A410 | Introduction to Complex Analysis (3) |
| MATH A422 | Partial Differential Equations (3) |
| STAT A253 | Applied Statistics for the Sciences (4) |
| | or |
| STAT A307 | Probability and Statistics (4) |
| STAT A308 | Intermediate Statistics for the Sciences (<i>integrative capstone</i>) (3) |
| STAT A402 | Scientific Sampling (3) |
| STAT A403 | Regression Analysis (3) |
| STAT A404 | Analysis of Variance (3) |
| STAT A405 | Nonparametric Statistics (3) |
| STAT A407 | Time Series Analysis (3) |
| STAT A408 | Multivariate Statistics (3) |
| STAT A490 | Selected Topics in Statistics (1-3) |
| d. | A minimum of 9 credits must come from the following Social Sciences Course List for the Environmental Sciences Option: 9 |
| ANTH A101 | Introduction to Anthropology (3) |
| ANTH A202 | Cultural Anthropology (3) |
| ANTH A205 | Biological Anthropology (3) |
| ANTH A335 | Native North Americans (3) |
| ANTH A354 | Culture and Ecology (3) |

| | |
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| ANTH A415 | Applied Anthropology (3) |
| ANTH A445 | Evolution of Humans and Disease (3) |
| CEL A292 | Introduction to Civic Engagement (3) |
| CEL A390 | Selected Topics in Civic Engagement (1-3) |
| ECON A201 | Principles of Macroeconomics (3) |
| ECON A202 | Principles of Microeconomics (3) |
| ECON A210 | Environmental Economics and Policy (3) |
| ECON A300 | The Economy of Alaska (3) |
| ECON A321 | Intermediate Microeconomics (3) |
| ECON A324 | Intermediate Macroeconomics (3) |
| ECON A435 | Natural Resource Economics (3) |
| ENVI/ | |
| PHIL A303 | Environmental Ethics (3) |
| ENVI A470 | Environmental Planning and Problem Solving (4) |
| ENVI A490 | Topics in Environment and Society (3) |
| GEOG A101 | Local Places/Global Regions: An Introduction to Geography (3) |
| LSSS A311 | People, Places and Ecosystems (3) |
| SOC A101 | Introduction to Sociology (3) |
| SOC A404 | Environmental Sociology (3) |

Pre-Health Professions Option (80 credits)

- Complete the following required courses (24 credits):

| | | |
|-------------|--|---|
| BIOL A115/L | Fundamentals of Biology I with Laboratory | 4 |
| BIOL A116/L | Fundamentals of Biology II with Laboratory | 4 |
| CHEM A105 | General Chemistry I | 3 |
| CHEM A105L | General Chemistry I Laboratory | 1 |
| CHEM A106 | General Chemistry II | 3 |
| CHEM A106L | General Chemistry II Laboratory | 1 |
| PHYS A123 | Basic Physics I | 3 |
| PHYS A123L | Basic Physics I Laboratory | 1 |
| PHYS A124 | Basic Physics II | 3 |
| PHYS A124L | Basic Physics II Laboratory | 1 |
- Complete an additional 56 credits of degree electives from the approved course lists for the Pre-Health Professions Option.
 - A minimum of 32 credits must be upper division.
 - A minimum of 24 credits must come from the following Natural Sciences Course List for the Pre-Health Professions Option: 24

| | |
|-------------|---|
| BIOL A111/L | Human Anatomy and Physiology I with Laboratory (4) |
| BIOL A112/L | Human Anatomy and Physiology II with Laboratory (4) |
| BIOL/ | |
| CPLX A200 | Introduction to Complexity (3) |
| BIOL A240 | Introductory Microbiology for Health Sciences (4) |
| | or |
| BIOL A340 | General Microbiology (5) |
| BIOL A242 | Fundamentals of Cell Biology (4) |
| BIOL A252 | Principles of Genetics (4) |
| BIOL A310 | Principles of Physiology (4) |
| BIOL A403 | Microtechnique (4) |
| BIOL A415 | Comparative Animal Physiology (3) |
| BIOL A425 | Mammalogy (3) |
| BIOL A451 | Applied Microbiology (3) |
| BIOL A452 | Human Genome (<i>integrative capstone</i>) (3) |
| BIOL/CHEM/ | |
| PHYS A456 | Nonlinear Dynamics and Chaos* (3) |
| BIOL A461 | Molecular Biology (3) |
| BIOL A461L | Molecular Biology Laboratory (1) |
| BIOL A462 | Virology (3) |
| BIOL/ | |
| CHEM A471 | Immunochemistry (4) |
| BIOL A487 | Comparative Anatomy of Vertebrates (4) |
| BIOL A488 | Developmental Biology (4) |

| | | | |
|------------|--|---|--|
| BIOL A489 | Population Genetics and Evolutionary Processes (<i>integrative capstone</i>) (3) | PSY A498 | Individual Research (3) |
| BIOL A490 | Selected Lecture Topics in Biology (1-3) | d. | A minimum of 9 credits must come from the following Math and Computational Skills Course List for the Pre-Health Professions Option: 9 |
| BIOL A490L | Selected Laboratory Topics in Biology (1-3) | MATH A200 | Calculus I (4) or |
| BIOL A492 | Undergraduate Seminar (1) | MATH A272 | Applied Calculus (3) |
| BIOL A495A | Internship in the Biological Sciences (3) | MATH A201 | Calculus II (4) |
| BIOL A498 | Individual Research (1-6) | MATH A202 | Calculus III (4) |
| CHEM A212 | Quantitative Analysis (5) | MATH A215 | Introduction to Mathematical Proofs (3) |
| CHEM A311 | Physical Chemistry: A Biological Orientation (3) | MATH A231 | Introduction to Discrete Mathematics (3) |
| CHEM A321 | Organic Chemistry I (3) | MATH A302 | Ordinary Differential Equations (3) |
| CHEM A322 | Organic Chemistry II (3) | MATH A303 | Introduction to Modern Algebra (3) |
| CHEM A323L | Organic Chemistry Laboratory (2) | MATH A305 | Introduction to Geometrics (3) |
| CHEM A434 | Instrumental Methods (4) | MATH A306 | Discrete Methods (3) |
| CHEM A441 | Principles of Biochemistry I (<i>integrative capstone</i>) (3) | MATH A314 | Linear Algebra (3) |
| CHEM A442 | Principles of Biochemistry II (3) | MATH A321 | Analysis of Several Variables (3) |
| CHEM A443 | Biochemistry Laboratory (2) | MATH A324 | Advanced Calculus (3) |
| CHEM A460 | Chemical Ecotoxicology (3) | MATH A371 | Stochastic Processes (3) |
| CHEM A492 | Undergraduate Seminar (1) | MATH A407 | Mathematical Statistics I (3) |
| CHEM A498 | Individual Research (3) | MATH A408 | Mathematical Statistics II (3) |
| c. | A minimum of (15) credits must come from the following Social Sciences Course List for the Pre-Health Professions Option: 15 | MATH A410 | Introduction to Complex Analysis (3) |
| ANTH A101 | Introduction to Anthropology (3) | MATH A422 | Partial Differential Equations (3) |
| ANTH A205 | Biological Anthropology (3) | MATH A490A | Selected Topics in Pure Mathematics (3) |
| ANTH A324 | Psychological Anthropology (3) | MATH A490B | Selected Topics in Applied Mathematics (3) |
| ANTH A365 | Modern Human Biological Diversity (3) | MATH A498 | Individual Research (1-3) |
| ANTH A445 | Evolution of Humans and Disease (3) | STAT A253 | Applied Statistics for the Sciences (4) or |
| ANTH A455 | Medical Anthropology (3) | STAT A307 | Probability and Statistics (4) |
| AHNT A457 | Food and Nutrition: An Anthropological Perspective (3) | STAT A308 | Intermediate Statistics for the Sciences (<i>integrative capstone</i>) (3) |
| ANTH A485 | Human Osteology (4) | STAT A402 | Scientific Sampling (3) |
| ANTH A486 | Applied Human Osteology (3) | STAT A403 | Regression Analysis (3) |
| ANTH A490 | Selected Topics in Anthropology (1-3) | STAT A404 | Analysis of Variance (3) |
| ECON A201 | Principles of Macroeconomics (3) | STAT A405 | Nonparametric Statistics (3) |
| ECON A202 | Principles of Microeconomics (3) | STAT A407 | Time Series Analysis (3) |
| HS A220 | Core Concepts in Health Sciences (3) | STAT A408 | Multivariate Statistics (3) |
| HS A210 | Introduction to Environmental Health (3) | STAT A490 | Selected Topics in Statistics (1-3) |
| HS A230 | Introduction to Global Health (3) | General Sciences Option (80 credits) | |
| HS A326 | Introduction to Epidemiology (3) | 1. | Complete the following required courses (32 credits): |
| HS A492 | Senior Seminar: Contemporary Health Policy (<i>integrative capstone</i>) (3) | BIOL A115/L | Fundamentals of Biology I with Laboratory 4 |
| PHIL A302 | Biomedical Ethics (3) | BIOL A116/L | Fundamentals of Biology II with Laboratory 4 |
| PSY A111 | General Psychology (3) | CHEM A105 | General Chemistry I 3 |
| PSY A143 | Death and Dying (3) | CHEM A105L | General Chemistry I Laboratory 1 |
| PSY A150 | Lifespan Development (3) | CHEM A106 | General Chemistry II 3 |
| PSY A245 | Child Development (3) | CHEM A106L | General Chemistry II Laboratory 1 |
| PSY A245L | Child Development Laboratory (1) | GEOL A111/L | Physical Geology with Laboratory 4 |
| PSY A260 | Statistics for Psychology (3) | GEOL A221/L | Historical Geology with Laboratory 4 |
| PSY A260L | Statistics for Psychology Lab (1) | PHYS A123 | Basic Physics I (3) 8 |
| PSY A261 | Research Methods in Psychology (4) | PHYS A123L | Basic Physics I Laboratory (1) and |
| PSY A345 | Abnormal Psychology (3) | PHYS A124 | Basic Physics II (3) |
| PSY A355 | Learning and Cognition (4) | PHYS A124L | Basic Physics II Laboratory (1) or |
| PSY A366 | Perception (3) | PHYS A211 | General Physics I (3) |
| PSY A368 | Personality (3) | PHYS A211L | General Physics I Laboratory (1) and |
| PSY A370 | Biological Psychology (<i>integrative capstone</i>) (3) | PHYS A212 | General Physics II (3) |
| PSY A412 | Foundations of Modern Psychology (3) | PHYS A212L | General Physics II Laboratory (1) |
| PSY A420 | Conducting Research in Psychology (3) | 2. | Complete an additional 48 credits of degree electives. 48 |
| PSY A425 | Clinical Psychology (3) | a. | The credits may come from the following course lists: |
| PSY A428 | Evolutionary Psychology (3) | i. | Environmental Sciences Option Course Lists (above) |
| PSY A450 | Adult Development and Aging (3) | ii. | Pre-Health Professions Course Lists (above) |
| PSY A453 | Application of Statistics to the Social Sciences (4) | | |
| PSY A455 | Mental Health Services in Alaska (3) | | |
| PSY A485 | Health Psychology (3) | | |

- iii. General Sciences Additional Course List
- | | |
|--------------|--|
| ASTR A103 | Solar System Astronomy (3) |
| ASTR A103L | Solar System Astronomy Laboratory (1) |
| ASTR A104 | Stars, Galaxies and Cosmology (3) |
| ASTR A104L | Stars, Galaxies and Cosmology Laboratory (1) |
| PHYS A311 | Intermediate Classical Mechanics (3) |
| PHYS/EE A314 | Electromagnetics (3) |
| PHYS A320 | Simulation of Physical Systems (3) |
| PHYS/EE A324 | Electromagnetics II (3) |
| PHYS A403 | Quantum Mechanics (3) |
| PHYS A413 | Statistical and Thermal Mechanics (3) |
| PHYS A498 | Individual Research (1-6) |
- b. At least 2 of the following disciplines must be represented at the upper division level: Astronomy, Biology, Chemistry, Geology, Mathematics, Physics, Statistics.
- c. Students wishing to meet the National Science Teachers Association Standards for Science Teacher Preparation will need to meet the following credit requirements within the 48 degree elective credits:
- i. Twenty of the 48 credits must come from the following (4 credits each):
- Biology (BIOL)
 - Chemistry (CHEM)
 - Geology (GEOL)
 - Astronomy (ASTR)
 - Physics or Astronomy (PHYS or ASTR) (4)
- ii. In addition to the credits listed above (i), at least 17 additional credits must come from one of the following disciplines such that a minimum of 21 elective credits are taken in a single science discipline.
1. Biology (BIOL) (17)
or
 2. Chemistry (CHEM) (17)
or
 3. Geology (GEOL) (17)
or
 4. Physics/Astronomy (PHYS and/or ASTR) (17)
- d. Students wishing to meet the National Science Teachers Association Standards for Science Teacher Preparation with an emphasis in Physics will be unable to do so while earning a degree in 120-125 credits. Options are to earn a degree with greater than 125 credits, or develop a degree plan that meets the majority of the standards' requirements and complete the remainder as a post-Baccalaureate student.
- e. A minimum of 32 credits must be upper division.

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PHILOSOPHY

Administration/Humanities Building (ADM), Room 254, (907) 786-4455
<http://www.uaa.alaska.edu/philosophy>

Philosophy is the creative and critical reflection on enduring questions concerning the nature of the world and our place in it. For example, philosophy asks metaphysical questions about what exists, epistemic questions about what we can claim to know, and ethical questions about the nature of the good life and right action. In addition, philosophy involves the study and practice of good reasoning and clear thinking, skills that are essential to any discipline or profession.

The Philosophy Department offers a variety of courses in the central areas of philosophy that acquaint students with the rich, living traditions of the world and explore historical and contemporary issues. Departmental faculty have a wide range of philosophical interests and expertise, with a particular strength in theoretical and applied ethics.

The Philosophy Department offers several options for students interested in the study of philosophy: (1) a Bachelor of Arts in Philosophy, with a philosophy track, a law track, or an applied ethics track; (2) a Certificate of Applied Ethics; (3) a minor in Philosophy, with a philosophy track or law track. Please read the introduction to each program below to determine which one of these options may be suitable for your particular needs.

The philosophy track is designed for students planning to go on to graduate school in philosophy or other humanities areas such as religious studies, theology, or classics. It would also be a suitable second major for those planning graduate studies in history, English, French or German literature. In general, it is ideal for students who are seeking jobs in fields where writing, critical thinking, and general liberal arts skills are in demand, or for lifelong learners interested in philosophy.

The religious studies Track is designed for students who want to learn about and reflect on religious traditions in a philosophical manner. Students completing this track will be prepared for graduate study in philosophy or religion.

The law track is designed for students planning on attending law school or related professional schools.

The applied ethics track is designed for four types of students: (1) those who intend to pursue a graduate degree in philosophy with programs that specialize in applied ethics; (2) those interested in a strong liberal arts degree (3) those who are seeking careers in the nonprofit sector, public administration, helping professions, or government service; and (4) those interested in the study of practical ethics.

The Certificate in Applied Ethics is designed for students whose intended careers will be complemented by emphasis in ethics education: for

example, business majors who may plan also to be ethics officers; those who intend to become professionals, such as lawyers, nurses, social workers, or engineers; or those in public administration, the helping professions, government service, and nonprofits. It will also be applicable to persons presently in the workforce such as corporate ethics officers, executives, and professionals who are seeking career advancement or simply want to acquire skills and knowledge in ethical decision-making.

The minor in Philosophy is designed for students who are interested in philosophy but pursuing another degree, and for students majoring in a discipline that is complemented by the study of philosophy, such as History, Justice, English, Psychology, Anthropology, Sociology, Mathematics, or the natural sciences.

Philosophy Department Honors

The Department of Philosophy recognizes exceptional undergraduate students by awarding them Departmental Honors in Philosophy. Students majoring in any one of the Bachelor of Arts tracks in Philosophy are eligible to graduate with departmental honors upon satisfaction of all of the following requirements:

1. Meet the requirements for a Bachelor of Arts degree in Philosophy.
2. Meet the requirements for Graduation with Honors as listed in Chapter 7, Academic Standards and Regulations.
3. Maintain a grade point average of 3.75 or above in courses specific to the Philosophy major.
4. Complete PHIL A498 Senior Research Project with an honor grade (A), and a recommendation for departmental honors from the student's faculty committee for this course.
5. Notify the chair in writing, on or before date on which the Application for Graduation is filed with the Office of the Registrar, of the intention to graduate with departmental honors.

Undergraduate Certificate, Applied Ethics

Admission Requirements

A student must satisfy the Admission to Certificate Requirements in Chapter 7, Academic Standards and Regulations.

Graduation Requirements

1. Complete the following requirements:

Written Communication Skills

Complete two courses from the GER requirements for written communication skills. 6

Oral Communication Skills

Complete one course from the GER requirements for oral communication skills. 3

Quantitative Skills

Complete one course from the GER requirements for quantitative skills. 3

Critical Reasoning Skills

Complete the following course:
PHIL A101 Introduction to Logic 3

Ethical Theory

Complete the following course:
PHIL A301 Ethics 3

Applied Ethics

Complete two courses from the following: 6
PHIL A302 Biomedical Ethics (3)
PHIL/
ENVI A303 Environmental Ethics (3)
PHIL A304 Business Ethics (3)

Professional Ethics

Complete one course from the following: 3
BA A488 Environment of Business (3)
HUMS A412 Ethical Issues in Human Services Practice (3)

| | |
|-----------|---|
| PADM A618 | Public Accountability, Ethics and Law (3) |
| PHIL A405 | Professional Ethics (3) |
| PSY A611 | Ethics and Professional Practice (3) |

Note: Graduate courses taken to satisfy this requirement cannot also be counted towards a graduate degree in that program.

Service Learning

Complete the following course:

| | | |
|-----------|------------------------------------|---|
| PHIL A495 | Service Learning in Applied Ethics | 3 |
|-----------|------------------------------------|---|

2. A total of 30 credits is required for the certificate.

Bachelor of Arts, Philosophy

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees located at the beginning of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences Requirements for the Bachelor of Arts listed at the beginning of the CAS section.

D. Major Requirements

1. Complete the following core courses (15 credits):

Logical Reasoning and Argumentation:

| | | |
|-----------|-----------------------|---|
| PHIL A101 | Introduction to Logic | 3 |
|-----------|-----------------------|---|

Foundations of Philosophy:

| | | |
|-----------|----------------------------|---|
| PHIL A201 | Introduction to Philosophy | 3 |
| PHIL A211 | History of Philosophy I | 3 |
| PHIL A212 | History of Philosophy II | 3 |

Ethical Theory and Value studies:

| | | |
|-----------|--------|---|
| PHIL A301 | Ethics | 3 |
|-----------|--------|---|

2. Choose one of the following tracks:

Note: Courses selected may not be used in more than one track.

Philosophy Track (21 credits)

Complete the following courses:

Applied Ethics: Complete one course from the following: 3

| | |
|-----------|--------------------------|
| PHIL A302 | Biomedical Ethics (3) |
| PHIL/ | |
| ENVI A303 | Environmental Ethics (3) |
| PHIL A304 | Business Ethics (3) |
| PHIL A405 | Professional Ethics (3) |

Philosophical Problems: Complete one course from each of the following two groups: 6

Group A

| | |
|-----------|------------------------|
| PHIL A309 | Philosophy of Mind (3) |
| PHIL A317 | Metaphysics (3) |

Group B

| | |
|-----------|--------------------------------|
| PHIL A318 | Epistemology (3) |
| PHIL A421 | Philosophy of the Sciences (3) |

Topics in Philosophy: Complete one course from the following: 3

| | |
|-----------|-------------------------------------|
| PHIL A313 | Eastern Philosophy and Religion (3) |
| PHIL A314 | Western Religion (3) |
| PHIL A321 | Philosophy of Religion (3) |

| | | |
|---|--|-----|
| PHIL A350 | Contemporary Social and Political Philosophy | (3) |
| PHIL A401 | Aesthetics (3) | |
| PHIL A406 | Philosophy of Law (3) | |
| PHIL A415 | Feminist Philosophy(3) | |
| Complete the following three courses (9 credits): | | |
| PHIL A423 | Advanced Ethical Theory | 3 |
| PHIL A490 | Topics in Contemporary Philosophy | 3 |
| PHIL A492 | Seminar on an Enduring Philosopher | 3 |
| Religious Studies Track (21 credits) | | |
| Complete the following courses: | | |
| PHIL A313 | Eastern Philosophy and Religion | 3 |
| PHIL A314 | Western Religions | 3 |
| PHIL A321 | Philosophy of Religion | 3 |
| Complete one of the following: | | |
| PHIL A317 | Metaphysics (3) | 3 |
| PHIL A318 | Epistemology (3) | |
| Complete one of the following: | | |
| AKNS A201 | Alaska Native Perspectives (3) | 3 |
| ANTH A200 | Natives of Alaska (3) | |
| Complete one of the following: | | |
| ANTH A335 | Native North Americans (3) | 3 |
| ANTH A400 | Anthropology of Religion (3) | |
| SOC A347 | Sociology of Religion (3) | |
| Complete one of the following: | | |
| PHIL A423 | Advanced Ethical Theory (3) | 3 |
| PHIL A490 | Topics in Contemporary Philosophy (3) | |
| PHIL A492 | Seminar on an Enduring Philosopher (3) | |

Law Track (21 credits)

Complete the following courses:

Professional Ethics:

| | | |
|-----------|---------------------|---|
| PHIL A405 | Professional Ethics | 3 |
|-----------|---------------------|---|

Philosophical Foundations of the Law:

| | | |
|--------------|--|---|
| PHIL A350 | Contemporary Social and Political Philosophy | 3 |
| PHIL A406 | Philosophy of Law | 3 |
| PHIL A423 | Advanced Ethical Theory | 3 |
| PS A332 | History of Political Philosophy I: Classical | 3 |
| PS A333 | History of Political Philosophy II: Modern | 3 |
| PS/JUST A343 | Constitutional Law | 3 |

Applied Ethics Track (18 credits)

Complete the following courses:

Professional Ethics:

| | | |
|-----------|---------------------|---|
| PHIL A405 | Professional Ethics | 3 |
|-----------|---------------------|---|

Applied Ethics Core: Complete two courses from the following:

| | | |
|----------------|--|---|
| PHIL A302 | Biomedical Ethics (3) | 6 |
| PHIL/ENVI A303 | Environmental Ethics (3) | |
| PHIL A304 | Business Ethics (3) | |
| PHIL A350 | Contemporary Social and Political Philosophy (3) | |
| PHIL A406 | Philosophy of Law (3) | |
| PHIL A415 | Feminist Philosophy (3) | |

Complete the following three courses (9 credits):

| | | |
|-----------|------------------------------------|---|
| PHIL A423 | Advanced Ethical Theory | 3 |
| PHIL A490 | Topics in Contemporary Philosophy | 3 |
| PHIL A495 | Service Learning in Applied Ethics | 3 |

- A total of 120 credits is required for the degree of which 42 credits must be upper division.

Minor, Philosophy

Students majoring in another subject who wish to minor in Philosophy must complete the following requirements. A total of 18 credits is required for the minor, 9 of which must be upper division.

- Complete the following courses:

| | | |
|------------------------------------|--------------------------------|---|
| Ways of Knowing (pick one): | | 3 |
| PHIL A101 | Introduction to Logic (3) | |
| PHIL A201 | Introduction to Philosophy (3) | |
| PHIL A301 | Ethics (3) | |

Foundations of Philosophy:

| | | |
|-----------|--------------------------|---|
| PHIL A211 | History of Philosophy I | 3 |
| PHIL A212 | History of Philosophy II | 3 |

- Upper Level Electives (9 credits)

Choose any three upper level Philosophy courses 9

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Physics is the universal science. It is the rational development of experiments, observations, and theories to explain the fundamental structure of the universe. Physicists study everything from the smallest subatomic particle to the entire universe.

The laws that physicists have discovered form the basis for understanding the world and also for making the devices and machines that we see and use every day.

The Physics minor will provide a valuable option especially to Engineering, Math, Computer Science, Chemistry, Biology, or Geology majors. It is widely known that a strong physics background increases a graduate's employability.

Minor, Physics

Students majoring in another subject who wish to minor in Physics must complete for following requirements. A total of 18 credits is required for the minor.

| | | |
|-----------------------------------|-------------------------------|---|
| PHYS A211 | General Physics I | 3 |
| PHYS A211L | General Physics I Laboratory | 1 |
| PHYS A212 | General Physics II | 3 |
| PHYS A212L | General Physics II Laboratory | 1 |
| PHYS A303 | Modern Physics | 3 |
| Upper division Physics electives. | | 7 |

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POLITICAL SCIENCE

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In its oldest definition, political science was called the master science. More modern definitions are less comprehensive, but of the social sciences, political science has perhaps the least definite boundaries and the widest concerns. Consequently, political science covers many different subjects, uses several diverse methods, and appeals to a variety of students.

Students come to political science because they are interested in politics: some of them with an eye to a political career, some with a scholarly intent, and many wishing to know more about this central, inescapable human concern. The Department of Political Science aims to make all students aware and critical of their first opinions (since human beings are at their most opinionated in politics), to open up the possibilities of politics, to reveal the permanent political problems, to impart an intellectual discipline, and to supply a guide for choice.

The Political Science program is divided into five areas: comparative politics, international relations, political philosophy, American politics, and political behavior. Majors in Political Science are required to take at least one course in each of these areas, to specialize in one of them, and to complete introductory courses in political science.

The department also offers minors in Political Science and Public Administration. Students selecting the Political Science minor take two introductory courses and four additional upper division Political Science electives. Students selecting the Public Administration minor take two introductory courses; courses in public administration, public policy, and organization theory; and one additional starred (*) course in Political Science.

The department welcomes all students who want to learn more about politics. It reserves its honors for majors who earn qualifying marks both in a senior seminar and on a comprehensive examination.

Honors in Political Science

Students majoring in Political Science are eligible to graduate with departmental honors if they satisfy all of the following requirements:

1. Meet the requirements for a BA degree in Political Science.
2. Maintain a grade point average of 3.50 or above in courses applicable to the degree requirements.
3. Complete PS A492 Senior Seminar in Politics in the final term of study with an honor grade (A or B).
4. Receive an honors score (based upon criteria established by the department) on a comprehensive examination for majors.

Note: Departmental honors are awarded by the Political Science faculty.

Bachelor of Arts, Political Science

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section.

D. Major Requirements

Note: Courses required for Political Science minors which may be used to meet General Education Requirements and/or College of Arts and Sciences BA requirements are designated by a section mark (§) after their titles.

1. Complete the following core courses:

| | | |
|-------------|---------------------------------------|---|
| PS A101 | Introduction to American Government § | 3 |
| PS A102 | Introduction to Political Science § | 3 |
| PS A301 | Comparative Political Economy | 3 |
| PS A330 | The American Political Tradition | 3 |
| PS/SOC A361 | Social Science Research Methods | 3 |
| PS A492 | Senior Seminar in Politics § | 3 |
2. Complete one starred (*) course from each of the five areas below: 15

Comparative Politics

- | | |
|--------------|-----------------------------------|
| *PS A311 | Comparative Politics § (3) |
| *PS A312 | Comparative Northern Politics (3) |
| PS/AKNS A411 | Tribes, Nations, and Peoples (3) |
| PS A490 | Studies in Politics (1-3) |

International Relations

- | | |
|----------|---|
| *PS A321 | International Relations § (3) |
| *PS A322 | United States Foreign Policy (3) |
| PS A324 | Model United Nations (3) |
| PS A424 | International Law and Organizations (3) |
| PS A490 | Studies in Politics (1-3) |

Political Philosophy

- | | |
|----------|---|
| *PS A331 | Political Philosophy § (3) |
| *PS A332 | History of Political Philosophy I: Classical § (3) |
| *PS A333 | History of Political Philosophy II: Modern § (3) |
| PS A490 | Studies in Politics (1-3) |

American Politics

- | | |
|--------------|------------------------------------|
| *PS A341 | The United States Congress (3) |
| *PS A342 | The American Presidency (3) |
| PS/JUST A343 | Constitutional Law (3) |
| PS A344 | State and Local Politics (3) |
| PS A345 | Alaska Government and Politics (3) |
| PS/AKNS A346 | Alaska Native Politics (3) |
| PS A347 | Public Administration (3) |
| PS A348 | Public Policy (3) |
| PS A490 | Studies in Politics (1-3) |

Political Behavior

- | | |
|--------------|---|
| *PS/SOC A351 | Political Sociology § (3) |
| *PS A353 | Political Behavior, Participation, and Democracy (3) |
| PS A453 | Organization Theory (3) |
| PS A490 | Studies in Politics (1-3) |
| PS A495 | Internship in Political Science (3) |
3. Complete 6 credits in additional upper division Political Science courses from one of the five areas listed above. PS A490 may be repeated with different subtitle.
 4. A total of 120 credits is required for the degree, of which 42 credits must be upper division, and a minimum of 39 Political Science credits.

Minors

The Department of Political Science offers two minors, one in Political Science and one in Public Administration. A minor requires 18 credits earned according to the following rules.

Note: Courses required for Political Science minors which may be used to meet General Education Requirements and/or College of Arts and Sciences BA requirements are designated by an section mark (§) after their titles.

Political Science Minor

Introductory courses:

| | | |
|---------|--|----|
| PS A101 | Introduction to American Government § | 3 |
| PS A102 | Introduction to Political Science § | 3 |
| | Upper division Political Science courses | 12 |

Public Administration Minor

Introductory courses:

| | | |
|---------|---------------------------------------|---|
| PS A101 | Introduction to American Government § | 3 |
| PS A102 | Introduction to Political Science § | 3 |

Additional courses, as follows:

| | | |
|---------|--|---|
| PS A347 | Public Administration | 3 |
| PS A348 | Public Policy | 3 |
| PS A453 | Organization Theory | 3 |
| | One additional starred (*) course from one of the areas listed in item 2 above under major requirements. | 3 |

Note: Political Science majors who earn a minor in Public Administration may not count upper division courses required for the minor (i.e., PS A347, PS A348, or PS A453) toward the major requirements in item 3 above for additional upper division credits in Political Science.

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PSYCHOLOGY

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The undergraduate Psychology program offers mentorship and high-quality training in the science of behavior and mental processes and, in so doing, enriches the lives of our students, citizens of Alaska, and the field of psychology. In service of this mission, the faculty provides effective instruction, academic and career advising, research training, professional skill development, service opportunities, preparation for graduate school, and employment in the human service field.

The Psychology major requirements are flexible and are designed to serve a variety of career goals. Both the Bachelor of Arts and the Bachelor of Science degrees are available. The student majoring in psychology pursuing a general interest in human nature will probably take a different sequence of Psychology courses than a student who is preparing for advanced work in psychology. All students are encouraged to plan undergraduate work carefully. Early and frequent consultation with an advisor is helpful in selecting courses which will provide a solid foundation in psychology and a good general education.

Occupational Endorsement Certificate, Community Mental-Health Services

Students can earn on their transcript an Occupational Endorsement Certificate in Community Mental-Health Services. This transcripted certificate is available to any student – not just Psychology majors – who receive grades of C or higher in the following five courses designed to provide some of the knowledge and skills appropriate for a variety of entry-level jobs in community mental-health settings. Taken together, the five courses (and their two prerequisites) introduce students to

mental-health problems, communication skills, consumer empowerment, assessment, professional networking, service facilitation, behavior change processes, advocacy, crisis intervention, organizational settings, documentation, ethics, and professional behavior. Mental health problems common to Alaska receive special emphasis. Two semesters of community placement allow skills to be practiced in mental health settings.

Occupational Endorsement Certificate Requirements

Admission

Complete the admission requirements for Occupational Endorsement Certificates found in Chapter 7, Academic Standards and Regulations.

Graduation Requirements

1. Satisfy General University Requirements for Occupational Endorsement Certificates found in the beginning of this chapter.
2. Complete PSY A327 with a grade of B or higher.
3. Complete each of the following courses with a grade of C or higher (12 credits)

| | | |
|----------|------------------------------------|---|
| PSY A372 | Community Psychology* | 3 |
| PSY A427 | Field Experience in Psychology II | 3 |
| PSY A445 | Strategies of Behavior Change | 3 |
| PSY A455 | Mental Health Services in Alaska** | 3 |

* Prerequisite: PSY A111 (General Psychology)

** Prerequisite: PSY A345 (Abnormal Psychology)

4. In addition to the prerequisite courses, a total of 15 credits is required for the Occupational Endorsement Certificate in Community Mental-Health Services.

Honors in Psychology

The Department of Psychology recognizes exceptional undergraduate students by awarding them Departmental Honors in Psychology. To graduate with departmental honors, the student must be a declared Psychology major and meet the following requirements:

1. Satisfy all requirements for a BA or BS degree in Psychology.
2. Maintain a cumulative GPA of 3.50.
3. Take PSY A412 Foundations of Modern Psychology.
4. Take PSY A420 Conducting Research in Psychology.
5. Complete PSY A499 Senior Thesis. The thesis project must be approved in advance by the Undergraduate Studies Committee and carried out by following applicable departmental guidelines.
6. Students intending to graduate with departmental honors must notify the Departmental Honors Committee in writing on or before the date they file their Application for Graduation with the Office of the Registrar.

Bachelor of Arts, Psychology

Bachelor of Science, Psychology

Admission Requirements

Complete the admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements listed at the beginning of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences Requirements listed at the beginning of this chapter.

D. Major Requirements

1. Psychology Core Requirements (30 Credits)

| | | |
|-----------|--------------------------------|---|
| PSY A111 | General Psychology | 3 |
| PSY A150 | Lifespan Development | 3 |
| PSY A260 | Statistics for Psychology | 3 |
| PSY A260L | Statistics for Psychology Lab | 1 |
| PSY A261 | Research Methods in Psychology | 4 |
| PSY A345 | Abnormal Psychology | 3 |
| PSY A355 | Learning and Cognition | 4 |
| PSY A368 | Personality | 3 |
| PSY A370 | Behavioral Neuroscience | 3 |
| PSY A375 | Social Psychology | 3 |

2. Psychology Capstone Requirement (3 Credits)

A capstone course is required of all Psychology majors (BA or BS). Each capstone option is designed to synthesize and apply material from the Psychology major. Choice of a capstone should be based, at least in part, on the student's future career plans. Students planning to work in human service jobs following their baccalaureate degree should consider taking PSY A427. Students planning on graduate work in Psychology should consider taking PSY A412, PSY A420 or PSY A499. Students may elect to take all of these courses as upper division electives.

| | |
|----------|---------------------------------------|
| PSY A412 | Foundations of Modern Psychology (3) |
| | or |
| PSY A420 | Conducting Research in Psychology (3) |
| | or |
| PSY A427 | Field Experience in Psychology II (3) |
| | or |
| PSY A428 | Evolutionary Psychology (3) |
| | or |
| PSY A499 | Senior Thesis (3) |

Note: All of the above psychology capstone courses have rigorous prerequisites, including grades of C or higher in six credits of English composition, and grades of C or higher in PSY A111, PSY A150, PSY A260, PSY A260L, and PSY A261. Although Ds are passing grades for capstone prerequisites, Cs or higher in these prerequisites are required for admission into psychology's capstone courses. Additional prerequisites may apply to each capstone course. See course descriptions of each capstone course for more details.

3. Psychology Electives (9 Credits)

Take an additional 9 credits of Psychology, 6 of which must be upper division.

4. Psychology Exit Examination

All Psychology majors are required to take the exit examination, a standardized test of knowledge of psychology approved by the Psychology Department. There is no minimum score required for graduation.

5. A total of 120 credits is required for this degree, of which 42 credits must be upper division.

Minor, Psychology

Students majoring in another subject who wish to minor in Psychology must complete a total of 18 credits of Psychology, of which 6 must be upper division.

Requirements include the following:

1. PSY A111 General Psychology
2. Three additional courses required in the core above (see list D.1).
3. Two additional Psychology courses

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SOCIOLOGY

Social Sciences Building (SSB), Room 372, (907) 786-1714

www.uaa.alaska.edu/sociology

Sociology is the scientific study of human interaction, social organization, and culture. As a social science, sociology seeks to describe, interpret, and explain variations in human conduct using empirical methods that include experiments, surveys, ethnographic observation, life histories, and historical and comparative approaches. Sociologists study many aspects of the human condition, including intimate relationships, aging and the life-course, deviance and crime, population growth and migration, bureaucratic power and collective action, religion and ideology, and inequalities of race, gender, and social class. The curriculum in sociology provides a background in social theory and an opportunity for the acquisition of practical social science research skills. It is meant to offer students a contribution to a liberal arts education, preparation for graduate training, and preparation for careers in applied sociology in a variety of organizational settings.

Honors in Sociology

Students majoring in Sociology are eligible to graduate with departmental honors if they satisfy all of the following:

1. Meet all the requirements for a BA or BS degree in Sociology.
2. Maintain a grade point average of 3.50 or above in all Sociology courses.
3. Attain a score at or above the 90th percentile on the ETS Major Field Test.

Bachelor of Arts, Sociology

Bachelor of Science, Sociology

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Advising

All Sociology majors are strongly encouraged to meet with their faculty advisors each semester for the purpose of reviewing their academic progress and planning future courses. It is particularly important for students to meet with their faculty advisors when it appears that academic difficulties may arise.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for all Baccalaureate Degrees listed at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences Requirements for either a BA or BS degree listed at the beginning of the CAS section.

D. Major Requirements

- Complete Sociology core courses (19 credits):

| | | |
|--------------|--|---|
| SOC A101 | Introduction to Sociology | 3 |
| SOC A307 | Demography | 3 |
| SOC/PS A361 | Social Science Research Methods | 3 |
| SOC A402 | Social Theory | 3 |
| SOC/PSY A453 | Application of Statistics to the Social Sciences | 4 |
| SOC A488 | Capstone Seminar | 3 |
- Complete an additional 18 credits of Sociology, 9 credits of which must be upper division.
- Completion of 37 credits is required for the major in Sociology. A total of 120 credits is required for the degree, of which 42 credits must be upper division.

Minor, Sociology

Students majoring in another subject who wish to minor in Sociology must complete the following requirements. A total of 21 credits is required for the minor.

| | | |
|-------------|------------------------------------|---|
| SOC A101 | Introduction to Sociology | 3 |
| SOC/PS A361 | Social Science Research Methods | 3 |
| SOC A402 | Social Theory | 3 |
| | Upper division Sociology electives | 6 |
| | Sociology electives, any level | 6 |

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STATISTICS

Social Sciences Building (SSB), Room 154, (907) 786-1744
<http://math.uaa.alaska.edu>

Statistics courses are offered in the Department of Mathematical Sciences.

During the past several decades, the social and economic structure of the United States has shifted from an industrialized basis to an information and service base. Rapid development of computer technology has led to an increase in the use of statistics as a tool for analyzing data. Increasing demand exists for individuals with training in statistical analysis. The unprecedented growth of research institutes nationwide confirms the importance of sampling and statistical analysis.

Statistics is now widely used in a broad spectrum of disciplines. There is, and will continue to be, substantial demand among students and various entities within the community for this program.

Minor, Statistics

Students majoring in another subject who wish to minor in Statistics must complete the following requirements:

- Complete these required courses:

| | | |
|-----------|--|---|
| STAT A307 | Probability and Statistics | 4 |
| STAT A308 | Intermediate Statistics for the Sciences | 3 |
| MATH A200 | Calculus I | 4 |
| MATH A201 | Calculus II | 4 |
- Complete a minimum of 9 credits from the following:

| | | |
|-----------|-------------------------------------|---|
| STAT A402 | Scientific Sampling (3) | 9 |
| STAT A403 | Regression Analysis (3) | |
| STAT A404 | Analysis of Variance (3) | |
| STAT A405 | Nonparametric Statistics (3) | |
| STAT A407 | Time Series Analysis (3) | |
| STAT A408 | Multivariate Statistics (3) | |
| STAT A490 | Selected Topics in Statistics (1-3) | |
| MATH A371 | Stochastic Processes (3) | |
| MATH A407 | Mathematical Statistics I (3) | |
| MATH A408 | Mathematical Statistics II (3) | |
- A total of 24 credits is required in the minor.

FACULTY

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THEATRE AND DANCE

Fine Arts Building (ARTS), Room 302, (907) 786-1792
<http://theatre.uaa.alaska.edu>

The Department of Theatre and Dance offers a well-rounded liberal arts approach in its curriculum. Theatre courses cover all the basic areas of theatrical endeavor, including acting, movement for the actor, directing, stagecraft, scene design, lighting, costuming, makeup, dramatic literature, theatre history, dramatic theory and criticism, and play writing. The Dance program offers courses in dance techniques, choreography, improvisation, dance history and dance research methods. Selected topics offered from time to time range from a diverse menu of performance and technical offerings such as: *Alba Emoting Technique*, *Scene Painting*, *Practical Applications in Theatrical Control Systems*, *Sound Engineering*, and *Prop Design and Construction*. Dance offers Hip Hop, Salsa Immersion, and Capoeira.

Theatre is the art of giving life in performance to dramatic literature. Production is at the very center of our award-winning Theatre and Dance program. Each season UAA Theatre and Dance produces four plays and two dance concerts on its "modified thrust" Mainstage, and in the Jerry Harper Studio Theatre, a fully-equipped, black-box space. Student-directed scenes, one-acts, and full-length plays are also presented yearly in the Harper. Department plays are cast at open auditions and on average more than 100 majors, non-majors and members of the community are involved in our productions each year. All Theatre and Dance majors are required to participate in Mainstage productions and/or related departmental activities.

Dance as performance and as theoretical discourse from a multidisciplinary and multicultural perspective is primary in the Dance program. As in theatre, production is also at the heart of the program, with the UAA Dance Ensemble as the core performing group. Each year, we feature two dance productions either on Mainstage and/or at the Harper Theatre and guest artist residencies are a staple of the program. All Dance minors, or Theatre majors choosing the dance option, are required to participate in Dance Ensemble performances and/or related departmental activities.

Honors in Theatre

Students majoring in Theatre are eligible to graduate with departmental honors if they satisfy all of the following requirements:

1. Meet the requirements for a BA degree in Theatre.
2. Maintain a grade point average of 3.50 or above in Theatre courses applicable to the major requirements.
3. Complete THR A498 Individual Research with a minimum grade of B prior to enrolling in THR A499 Senior Thesis.
4. Complete THR A499 Senior Thesis with a minimum grade of B. The thesis project must be approved in writing in advance by the department faculty and be completed in the senior year. The project must culminate in a public performance or presentation.
5. Students intending to graduate with departmental honors must notify the department in writing at least one year prior to filing their Application for Graduation with the Office of the Registrar.

Bachelor of Arts, Theatre

Admission Requirements

Admission Requirements: All Majors

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Admission Requirements to Upper Division Courses

1. Completion of any combination of at least 9 credits from the Tier 1 General Education Requirements with a cumulative GPA of 2.25 or higher.
2. Completion of each of the following courses with a grade of C or better.

Theatre Option (21 credits):

| | | |
|----------|-----------------------------------|---|
| THR A121 | Introduction to Acting | 3 |
| THR A131 | Theatrical Production Techniques | 3 |
| THR A141 | Stagecraft I | 3 |
| THR A221 | Movement for the Actor | 3 |
| THR A222 | Voice for the Actor | 3 |
| THR A243 | Scene Design | 3 |
| THR A257 | Costume Design and Construction I | 3 |

Dance Option (21 credits):

| | | |
|--|-----------------------------------|---|
| 4 credits of any 100- or 200-level dance (DNCE) performance course | | 4 |
| DNCE A170 | Dance Appreciation | 3 |
| DNCE A262 | Theory and Improvisation | 2 |
| THR A121 | Introduction to Acting | 3 |
| THR A131 | Theatrical Production Techniques | 3 |
| THR A221 | Movement for the Actor | 3 |
| THR A257 | Costume Design and Construction I | 3 |

Admission to Upper Division Courses

Students in the Theatre and Dance Program who do not meet the above standards may not take upper division courses.

Conditional Admission to Upper Division Courses

A student classified as being conditionally admitted to upper division status may take upper division THR and DNCE courses for one semester only while fulfilling division deficiencies with departmental approval.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. College of Arts and Sciences Requirements

Complete the College of Arts and Sciences Requirements listed at the beginning of the CAS section.

D. Major Requirements, BA Theatre

1. Complete the following required core courses (26 credits):

| | | |
|----------|------------------------------------|---|
| THR A121 | Introduction to Acting | 3 |
| THR A131 | Theatrical Production Techniques | 3 |
| THR A221 | Movement for the Actor | 3 |
| THR A257 | Costume Design and Construction I | 3 |
| THR A295 | Theatre Practicum: Technical (1-3) | 2 |
| THR A306 | Stage Management | 3 |
| THR A411 | History of the Theatre I | 3 |
| THR A412 | History of the Theatre II | 3 |
| THR A431 | Directing I | 3 |
2. Complete one of the following design area courses:

| | | |
|----------|--|---|
| THR A347 | Lighting Design (3) | 3 |
| THR A357 | Costume Design and Construction II (3) | 3 |
3. Students working toward a degree in Theatre may choose from the following two options:

Theatre Option (18 credits):

- a. Complete the following required courses (12 credits):

| | | |
|----------|-----------------------------|---|
| THR A141 | Stagecraft I | 3 |
| THR A222 | Voice for the Actor | 3 |
| THR A243 | Scene Design | 3 |
| THR A311 | Representative Plays I (3) | 3 |
| or | | |
| THR A312 | Representative Plays II (3) | 3 |
- b. Complete two of the following performance or technical area courses:

| | | |
|----------|--------------------------------------|---|
| THR A315 | Playwriting Workshop (3) | 3 |
| THR A321 | Meisner Acting Technique (3) | 3 |
| THR A325 | Theatre Speech and Dialects (3) | 3 |
| THR A328 | Acting Shakespeare (3) | 3 |
| THR A329 | Combat for the Stage (3) | 3 |
| THR A376 | CAD for the Arts (3) | 3 |
| THR A435 | Directing II (3) | 3 |
| THR A490 | Selected Topics in Performance (3) | 3 |
| THR A491 | Selected Topics in Technical Theatre | 3 |

Dance Option (18 credits):

- a. Complete the following required courses (12 credits):

| | | |
|--|---------------------------------|---|
| 4 credits from DNCE A100- or DNCE A200-level technique classes | | 2 |
| DNCE A170 | Dance Appreciation | 3 |
| DNCE A262 | Theory and Improvisation | 2 |
| DNCE A361 | Approaches to Dance Composition | 3 |
- b. Complete 8 credits from the following performance area courses:

| | | |
|-----------|---|---|
| DNCE A101 | Fundamentals of Ballet I (2) | 2 |
| DNCE A121 | Fundamentals of Modern I (2) | 2 |
| DNCE/ | | |
| THR A124 | Dance for Musical Theatre I (2) | 2 |
| DNCE A131 | Fundamentals of Music-Based Jazz I (2) | 2 |
| DNCE A145 | Dances of the West African Diaspora I (2) | 2 |
| DNCE/ | | |
| AKNS A146 | Introduction to Alaska Native Dance (1-2) | 2 |
| DNCE A147 | Popular American Social Dance (2) | 2 |
| DNCE A151 | Fundamentals of Tap I (1) | 1 |
| DNCE A205 | Fundamentals of Ballet II (2) | 2 |
| DNCE A223 | Fundamentals of Modern II (2) | 2 |
| DNCE/ | | |
| THR A224 | Dance for Musical Theatre II (2) | 2 |

| | |
|------------|---|
| DNCE A234 | Fundamentals of Music-Based Jazz II (2) |
| DNCE A245 | Dances of the West African Diaspora II (2) |
| DNCE A253 | Beginning Tap II (1) |
| DNCE A321 | Intermediate Modern I (2) |
| DNCE A322 | Intermediate Modern II (2) |
| DNCE A365 | Dance Repertory and Performance (3) |
| DNCE A395* | Advanced Practicum: Performance (1-3) |
| DNCE A465 | Advanced Performance and Choreographic Workshop (3) |
| THR A222 | Voice for the Actor (3) |

*Note: DNCE A395 may be used for a maximum of 2 credits to meet elective Performance Area Requirements.

4. A total of 120 credits is required for the degree of which 42 credits must be upper division.

Minor, Theatre

Students majoring in another subject who wish to minor in Theatre must complete the following requirements. A total of 18 credits is required for the minor in Theatre.

- Complete the following required courses (9 credits):

| | | |
|----------|----------------------------------|---|
| THR A121 | Introduction to Acting | 3 |
| THR A131 | Theatrical Production Techniques | 3 |
| THR A411 | History of the Theatre I (3) | 3 |
| | or | |
| THR A412 | History of the Theatre II (3) | |
| | Theatre electives | 3 |
- Choose 9 credits from any 200-level or above Theatre course offerings excluding Theatre Practicum 9

Minor, Dance

Students majoring in another subject who wish to minor in Dance must complete the following requirements. A total of 18 credits is required for the minor.

- Complete the following required courses (14 credits):

| | | |
|-----------|---|---|
| DNCE A170 | Dance Appreciation | 3 |
| DNCE A262 | Theory and Improvisation | 2 |
| DNCE A361 | Approaches to Dance Composition | 3 |
| DNCE A370 | Interdisciplinary Dance Studies: Issues and Methods | 3 |
| THR A131 | Theatrical Production Techniques | 3 |
- And choose 4 more credits from the following courses: 4

| | |
|-----------|---|
| DNCE A101 | Fundamentals of Ballet I (2) |
| DNCE A121 | Fundamentals of Modern Dance I (2) |
| DNCE/ | |
| THR A124 | Dance for Musical Theatre I (2) |
| DNCE A131 | Fundamentals of Music-Based Jazz I (2) |
| DNCE A145 | Dances of the West African Diaspora I (2) |
| DNCE/ | |
| AKNS A146 | Introduction to Alaska Native Dance (1-2) |
| DNCE A147 | Popular American Social Dance (2) |
| DNCE A151 | Fundamentals of Tap I (1) |
| DNCE A205 | Fundamentals of Ballet II (2) |
| DNCE A223 | Fundamentals of Modern II (2) |
| DNCE/ | |
| THR A224 | Dance for Musical Theatre II (2) |
| DNCE A234 | Fundamentals of Music-Based Jazz II (2) |
| DNCE A245 | Dances of the West African Diaspora II (2) |
| DNCE A253 | Beginning Tap II (1) |
| DNCE A321 | Intermediate Modern I (2) |
| DNCE A322 | Intermediate Modern II (2) |
| DNCE A365 | Dance Repertory and Performance (3) |
| DNCE A465 | Advanced Performance and Choreographic Workshop (3) |

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WOMEN'S STUDIES

Social Sciences Building (SSB), Room 355 (907) 786-4837
<http://www.uaa.alaska.edu/womensstudies>

The interdisciplinary Women's Studies minor offers students the opportunity to select courses from a variety of academic disciplines. Women's Studies courses are planned to foster open, vigorous inquiry about women, to challenge curricula in which women are absent or peripheral, to question cultural assumptions in light of new information, and to create a supportive environment for those interested in studying women.

Minor, Women's Studies

Students majoring in another subject who wish to minor in Women's Studies must complete the following requirements. A total of 18 credits is required for the minor, of which 9 must be upper division.

- Complete these required courses:

| | | |
|---------|--|---|
| WS A200 | Introduction to Women's and Gender Studies | 3 |
| WS A400 | Feminist Theory | 3 |
| WS A401 | Seminar in Women's Studies* | 3 |
- Complete 9 credits of pre-approved electives. 9

Students must select electives from at least two different disciplines (as defined by prefix). At least one elective must be upper division (300 level or higher). Relevant courses not listed as approved electives may apply with the approval of Women's Studies chair.

| | |
|------------|--|
| ANTH A270 | Women in Cross-cultural Perspective (3) |
| ENGL A403 | Topics in Autobiography (3)** |
| ENGL A404 | Topics in Women's Literature (3) |
| HIST A382 | American Women's History (3) |
| HUMS A350 | Men and Masculinity (3) |
| PSY A313 | Psychology of Women (3) |
| SOC A242 | Introduction to Family, Marriage, and Intimate Relationships (3) |
| SOC A342 | Sexual, Marital and Family Lifestyles (3) |
| SOC A352 | Women and Social Action (3) |
| SOC A377 | Men, Women and Change (3) |
| WS/PS A355 | Women in Politics (3) |
| WS A401 | Seminar in Women's Studies (3)* |

*WS A401: May be taken a second time with a change of subtitle as an elective.

**Counts for Women's Studies minor only when focus is on Women's Autobiography. Taught every other year with this focus.

Note: Other courses may apply to the minor with approval of Women's Studies chair.

FACULTY

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COLLEGE OF BUSINESS AND PUBLIC POLICY

The College of Business and Public Policy serves Alaska and global communities primarily by training and educating the workforce and also promoting excellence in public, private, and nonprofit management and related business disciplines; providing professional assistance to public, private and nonprofit organizations; and conducting basic applied and pedagogical research.

The College of Business and Public Policy has six departments:

(1) Accounting, (2) Business Administration, (3) Computer Information Systems, (4) Economics, (5) Logistics, and (6) Public Administration. A certificate, an Associate of Applied Science, a Bachelor of Business Administration, a Bachelor of Arts in Economics, a Master of Business Administration, a Master of Public Administration, and a Master of Science in Global Supply Chain Management are offered by the College. The College operates the Small Business Development Center, Center for Economic Development, Center for Economic Education, Business Enterprise Institute, and the Institute of Social and Economic Research. The Dean's Executive Advisory Council includes over 10 top executives representing the leading employers in the state. Many local firms offer scholarships, internships, and job opportunities for College of Business and Public Policy students. The College has over 40 full-time faculty with graduate degrees from many of the best universities in the country and extensive business experience. The College maintains a small-school atmosphere with high academic standards. The baccalaureate, Master of Business Administration, and Master of Science in Global Supply Chain Management degree programs are accredited by the AACSB International (The Association to Advance Collegiate Schools of Business). The College of Business and Public Policy offers degree planning sheets that provide a suggested sequence for taking courses within the degree(s); they are not intended to take the place of the degree requirements listed in this catalog. These sheets are available in the CBPP Student Information Office (RH 203).

The College of Business and Public Policy embraces the University's mission to serve Alaska and the global community (with specific focus on the North Pacific Rim) by providing business education leading to associate, baccalaureate, and graduate education, and research/outreach services. The College provides professional training through occupational endorsement and certificate programs in addition to degree programs. The College maintains an environment that values, promotes, develops, and fosters equal treatment of cultural and ethnic groups. Students are trained to meet the ethical, environmental, and moral challenges facing future business leaders. The programs are designed to advance critical thinking and behavioral and communication skills. The faculty strives to stay abreast of advances in modern information technology for educating business students, and we are committed to maintaining state-of-the-art computer laboratory facilities. We serve a student body that is diverse in terms of social and educational background, business experience, learning motives, and career ambitions. The College seeks to meet the needs of our constituents by staying current with emerging trends, by training and educating a competent work force in management and business-related disciplines, and by providing pedagogical, basic and applied research, training, and technical assistance.

ACCOUNTING

Edward & Cathryn Rasmuson Hall (RH), Room 203, (907) 786-4100
www.cbpp.uaa.alaska.edu

The Department of Accounting offers two programs: an Associate of Applied Science (AAS) degree with a major in Accounting and the Bachelor of Business Administration (BBA) degree with a major in Accounting. The programs are designed to prepare students for a career in business, government, or other types of organizations. BBA graduates will generally pursue professional accounting careers, while

AAS graduates will be qualified for vocationally oriented accounting positions. The Department of Accounting is also committed to enhancing the lifelong learning opportunities for responsible citizenship and personal satisfaction where accounting and business dimensions are critical ingredients. The AAS degree in Accounting is available at UAA, Kenai Peninsula College, Kodiak College, and Matanuska-Susitna College campuses.

Associate of Applied Science, Accounting

Admission Requirements

Satisfy the Admission to Certificate and Associate Degree Programs Requirements in Chapter 7, Academic Standards and Regulations.

General University Requirements

1. Complete the General University Requirements for Associate Degrees located at the beginning of this chapter.
2. Complete the Associate of Applied Science General Degree Requirements (15 credits) located at the beginning of this chapter. To provide maximum transferability to the BBA in Accounting, it is recommended that students consider the Bachelor of Business Administration General Education Requirements and business core requirements when selecting courses to fulfill the Associate of Applied Science General Course Requirements and business electives.

Major Requirements

1. Complete the following required courses (36 credits) with a grade of C or better:

| | | |
|--------------|---|---|
| ACCT A101 | Principles of Financial Accounting I | 3 |
| ACCT A102 | Principles of Financial Accounting II | 3 |
| ACCT A202 | Principles of Managerial Accounting | 3 |
| ACCT A210 | Income Tax Preparation | 3 |
| ACCT A222 | Introduction to Computerized Accounting | 3 |
| ACCT A225 | Payroll Accounting | 3 |
| ACCT A230 | Workpaper Preparation and Presentation | 3 |
| BA A151 | Introduction to Business | 3 |
| BA/JUST A241 | Business Law I | 3 |
| CIS A110 | Computer Concepts in Business | 3 |
| ECON A201 | Principles of Macroeconomics | 3 |
| MATH A105 | Intermediate Algebra | 3 |
2. Complete 9 credits of electives. Students may choose any course at the 100 level or above in ACCT, BA, CIS, CIOS, ECON, or LOG but may not use more than 6 credits from one discipline. 9
3. Students using CIOS A260A to meet an AAS Written Communication Skills General Course Requirement may not also apply it as an elective course for this major.
4. Students using an ECON course to meet an AAS General Course Requirement in the Social Sciences discipline may not also apply it as an elective course for this major.
5. Students must complete 6 credits selected from Humanities, Mathematics and Natural Sciences, or Social Sciences from the AAS General Course Requirement Classification List, other than BA A151, ECON A201, and MATH A105.
6. A total of 60 credits is required for the degree.

Bachelor of Business Administration, Accounting

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Admission Requirements to Upper Division Courses

- Completion of at least 39-40 credits with a cumulative GPA of 2.25 or higher.
- Completion of each of the following courses with a grade of C or better:

| | | |
|-----------|---|-----|
| ACCT A201 | Principles of Financial Accounting | 3 |
| ACCT A202 | Principles of Managerial Accounting | 3 |
| BA A273 | Introduction to Statistics for Business and Economics | 3 |
| CIS A110 | Computer Concepts in Business | 3 |
| CIS A280 | Managerial Communications | 3 |
| ECON A201 | Principles of Macroeconomics | 3 |
| ECON A202 | Principles of Microeconomics | 3 |
| ENGL A111 | Methods of Written Communication | 3 |
| ENGL A212 | Technical Writing | 3 |
| MATH A107 | College Algebra (4) | 3-4 |
| | or | |
| MATH A172 | Applied Finite Mathematics (3) | |
| | Oral communication skills GER | 3 |
| | COMM A111 Fundamentals of Oral Communication (3) | |
| | or | |
| | COMM A241 Public Speaking (3) | |
- Completion of any combination of at least 9 credits in the following General Education disciplinary areas:

| | | |
|------------------|--|---|
| Fine Arts | | |
| Humanities | | |
| Natural Sciences | | 9 |

Admission to Upper Division Status

BBA students in Accounting who do not meet the above standards may not take upper division courses in ACCT, BA, CIS, or LOG.

Other students who meet course prerequisites may take up to 15 upper division ACCT, BA, CIS and LOG credits without being formally admitted to a BBA program. All students must apply for admission to a BBA program before accumulating more than 15 such credits. Please contact the Student Information Office for assistance in applying for admission to upper division standing within the College of Business and Public Policy.

Conditional Admission to Upper Division Status

A student classified as being conditionally admitted to upper division status may take upper division ACCT, BA, CIS, and LOG courses for one semester only, while completing lower division deficiencies.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. College of Business and Public Policy Requirements for Accounting Majors

Students earning a BBA degree must complete at least 50 percent of their required business credits at the University of Alaska Anchorage. All ACCT, BA, CIS, ECON, LGOP, and LOG courses are considered business credits for the purpose of this requirement.

- Complete the BBA core requirements:
The following courses must be completed with a grade of C or better.

| | | |
|------------|---|-----|
| ACCT A201* | Principles of Financial Accounting | 3 |
| ACCT A202 | Principles of Managerial Accounting | 3 |
| BA A273 | Introduction to Statistics for Business and Economics | 3 |
| CIS A110 | Computer Concepts in Business | 3 |
| CIS A280 | Managerial Communications | 3 |
| ECON A201 | Principles of Macroeconomics | 3 |
| ECON A202 | Principles of Microeconomics | 3 |
| ENGL A212 | Technical Writing | 3 |
| MATH A107 | College Algebra (4) | 3-4 |
| | or | |
| MATH A172 | Applied Finite Mathematics (3) | |
| MATH A200 | Calculus I (4) | 3-4 |
| | or | |
| MATH A272 | Applied Calculus (3) | |

*The ACCT A101 Principles of Financial Accounting I and ACCT A102 Principles Financial Accounting II sequence may be used to satisfy the ACCT A201 requirement for this degree.

Note: Students who plan to attend graduate school are encouraged to take MATH A107, MATH A200, MATH A201 Calculus II, MATH A202 Calculus III instead of MATH A172 and MATH A272. MATH A108 Trigonometry is a prerequisite for MATH A200.

- Complete these upper division core courses with a grade of C or better:

| | | |
|-----------|------------------------------------|---|
| ACCT A316 | Accounting Information Systems II | 3 |
| BA A300 | Organizational Theory and Behavior | 3 |
| BA A325 | Corporate Finance | 3 |
| BA A343 | Principles of Marketing | 3 |
| BA A377 | Operations Management | 3 |
| BA A462 | Strategic Management | 3 |

D. Major Requirements

- Complete the following requirements with a grade of C or better:

| | | |
|--------------|-------------------------------------|---|
| ACCT A216 | Accounting Information Systems I | 3 |
| ACCT A301 | Intermediate Accounting I | 3 |
| ACCT A302 | Intermediate Accounting II | 3 |
| ACCT A310 | Income Tax | 3 |
| ACCT A342 | Managerial Cost Accounting | 3 |
| ACCT A452 | Auditing (GER Integrative Capstone) | 3 |
| BA/JUST A241 | Business Law I | 3 |
| | Accounting electives | 6 |

Approved Accounting electives (6 credits) must be selected from the following courses and passed with a C or better:

| | | |
|-----------|--|---|
| ACCT A401 | Advanced Accounting (3) | |
| ACCT A410 | Advanced Income Tax (3) | |
| ACCT A420 | Fraud Examination (3) | |
| ACCT A430 | Governmental and Non-for-Profit Accounting (3) | |
| | Upper division ECON elective (3) | 3 |
| | or | |
| BA A375 | Statistics for Business and Economics (3) | |

- A total of 120 credits is required for the degree, of which 42 credits must be upper division.

Minor, Accounting*

Students who wish to minor in Accounting must complete the following requirements. A total of 18 credits is required for the minor.

| | | |
|-----------|-------------------------------------|----|
| ACCT A201 | Principles of Financial Accounting | 3 |
| ACCT A202 | Principles of Managerial Accounting | 3 |
| | Upper division Accounting electives | 12 |

*Not available to BBA Accounting majors.

FACULTY

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BUSINESS ADMINISTRATION

Edward & Cathryn Rasmuson Hall (RH), Room 203, (907) 786-4100
www.cbpp.uaa.alaska.edu

The Department of Business Administration offers a Certificate in Small Business Management at the Kenai campus; an AAS degree in General Business at the Kenai and Kodiak campuses; an AAS degree in Small Business Administration at the Anchorage, Kenai, and Mat-Su campuses; as well as a BBA degree in Economics, Finance, Global Logistics and Supply Chain Management, Management, and Marketing on the Anchorage campus. A Business Administration minor is also available on the Anchorage campus. These are professional programs designed to meet the challenges of a dynamic and changing business environment. Graduates in business find job opportunities in Alaska, throughout the United States and in many foreign countries.

The BBA in Finance prepares students for entry-level financial management jobs in corporations, nonprofit organizations, and financial institutions; financial analysis with brokerage and money management firms; financial planning services; real estate; and financial consulting to small business. Furthermore, it prepares a student for graduate studies in finance.

Students will gain knowledge in the concepts of financial planning, analysis and management in a global context; the functions, structures, delivery systems, efficiency and performance of financial markets and institutions; the concepts, techniques and strategies of investment in financial and real assets; the creation of values for the stockbrokers, stakeholders and society; and the value of financial securities and the enterprise.

The BBA in Management prepares students for entry-level general management jobs in corporations, nonprofit organizations, and government; personnel and benefits management; recruitment and career planning services; conflict resolution and arbitration; and management consulting to small business. Furthermore, it prepares a student for graduate studies in management.

Students will gain knowledge in the concepts of organizational theory, design and development in a global context; the study of human behaviors and interactions within an organization; the management of human resources of an organization; negotiations, conflict resolutions and arbitrations; the formulation of strategies for the management of total organization in an ever-changing environment; and the value of ethics and social responsibility.

The BBA in Marketing prepares students for entry-level marketing jobs in corporations and retail organizations, promotion and advertising, purchasing and distribution, market research and sales forecasting, and marketing consulting to small businesses. Furthermore, it prepares students for graduate studies in marketing.

Students will gain knowledge in the principles of marketing and its essential role in business and society; the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods, and services in local, national and global markets; and designing, executing and analyzing marketing research for sales forecasting; through focused studies in consumer behavior, international marketing, retail, promotional and marketing management.

Undergraduate Certificate, Small Business Management

Kenai Peninsula College (KPC)
 156 College Road, Soldotna, Alaska 99669, (907) 262-0300
www.kpc.alaska.edu

The Small Business Management Certificate program is offered only at Kenai Peninsula College. Advising for this program is only available from the Business faculty at Kenai Peninsula College. Please call (907) 262-0344 for more information.

Graduates of the UAA Small Business Management program will have the ability to:

1. Explain basic accounting reports, cash flow, and budgets;
2. Demonstrate basic supervision skills and identify important human behavioral traits;
3. Describe fundamental marketing functions and strategy, basic selling principles, and necessary interpersonal skills for customer relations;
4. List and explain economics terms and concepts from a macro and micro perspective;
5. Use computers for word processing and spreadsheets for data analysis;
6. Communicate ideas in a variety of modes; and
7. Identify the impact of business from ethical, legal, and social responsibility points of view.

Admission Requirements

Complete university admissions requirements for certificates found in Chapter 7, Academic Standards and Regulations.

General University Requirements

Complete the General University Requirements for Undergraduate Certificates located at the beginning of this chapter.

1. Complete the following communication requirements:

| | | |
|--------------------------------------|--|---|
| ENGL A111 | Methods of Written Communication | 3 |
| Select 3 credits from the following: | | 3 |
| ENGL A211 | Academic Writing About Literature (3) | |
| *ENGL A212 | Technical Writing (Recommended) (3) | |
| ENGL A213 | Writing in the Social and Natural Sciences (3) | |
| ENGL A214 | Persuasive Writing (3) | |
| CIOS A260A | Business Communications (3) | |

**Note: ENGL A212 is required for a UAA four-year degree in Business.*
2. Complete the following major requirements:

| | | |
|-------------|--|---|
| BA A166 | Small Business Management | 3 |
| BA A231 | Fundamentals of Supervision | 3 |
| **ACCT A101 | Principles of Financial Accounting I (3) | 3 |
| or | | |
| ACCT A120 | Bookkeeping for Business I (Not offered at KPC) (3) | |
| or | | |
| **ACCT A201 | Principles of Financial Accounting (Not offered at KPC) (3) | |
| **ACCT A102 | Principles of Financial Accounting II (3) | 3 |
| or | | |
| ACCT A202 | Principles of Managerial Accounting (3) | |
| or | | |
| ACCT A222 | Introduction to Computerized Accounting (3) | |

***Students taking ACCT A101 & ACCT A102 cannot use ACCT A201 for credit toward certificate.*
3. Complete 9 credits from the following departments: 9

| | |
|--------------------------------|----------------------------------|
| ACCT, BA, CIOS, CIS, ECON | |
| The following are recommended: | |
| ECON A201 | Principles of Macroeconomics (3) |
| ECON A202 | Principles of Microeconomics (3) |
| CIOS A101 (A, B or C) | Keyboarding (1-3) |

4. Complete 3 elective credits. 3
5. A total of 30 credits is required for the certificate.

FACULTY

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 Thomas Dalrymple, Assistant Professor, IFTAD@uaa.alaska.edu
 Ray Zagorski, Associate Professor, IFRZ@uaa.alaska.edu

Associate of Applied Science, General Business

Kenai Peninsula College (KPC)
 156 College Road, Soldotna, Alaska, 99669, (907) 262-0300
 www.kpc.alaska.edu

Kodiak College (KOC)
 117 Benny Benson Drive, Kodiak, Alaska 99615, (907) 745-9711
 www.koc.alaska.edu

Matanuska-Susitna College (MSC)
 Mile Two Trunk Road, Palmer, Alaska 99645, (907) 745-9774
 www.matsu.alaska.edu

This is a flexible two-year degree program providing a solid business foundation and preparation for career advancement. It prepares graduates to apply principles and skills relating to accounting, management, marketing, finance, economics, and business law to businesses of all sizes. Graduates will be able to practice relevant business skills, meet the diverse needs of a business to achieve organizational goals, start and manage their own small business, and communicate effectively and manage their business affairs with professionalism, integrity, and a spirit of inquiry.

The graduates of the UAA General Business program will have the ability to:

1. Apply the principles and skills relating to accounting, management, and marketing, finance, economics and business law to businesses of all sizes;
2. Practice the business skills relevant to the specific company or industry of their present or future employment;
3. Manage or supervise specialists with consideration for all aspects of business;
4. Integrate the diverse needs of a business to achieve organizational goals;
5. Start and manage their own small businesses;
6. Communicate effectively orally and in writing;
7. Effectively deal with subordinates, superiors, customers, and other stakeholders in professional matters; and
8. Manage their business affairs with professionalism, integrity, and a spirit of inquiry.

Admission Requirements

Complete university admissions requirements for associate degrees found in Chapter 7, Academic Standards and Regulations.

General University Requirements

1. Complete the General University and the General Course Requirements for Associate of Applied Science Degrees located at the beginning of this chapter.
2. Complete the Associate of Applied Science General Course Requirements (15 credits) located at the beginning of this chapter. Of the courses needed to satisfy the General Course Requirements, one must be MATH A105 or higher.

Communication and General Course Requirements

Oral Communications Courses

- Select 3 credits from the following: 3
- COMM A111 Fundamentals of Oral Communication (3)
 COMM A235 Small Group Communication (3)
 COMM A237 Interpersonal Communication (3)

COMM A241 Public Speaking (3)

Written Communication Courses

- Select 6 credits from the following: 6
- ENGL A111 Methods of Written Communication (required) (3)
 ENGL A211 Academic Writing About Literature (3)
 ENGL A212 Technical Writing (3)
 ENGL A213 Writing in the Social and Natural Sciences (3)
 CIOS A260A Business Communications (3)

Humanities* Social Sciences, Mathematics, Natural Sciences

- Select 6 credits from approved General Course Requirements: 6
- MATH A105 Intermediate Algebra or higher level (required) (3)
 and 3 more credits from an approved course

*Note: Any English courses used to satisfy humanities General Course Requirements must be different from the written communications requirement and have a course number higher than ENGL A111.

Major Requirement Courses

1. Complete the following required courses:

| | | |
|--------------|---------------------------------------|---|
| ACCT A101 | Principles of Financial Accounting I | 3 |
| ACCT A102 | Principles of Financial Accounting II | 3 |
| ACCT A202 | Principles of Managerial Accounting | 3 |
| BA A151 | Introduction to Business | 3 |
| BA A231 | Fundamentals of Supervision | 3 |
| BA/JUST A241 | Business Law I | 3 |
| BA A260 | Marketing Practices | 3 |
| BA A264 | Personal Selling | 3 |
| CIS A110 | Computer Concepts in Business | 3 |
| ECON A201 | Principles of Macroeconomics | 3 |
2. Major elective courses: 6 credits 6
 Advisor approved courses from the following programs:
 ACCT, BA, CIS, CS, ECON
3. Electives: 9 credits 9
4. A total of 60 credits is required for the degree.

FACULTY

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 Ray Zagorski, Associate Professor, IFRZ@uaa.alaska.edu

Associate of Applied Science, Small Business Administration

Admission Requirements

Satisfy the Admission to Certificate and Associate Degree Programs Requirements in Chapter 7, Academic Standards and Regulations.

General University Requirements

1. Complete the General University Requirements for Associate Degrees located at the beginning of this chapter.
2. Complete the Associate of Applied Science General Course Requirements (15 credits) located at the beginning of this chapter. To provide maximum transferability, it is recommended that students consider the Bachelor of Business Administration General Education Requirements and business core requirements when selecting courses to fulfill the Associate of Applied Science General Course Requirements.

Major Requirements

1. Complete the required support courses:

| | | |
|-----------|---|-----|
| ACCT A101 | Principles of Financial Accounting I (3) | 3-6 |
| | and | |
| ACCT A102 | Principles of Financial Accounting II (3) | |
| | or | |
| ACCT A201 | Principles of Financial Accounting (3) | |

| | | |
|-----------|-------------------------------------|-----|
| ACCT A202 | Principles of Managerial Accounting | 3 |
| CIS A110 | Computer Concepts in Business | 3 |
| MATH A105 | Intermediate Algebra (3) | 3-4 |
| | or | |
| MATH A107 | College Algebra (4) | |
| | or | |
| MATH A172 | Applied Finite Mathematics (3) | |

Note: MATH A105 will not satisfy the quantitative skills General Education Requirement for the baccalaureate degree.

- Complete the required BA core courses:

| | | |
|--------------|-----------------------------|---|
| BA A151 | Introduction to Business | 3 |
| BA A166 | Small Business Management | 3 |
| BA A231 | Fundamentals of Supervision | 3 |
| BA A233 | Survey of Finance | 3 |
| BA/JUST A241 | Business Law I | 3 |
| BA A260 | Marketing Practices | 3 |
| BA A264 | Personal Selling | 3 |
- Complete 9-12 credits of electives from the following: 9-12

| | | |
|--------------|---|--|
| BA A131 | Personal Finance (3) | |
| BA/JUST A242 | Business Law II (3) | |
| BA A273 | Introduction to Statistics for Business and Economics (3) | |
| LGOP A110 | Logistics, Information Systems and Customer Service (3) | |
| LGOP A120 | Warehouse and Inventory Control Operations (3) | |
| LGOP A160 | Purchasing and Supply Management (3) | |

 or any 300-level business course provided the prerequisites have been met. All ACCT, BA, CIS, ECON, LGOP, and LOG are considered business courses.*
- Students must complete 6 credits selected from Humanities, Mathematics and Natural Sciences, or Social Sciences from the AAS General Course Requirement Classification List, other than BA A151 and MATH A105, or MATH A107/MATH A172.
- A total of 60 credits is required for the degree.

*Students who may decide to pursue a Bachelor of Business Administration degree can maximize transferability of their credits by taking MATH A107 or MATH A172, BA A273, and any 300-level business course as long as prerequisites have been completed.

Note: Students planning to go on to a BBA degree must have a grade of C or better in all business courses.

Bachelor of Business Administration

Major areas: **Economics**

Finance

Global Logistics and Supply Chain Management

Management

Marketing

The Bachelor of Business Administration (BBA) is a professional degree offered through the College of Business and Public Policy. It is designed to prepare students to pursue meaningful and rewarding careers in management. The curriculum for the BBA degree is management-oriented rather than highly specialized. Concepts that are relevant to both small and large firms and both the public and private sectors are emphasized.

The five majors — Economics, Finance, Global Logistics and Supply Chain Management, Management, and Marketing are designed to prepare students to pursue careers in the private and public sectors. Local, state, national, and international firms, and not-for-profit organizations provide a ready market for graduates in each of these five major areas of concentration.

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Admission Requirements to Upper Division Courses

- Completion of at least 39-40 credits with a cumulative GPA of 2.25 or higher.
- Completion of each of the following courses with a grade of C or better:

| | | |
|-------------------------------|---|-----|
| ACCT A201 | Principles of Financial Accounting | 3 |
| ACCT A202 | Principles of Managerial Accounting | 3 |
| BA A273 | Introduction to Statistics for Business and Economics | 3 |
| CIS A110 | Computer Concepts in Business | 3 |
| CIS A280 | Managerial Communications | 3 |
| ECON A201 | Principles of Macroeconomics | 3 |
| ECON A202 | Principles of Microeconomics | 3 |
| ENGL A111 | Methods of Written Communication | 3 |
| ENGL A212 | Technical Writing | 3 |
| MATH A107 | College Algebra (4) | 3-4 |
| | or | |
| MATH A172 | Applied Finite Mathematics (3) | |
| Oral Communication Skills GER | | 3 |
| COMM A111 | Fundamentals of Oral Communication (3) | |
| | or | |
| COMM A241 | Public Speaking (3) | |
- Completion of any combination of at least 9 credits in the following General Education disciplinary areas: 9

| | |
|------------------|--|
| Fine Arts | |
| Humanities | |
| Natural Sciences | |

Admission to Upper Division Status

BBA students in Economics, Finance, Global Logistics and Supply Chain Management, Management, and Marketing who do not meet the above standards may not take upper division courses in ACCT, BA, CIS, or LOG.

Other students who meet course prerequisites may take up to 15 upper division ACCT, BA, CIS, and LOG credits without being formally admitted to a BBA program. All students must apply for admission to a BBA program before accumulating more than 15 such credits. Please contact the Student Information Office for assistance in applying for admission to upper division standing within the College of Business and Public Policy.

Conditional Admission to Upper Division Status

A student classified as being conditionally admitted to upper division status may take upper division ACCT, BA, CIS, and LOG courses for one semester only, while completing lower division requirements.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. College of Business and Public Policy Requirements

Economics, Finance, Management, Global Logistics and Supply Chain Management and Marketing Majors

Students earning a BBA degree must complete at least 50 percent of their required business credits at the University of Alaska Anchorage. All ACCT, BA, CIS, ECON, LGOP and LOG courses are considered business credits for the purpose of this requirement.

- Complete the Business core requirements. The following courses must be completed with a C or better:

| | | |
|--------------|---|-----|
| ACCT A201* | Principles of Financial Accounting | 3 |
| ACCT A202 | Principles of Managerial Accounting | 3 |
| BA/JUST A241 | Business Law I | 3 |
| BA A273 | Introduction to Statistics for Business and Economics | 3 |
| CIS A110 | Computer Concepts in Business | 3 |
| CIS A280 | Managerial Communications | 3 |
| ECON A201 | Principles of Macroeconomics | 3 |
| ECON A202 | Principles of Microeconomics | 3 |
| ENGL A212 | Technical Writing | 3 |
| MATH A107 | College Algebra (4) | 3-4 |
| | or | |
| MATH A172 | Applied Finite Mathematics (3) | |
| MATH A200 | Calculus I (4) | 3-4 |
| | or | |
| MATH A272 | Applied Calculus (3) | |

*The ACCT A101 Principles of Financial Accounting I and ACCT A102 Principles of Financial Accounting II sequence may be used to satisfy the ACCT A201 requirement for this degree.

Note: Students who plan to attend graduate school are encouraged to take MATH A107 and MATH A200 instead of MATH A172 and MATH A272. MATH A108 Trigonometry is a prerequisite for MATH A200.

- Complete these upper division core courses. The following courses must be completed with a C or better prior to graduating:

| | | |
|----------|------------------------------------|---|
| BA A300 | Organizational Theory and Behavior | 3 |
| BA A325 | Corporate Finance | 3 |
| BA A343 | Principles of Marketing | 3 |
| BA A377 | Operations Management | 3 |
| BA A462 | Strategic Management | 3 |
| CIS A376 | Management Information Systems | 3 |

(GER Integrative Capstone)

C. Major Requirements

Economics Major

- Complete the following requirements. The following courses must be completed with a C or better prior to graduating:

| | | |
|-----------|---|----|
| ECON A312 | Econometrics for Business and Economics | 3 |
| ECON A321 | Intermediate Microeconomics | 3 |
| ECON A324 | Intermediate Macroeconomics | 3 |
| ECON A492 | Seminar in Economic Research | 3 |
| | Upper division Economics electives* | 12 |

*Note: No more than a total of 6 credits earned in an independent study, or ECON A454 Economics Internship, may be used to satisfy requirements for the major (6 credits of independent study or 3 credits of independent study and 3 credits of ECON A454).
- A total of 120 credits is required for the degree, of which a minimum of 45 credits must be upper division.

Finance Major

All courses must be completed with a C or better prior to graduating.

1. Investment Concentration (30 credits)

- Complete the following:

| | | |
|--------------|---|---|
| BA/JUST A242 | Business Law II | 3 |
| BA A375 | Statistics for Business and Economics (3) | |
| | or | |
| ECON A312 | Econometrics for Business and Economics (3) | |
| | or | |
| ECON A429 | Business Forecasting (3) | |
| BA A380 | Investment Management | 3 |
| BA A385 | Advanced Corporate Finance | 3 |

- Complete at least 12 credits from the following: 12-18

| | | |
|----------|------------------------------------|--|
| BA A426 | Financial Institutions (3) | |
| BA A427 | International Finance (3) | |
| BA A451 | Advanced Investment Strategies (3) | |
| BA A452 | Financial Derivatives (3) | |
| BA A453 | Bond Market Analysis (3) | |
| BA A491A | Student Managed Portfolio (3) | |
- Complete 0 to 6 credits of upper division business electives. 0-6

2. Real Estate and Property Management Concentration (30 credits)

- Complete the following:

| | | |
|--------------|-----------------------------------|---|
| BA A131 | Personal Finance | 3 |
| BA/JUST A242 | Business Law II | 3 |
| BA A306 | Real Estate Principles | 3 |
| BA A315 | Property Management and Marketing | 3 |
| BA A320 | Real Estate Finance | 3 |
 - Complete at least 9 credits from the following: 9-15

| | | |
|---------|------------------------------------|--|
| BA A385 | Advanced Corporate Finance (3) | |
| BA A395 | Property Management Internship (3) | |
| BA A426 | Financial Institutions (3) | |
| BA A431 | Real Estate Appraisal (3) | |
| BA A432 | Real Estate Law (3) | |
 - Complete 0 to 6 credits upper division business electives 0-6
3. A total of 120 credits is required for the degree, of which a minimum of 45 credits must be upper division.

Global Logistics and Supply Chain Management Major

- Complete the following requirements. The following courses must be completed with a grade of C or better prior to graduating:

| | | |
|----------|---|---|
| LOG A378 | Foundations of Logistics and Supply Chain Management | 3 |
| LOG A379 | Transportation Management | 3 |
| LOG A415 | Purchasing Management | 3 |
| LOG A416 | International Logistics and Transportation Management | 3 |
| LOG A417 | Materials Management | 3 |
- Complete LOG A495 Internship in Global Logistics and Supply Chain Management* 3

*The internship is intended to be in logistics and/or supply chain management. This requirement may be waived if the major advisor determines that the student already has significant logistics work experience. If waived, the student will need to select 3 additional upper division credits to total 45.
- Complete 9 credits of upper division program electives approved by the student's advisor with a grade of C or better. These may include, but are not limited to the following: 9

| | | |
|-----------|--|--|
| ACCT A342 | Managerial Cost Accounting (3) | |
| AT A420 | Air Transportation System (3) | |
| ATP A332 | Transport Aircraft Systems (3) | |
| BA A375 | Statistics for Business and Economics (3) | |
| BA A420 | Marketing Research (3) | |
| BA A447 | International Marketing (3) | |
| BA A487 | International Management (3) | |
| CIS A310 | Analysis of Business Systems (3) | |
| CIS A330 | Database Management Systems (3) | |
| CIS A410 | Project Management (3) | |
| CIS A489 | Systems Design, Development and Implementation (3) | |
| ECON A312 | Econometrics for Business and Economics (3) | |
| ECON A363 | International Economics (3) | |
| ECON A429 | Business Forecasting (3) | |

4. A total of 120 credits is required for the degree, of which a minimum of 45 credits must be upper division.

Management Major

- Complete the following requirements. The following courses must be completed with a C or better prior to graduating:

| | | |
|---|--|----|
| BA A361 | Human Resource Management | 3 |
| BA A461 | Negotiations and Conflict Management | 3 |
| BA A481 | Applications in Management | 3 |
| BA A488 | Environment of Business | 3 |
| BA A489 | Entrepreneurship and New Business Planning | 3 |
| Upper division electives in ACCT, BA, CIS, ECON, or LOG | | 12 |
- A total of 120 credits is required for the degree, of which a minimum of 45 credits must be upper division.

Marketing Major

- Complete the following requirements. The following courses must be completed with a C or better prior to graduating:

| | | |
|-----------|---|---|
| BA A264 | Personal Selling | 3 |
| BA A381 | Consumer Behavior | 3 |
| BA A420 | Marketing Research | 3 |
| BA A460 | Marketing Management | 3 |
| BA A375 | Statistics for Business and Economics (3) | 3 |
| or | | |
| ECON A312 | Econometrics for Business and Economics (3) | |
| or | | |
| ECON A429 | Business Forecasting (3) | |
- Complete an additional 6 credits of upper division courses with a grade of C or better prior to graduating: 6

Upper division Business electives recommended:

| | | |
|---------|-----------------------------|--|
| BA A447 | International Marketing (3) | |
| BA A463 | Promotion Management (3) | |
- A total of 120 credits is required for the degree, of which a minimum of 45 credits must be upper division.

Minor, Business Administration *

Students majoring in another subject who wish to minor in Business Administration must complete the following requirements. A total of 21 credits is required for the minor. Prerequisites for these courses must also be satisfied.

| | | |
|-----------------------------------|-------------------------------------|---|
| ACCT A201 | Principles of Financial Accounting | 3 |
| ACCT A202 | Principles of Managerial Accounting | 3 |
| ECON A201 | Principles of Macroeconomics | 3 |
| ECON A202 | Principles of Microeconomics | 3 |
| Upper division Business electives | | 9 |

* Not available to BBA majors.

Minor, Real Estate *

Students majoring in another subject who wish to minor in Real Estate must complete the following requirements. All courses must be completed with a C or better. Students pursuing a baccalaureate degree outside the College of Business and Public Policy should see the departmental advisor.

- Complete the following:

| | | |
|--------------|------------------------|---|
| BA A131 | Personal Finance | 3 |
| BA/JUST A241 | Business Law I | 3 |
| BA/JUST A242 | Business Law II | 3 |
| BA A306 | Real Estate Principles | 3 |
| BA A320 | Real Estate Finance | 3 |
- Complete 6 credits from the following: 6

| | | |
|---------|---------------------------------------|--|
| BA A315 | Property Management and Marketing (3) | |
| BA A395 | Property Management Internship (3) | |

| | |
|---------|----------------------------|
| BA A426 | Financial Institutions (3) |
| BA A431 | Real Estate Appraisal (3) |
| BA A432 | Real Estate Law (3) |

*Not available to BBA Finance majors.

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COMPUTER INFORMATION SYSTEMS

Edward & Cathryn Rasmuson Hall (RH), Room 203, (907) 786-4100
www.cbpp.uaa.alaska.edu

The Computer Information Systems Department provides educational opportunities in computer information systems through degree programs, courses for all students, and career-enrichment opportunities.

Courses involving computer instruction, as well as many other business school courses, are supported by seven computerized classrooms and state-of-the-art open laboratory facilities. These computer classrooms and labs provide students with hands-on learning experiences using the latest Intel workstations supported by state-of-the-art network servers. Our computer environment features several state-of-the-art software and tools for business information systems integration, development, and management.

College of Business and Public Policy students have the opportunity to use the computer facilities to help them with their coursework. Laboratories include special business presentation facilities, and an experimental multimedia and a decision-support room.

Computer courses are taught using both structured instructor-led and self-guided tutorial approaches in the traditional classroom as well as online discussions.

Computer Information Systems Degree Programs

The College of Business and Public Policy prepares students for computer careers in computer programming and systems design, network administration and database administration through our Associate of Applied Science in Business Computer Information Systems (BCIS). Students are prepared for computer careers in systems analysis and design, e-commerce, web design, end-user computing, managing information systems, databases and networks, and associated occupations through the Management Information Systems (MIS) major in the Bachelor of Business Administration. Both degrees are based on the Association of Information Technology Professionals (AITP) model curriculum and are linked so that the diligent student can move from the two-year to the four-year degree without losing credits.

Both degrees emphasize using computers within business and public sector settings through hands-on teaching methods. The student is prepared for the technical and security aspects of the computer environment as well as the techniques and issues of managing information resources through the introduction of the theories followed by hands-on experience with the associated application.

Computer career education in the College of Business and Public Policy is enhanced by work and internship opportunities both within our own laboratories and with business and government facilities.

Associate of Applied Science, Business Computer Information Systems

Admission Requirements

Satisfy the Admission to Certificate and Associate Degree Program Requirements in Chapter 7, Academic Standards and Regulations. English and math placement tests are given by the Advising and Testing Center. A faculty advisor can assist students by recommending the proper levels of entry and appropriate CIS course plan. Students who are not proficient in typing (a minimum of 30 words per minute) should enroll in CIOS A101A Keyboarding A: Basic Keyboarding. Students must be able to read and comprehend technical manuals and texts.

Academic Progress

A grade of C or better is required to continue in each higher CIS course. To take upper division Information Systems program courses, students must complete lower division degree requirements and apply for upper division standing.

General University Requirements

- Complete the General University Requirements for Associate Degrees located at the beginning of this chapter.
- Complete the Associate of Applied Science General Course Requirements (15 credits) located at the beginning of this chapter. ENGL A212 is recommended. For the General Course Requirements, it is strongly recommended that students select 6 credits from humanities, math and natural sciences or social sciences that meet both the AAS and the baccalaureate General Education Requirements.

Major Requirements

- Complete the breadth requirements (21-22 credits):

| | | |
|------------|--|-----|
| ACCT A201* | Principles of Financial Accounting | 3 |
| ACCT A202 | Principles of Managerial Accounting | 3 |
| CIS A110 | Computer Concepts in Business | 3 |
| ECON A201 | Principles of Macroeconomics | 3 |
| ECON A202 | Principles of Microeconomics | 3 |
| MATH A107 | College Algebra (4) | 3-4 |
| | or | |
| MATH A172 | Applied Finite Mathematics (3) | 3 |
| | General Education Requirement elective** | 3 |

**The ACCT A101 Principles of Financial Accounting I and ACCT A102 Principles of Financial Accounting II sequence may be used to satisfy the ACCT A201 requirement for this degree.*

***Choose humanities or natural sciences course that meets both AAS and General Education Requirements for baccalaureate degrees.*
- Complete the Business core requirement:

| | | |
|---------|---|---|
| BA A273 | Introduction to Statistics for Business and Economics | 3 |
|---------|---|---|
- Complete CIS required courses (12 credits):

| | | |
|----------|--|---|
| CIS A210 | Contemporary Business Applications Development | 3 |
| CIS A310 | Analysis of Business Systems | 3 |
| CIS A330 | Database Management Systems | 3 |
| CIS A345 | Managing Data Communications and Computer Networks | 3 |
- Complete elective credits approved by a CIS Department advisor.

| | | |
|--|--|---|
| | | 9 |
|--|--|---|

No more than 3 credits of internship can be used to fulfill program electives.

- A minimum of 12 credits from Major Requirements, items 3 and 4 above, must be earned at the University of Alaska Anchorage.
- A total of 60-61 credits is required for the degree.

Bachelor of Business Administration, Management Information Systems

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Admission Requirements to Upper Division Courses

- Completion of at least 39-40 credits with a cumulative GPA of 2.25 or higher.
- Completion of each of the following courses with a grade of C or better:

| | | |
|-----------|---|-----|
| ACCT A201 | Principles of Financial Accounting | 3 |
| ACCT A202 | Principles of Managerial Accounting | 3 |
| BA A273 | Introduction to Statistics for Business and Economics | 3 |
| CIS A110 | Computer Concepts in Business | 3 |
| CIS A280 | Managerial Communications | 3 |
| ECON A201 | Principles of Macroeconomics | 3 |
| ECON A202 | Principles of Microeconomics | 3 |
| ENGL A111 | Methods of Written Communication | 3 |
| ENGL A212 | Technical Writing | 3 |
| MATH A107 | College Algebra (4) | 3-4 |
| | or | |
| MATH A172 | Applied Finite Mathematics (3) | 3 |
| | Oral Communication Skills GER | 3 |
| | COMM A111 Fundamentals of Oral Communication (3) | |
| | or | |
| | COMM A241 Public Speaking (3) | |
- Completion of any combination of at least 9 credits in the following General Education disciplinary areas:

| | | |
|--|------------------|---|
| | Fine Arts | 9 |
| | Humanities | |
| | Natural Sciences | |

Admission to Upper Division Status

BBA students in Management Information Systems who do not meet the above standards may not take upper division courses in ACCT, BA, CIS, or LOG.

Other students who meet course prerequisites may take up to 15 upper division ACCT, BA, CIS, and LOG credits without being formally admitted to a BBA program. All students must apply for admission to a BBA program before accumulating more than 15 such credits. Please contact the Student Information Office for assistance in applying for admission to upper division standing within the College of Business and Public Policy.

Conditional Admission to Upper Division Status

A student classified as being conditionally admitted to upper division status may take upper division ACCT, BA, CIS and LOG courses for one semester only, while completing lower division deficiencies.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. College of Business and Public Policy Requirements: Management Information Systems Major

Students earning a BBA degree must complete at least 50 percent of their required business credits at the University of Alaska Anchorage. All ACCT, BA, CIS, ECON, LGOP, and LOG courses are considered business credits for the purpose of this requirement.

1. Complete the Business core requirements with a grade of C or better (33-35 credits):

| | | |
|--------------|---|-----|
| ACCT A201* | Principles of Financial Accounting | 3 |
| ACCT A202 | Principles of Managerial Accounting | 3 |
| BA/JUST A241 | Business Law I | 3 |
| BA A273 | Introduction to Statistics for Business and Economics | 3 |
| CIS A110 | Computer Concepts in Business | 3 |
| CIS A280 | Managerial Communications | 3 |
| ECON A201 | Principles of Macroeconomics | 3 |
| ECON A202 | Principles of Microeconomics | 3 |
| ENGL A212 | Technical Writing | 3 |
| MATH A107 | College Algebra (4) | 3-4 |
| | or | |
| MATH A172 | Applied Finite Mathematics (3) | |
| MATH A200 | Calculus I (4) | 3-4 |
| | or | |
| MATH A272 | Applied Calculus (3) | |

*The ACCT A101 and ACCT A102 sequence may be used to satisfy the ACCT A201 requirement for this degree.

Note: Students who plan to attend graduate school are encouraged to take MATH A107 and MATH A200, MATH A201 Calculus II, MATH A202 Calculus III instead of MATH A172 and MATH A272. MATH A108 Trigonometry is a prerequisite for MATH A200.

2. Complete the following requirements. The following courses must be completed with a grade of C or better prior to graduating (18 credits):

| | | |
|----------|--|---|
| BA A300 | Organizational Theory and Behavior | 3 |
| BA A325 | Corporate Finance | 3 |
| BA A343 | Principles of Marketing | 3 |
| BA A377 | Operations Management | 3 |
| BA A462 | Strategic Management | 3 |
| CIS A376 | Management Information Systems (GER Integrative Capstone) | 3 |

D. Major Requirements

1. Complete the following required courses with a grade of C or better (18 credits):

| | | |
|----------|--|---|
| CIS A210 | Contemporary Business Applications Development | 3 |
| CIS A310 | Analysis of Business Systems | 3 |
| CIS A330 | Database Management Systems | 3 |
| CIS A345 | Managing Data Communications and Computer Networks | 3 |
| CIS A410 | Project Management | 3 |
| CIS A489 | Systems Design, Development and Implementation | 3 |

2. Complete 12 credits of upper division program electives approved by the department with a grade of C or better.

| | | |
|--|---|----|
| These may include, but are not limited to: | | 12 |
| CIS A360 | Object-Oriented Programming in .Net (3) | |
| CIS A361 | Advanced Contemporary Business Applications Development (3) | |
| CIS A365 | Object-Oriented Programming (3) | |

| | | |
|-----------|---|--|
| CIS A375 | E-Training Design and End-User Support (3) | |
| CIS A385 | Multimedia Authoring (3) | |
| CIS A390 | Selected Topics in Management Information Systems (1-6) | |
| CIS A395 | Programmer/Analyst Internship (3) | |
| CIS A430 | Client-Server Programming for Business Applications (3) | |
| CIS A445 | Advanced Network Management (3) | |
| CIS A460 | Web Development in the .Net Environment (3) | |
| CIS A495 | Systems Analyst/User Support Internship (3) | |
| CIS A498 | Individual Research Project (1-6) | |
| ECON A312 | Econometrics for Business and Economics (3) | |
| ECON A429 | Business Forecasting (3) | |

3. A minimum of CIS A489 Systems Design, Development, and Implementation and 9 credits from Major Requirements, items 1 and 2, must be earned at the University of Alaska Anchorage.
4. A total of 120 credits is required for the degree, of which a minimum of 45 credits must be upper division.

Minor, Computer Information Systems

Students majoring in another subject who wish to minor in Computer Information Systems (CIS) must complete the following requirements. A total of 18 credits is required for the minor, 12 of which must be upper division.

| | | |
|------------------------------|--|---|
| CIS A110 | Computer Concepts in Business | 3 |
| CIS A210 | Contemporary Business Applications Development | 3 |
| CIS A330 | Database Management Systems | 3 |
| CIS A376** | Management Information Systems (GER Integrative Capstone) | 3 |
| Upper division CIS electives | | 6 |

*BBA Economics, Finance, Global Logistics, Management, and Marketing degree students must take CIS A310 Analysis of Business Systems, instead of CIS A376 for the minor and 6 credits of upper division IS electives from the following list:

| | | |
|-----------|---|--|
| CIS A360 | Object-Oriented Programming in .Net (3) | |
| CIS A361 | Advanced Contemporary Business Applications Development (3) | |
| CIS A365 | Object-Oriented Programming (3) | |
| CIS A375 | E-Training Design and End-User Support (3) | |
| CIS A385 | Multimedia Authoring (3) | |
| CIS A390 | Selected Topics in Management Information Systems (1-6) | |
| CIS A395 | Programmer/Analyst Internship (3) | |
| CIS A430 | Client-Server Programming for Business Applications (3) | |
| CIS A445 | Advanced Network Management (3) | |
| CIS A460 | Web Development in the .Net Environment (3) | |
| CIS A495 | Systems Analyst/User Support Internship (3) | |
| CIS A498 | Individual Research Project (1-6) | |
| ECON A312 | Econometrics for Business and Economics (3) | |
| ECON A429 | Business Forecasting (3) | |

All students pursuing a minor in CIS must apply to the College of Business and Public Policy for upper division standing prior to taking any upper division course in CIS. Students pursuing a baccalaureate degree outside the College of Business and Public Policy with a minor in CIS can establish upper division standing by going to the College of Business and Public Policy Student Information Office and certifying they have completed at least 54 credits in their degree program and have completed the General Education Requirements of 6 credits of written communications,

3 credits of oral communication, 3 credits of college algebra (MATH A107 College Algebra or MATH A172 Applied Finite Mathematics or equivalent), and 12 credits in GER courses in fine arts, humanities, social sciences, or natural sciences.

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ECONOMICS

Edward & Cathryn Rasmuson Hall (RH), Room 203, (907) 786-4100
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Economics provides students with a systematic way of understanding activity in the world around them. Economics is a social science that studies how individuals, organizations, and governments make choices about the use of resources. A degree in Economics gives students career opportunities in many fields and provides excellent preparation for those who wish to pursue advanced study in a variety of disciplines. The Economics Department offers courses for both degree and non-degree-seeking students at the undergraduate and graduate levels. Students who wish to major in Economics may choose either the Bachelor of Arts or Bachelor of Business Administration degree. A minor in Economics is also offered.

Honors in Economics

Students majoring in Economics are eligible to graduate with departmental honors if they satisfy all of the following requirements:

1. Meet requirements for BA or BBA in Economics.
2. Maintain a GPA of 3.50 in their major requirements.
3. Complete ECON A492 Seminar in Economic Research with a grade of A, or complete a research paper with a grade of A which demonstrates independent economic research in a semester-length independent study course.
4. Receive an honors score on a comprehensive examination for Economics majors.
5. Students not meeting all these requirements may be awarded honors through a vote of the faculty.

Bachelor of Arts, Economics

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. Major Requirements

1. Complete the following required courses with a grade of C or better:

| | | |
|----------------|---|-----|
| BA A273 | Introduction to Statistics for Business and Economics | 3 |
| ECON A201 | Principles of Macroeconomics | 3 |
| ECON A202 | Principles of Microeconomics | 3 |
| ECON A312 | Econometrics for Business and Economics | 3 |
| ECON A321 | Intermediate Microeconomics | 3 |
| ECON A324 | Intermediate Macroeconomics | 3 |
| ECON A492 | Seminar in Economic Research | 3 |
| MATH A200 | Calculus I (4) | 3-4 |
| | or | |
| MATH A272 | Applied Calculus (3) | |
| Upper division | Economics electives | 12 |

*Note: No more than a total of 6 credits earned in an independent study, or ECON A454 Economics Internship, may be used to satisfy requirements for the major (6 credits of independent study or 3 credits of independent study and 3 credits of ECON A454).

Note: Math skills are important in the study of economics. For this reason, majors are to complete their math requirements early in their program. Students planning on graduate school are advised to take the entire calculus sequence (MATH A200, MATH A201, and MATH A202). MATH A108 Trigonometry is a prerequisite for MATH A200.

2. Students must complete at least 12 credits of their Economics courses in residence at UAA.
3. A total of 120 credits is required for the degree, of which 48 credits must be upper division.

Minor, Economics*

Students majoring in another subject who wish to minor in Economics must complete the following requirements. A total of 18 credits is required for the minor, 12 of which must be upper division.

| | | |
|----------------|------------------------------|----|
| ECON A201 | Principles of Macroeconomics | 3 |
| ECON A202 | Principles of Microeconomics | 3 |
| Upper division | Economics electives | 12 |

* Not available to BA and BBA Economics majors.

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LOGISTICS

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The Logistics Department offers four undergraduate programs: the Occupational Endorsement Certificate in Logistics and Supply Chain Operations, the Undergraduate Certificate in Logistics and Supply Chain Operations, the Associate of Applied Science in Logistics and Supply Chain Operations, and a major in Global Logistics and Supply Chain Management for the Bachelor of Business Administration.

Logistics refers to the complex systems of the movement of material, component parts, and information within a business firm, and the distribution of final products to customers. Logistics and supply chain management are an essential function that adds value to the final

product. The goal of logistics and supply chain management is timely delivery, competitive pricing, mobility, and flexibility, together with innovative transportation services. Today, competitive advantages in global markets exceed the realm of manufacturing. Companies that master information technology and logistics are setting global standards for overall supply chain performance. Firms with a virtual worldwide logistics system view that carries out dynamic and continuous distribution are gaining the competitive edge.

Every organization is engaged in logistics if it has a purchasing function and/or a delivery process. Prospective employers include business firms, nonprofit organizations, and government agencies.

Anchorage and Alaska are strategically located relative to the great markets of Europe, Asia, and the mainland United States. More freight in tonnage passes through the Ted Stevens Anchorage International Airport on a daily basis than any other airport in the United States. Truck and marine transportation is crucial to supplying Alaska with goods. The state owns a railroad, and pipelines move oil and other fuels. The military establishment of Alaska is located here largely because of the logistical advantages obtained from Alaska's strategic location. Effective development of the logistics sector depends on the availability of a labor force that understands and can manage logistics systems.

Occupational Endorsement Certificate, Logistics and Supply Chain Operations

The Occupational Endorsement Certificate in Logistics and Supply Chain Operations, which is awarded by the Logistics Department, is designed to provide a comprehensive foundation for students who want to initiate or develop a career path in logistics and supply chain operations without having to commit to lengthier educational programs. All 15 credits earned toward the occupational endorsement certificate are transferable to both the Undergraduate Certificate in Logistics and Supply Chain Operations and the Associate of Applied Science degree in Logistics and Supply Chain Operations.

At the completion of an Occupational Endorsement Certificate in Logistics and Supply Chain Operations, students are able to demonstrate:

1. Proficiency in adapting to a variety of logistics employment settings with an understanding of the common terminology, equipment, regulations, and information systems used.
2. Entry-level employability skills in the following areas: logistics operations, logistics customer service, purchasing, supply chain operations, warehouse operations, inventory control, transportation services, and transport operations management.

Admission Requirements

See Occupational Endorsement Certificate admissions in Chapter 7, Academic Standards and Regulations.

Graduation Requirements

Students must achieve a grade of C or better in all courses required for the certificate.

Major Requirements

1. See General University Requirements for Occupational Endorsement Certificates at the beginning of this chapter.
2. Complete the following courses:

| | | |
|-----------|---|---|
| LGOP A110 | Logistics, Information Systems and Customer Service | 3 |
| LGOP A120 | Warehouse and Inventory Control Operations | 3 |
| LGOP A125 | Transportation Services | 3 |
| LGOP A160 | Purchasing and Supply Management | 3 |
| LGOP A235 | Transport Operations Management | 3 |

Undergraduate Certificate, Logistics and Supply Chain Operations

The Certificate in Logistics and Supply Chain Operations program enables students to enhance and develop their understanding and skills in the fields of logistics and supply chain operations. It is designed to provide continuing education opportunities to professionals in the business community.

Admission Requirements

Satisfy the Admission to Certificate and Associates Degree Program Requirements in Chapter 7, Academic Standards and Regulations.

Graduation Requirements

Students must achieve a grade of C or better in all courses required for the certificate.

Major Requirements

1. Complete the following courses:

| | | |
|-----------|--|---|
| BA A151 | Introduction to Business | 3 |
| BA A231 | Fundamentals of Supervision | 3 |
| CIS A105 | Introduction to Personal Computers and Application Software (3) or | 3 |
| CIS A110 | Computer Concepts in Business (3) | |
| LGOP A110 | Logistics, Information Systems and Customer Service | 3 |
| LGOP A120 | Warehouse and Inventory Control Systems | 3 |
| LGOP A125 | Transportation Services | 3 |
| LGOP A160 | Purchasing and Supply Management | 3 |
| LGOP A235 | Transport Operations Management | 3 |
2. Two electives at the 100 level or higher.* 6
3. A total of 30 credits is required for this certificate.

* If students intend to pursue the AAS in Logistics and Supply Chain Operations, it is recommended that students use these elective credits to prepare for the written communications and math courses required for the AAS LGOP degree.

Associate of Applied Science, Logistics and Supply Chain Operations

The Logistics and Supply Chain Operations associate's degree was developed with input from Alaskan business, industry, and military representatives to meet the needs in all aspects of the operational and technical career fields of logistics. Students will build a foundation of knowledge and skills for successful logistics and supply chain operations: information management and customer service, warehousing and inventory control, purchasing and supply chain operations, transportation services, transportation rates, tariffs, and carrier liability. The AAS degree is designed to prepare graduates for employment in all the operational and technical aspects of logistics and supply chain operations, careers, and fields. Students planning to go on to a four-year program in the College of Business and Public Policy should know that all ACCT, BA, CIS, ECON, LGOP, and LOG courses in those four-year programs must be completed with a grade of C or better.

Admission Requirements

Satisfy the Admission to Certificate and Associate Degree Programs Requirements in Chapter 7, Academic Standards and Regulations.

General University Requirements

1. Complete the General University Requirements for Associate Degrees located at the beginning of this chapter.
2. Complete the Associate of Applied Science General Course Requirements (15 credits) located at the beginning of this chapter. To provide maximum transferability, it is recommended that

students consider the Bachelor of Business Administration General Education Requirements, and business core course requirements when selecting courses to fulfill the Associate of Applied Science General Course Requirements.

Major Requirements

- Complete the following courses:

| | | |
|--------------|---|-----|
| BA A151 | Introduction to Business | 3 |
| BA A231 | Fundamentals of Supervision | 3 |
| BA/JUST A241 | Business Law I | 3 |
| CIS A110 | Computer Concepts in Business | 3 |
| ECON A201 | Principles of Macroeconomics | 3 |
| LGOP A110 | Logistics, Information Systems and Customer Service | 3 |
| LGOP A120 | Warehouse and Inventory Control Operations | 3 |
| LGOP A160 | Purchasing and Supply Management | 3 |
| LGOP A125 | Transportation Services | 3 |
| LGOP A235 | Transport Operations Management | 3 |
| MATH A107 | College Algebra (4) | 3-4 |
| | or | |
| MATH A172 | Applied Finite Mathematics (3) | 3 |
- Complete four of the following courses: 12

| | |
|-----------|---|
| BA A273 | Introduction to Statistics for Business and Economics (3) |
| BA A295 | Internship in Business Administration (3) |
| BA A375 | Statistics for Business and Economics (3) |
| BA A377 | Operations Management (3) |
| ECON A312 | Econometrics for Business and Economics (3) |
| ECON A429 | Business Forecasting (3) |
| | Any 300- or 400- level LOG course (3) |
| OSH A101 | Introduction to Occupational Safety and Health (3) |
| OSH A108 | Injury Prevention and Risk Management (4) |
| OSH A250 | Hazardous Material Operation (3) |
| TECH A295 | Technical Internship (1-6) |
| TECH A302 | Operational Safety (3) |
- Students must complete 6 credits selected from Humanities, Mathematics and Natural Sciences, or Social Sciences from the AAS General Course Requirement Classification List, other than BA A151, ECON A201, and MATH A107/MATH A172.
- A total of 60-61 credits is required for the degree.

Bachelor of Business Administration

The requirements for the Bachelor of Business Administration with a major in Global Logistics and Supply Chain Management are listed with the BBA located earlier in this chapter.

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COLLEGE OF EDUCATION

Professional Studies Building (PSB), Suite 209, (907) 786-4401
www.uaa.alaska.edu/coe

The University of Alaska Anchorage is in full compliance with the institutional reporting requirements mandated in Title II of the Higher Education Act Amendments of 1998. Please contact the College of Education for a copy of the completed report.

The College of Education comprises a community of educators dedicated to improving the quality of education. The mission of the College of Education is to prepare educators and support the lifelong learning of professionals to embrace diversity and to be intellectually and ethically strong, resilient, and passionate in their work with Alaska's learners, families, educators, and communities. Our programs emphasize the power of learning to transform people's lives. Across the university, faculty members teach professional educators to work in diverse settings, to form and sustain learning partnerships, and to provide learning across the life span. We are confident that this preparation will result in educators' significant contributions to society.

The College of Education promotes the following core values in their collegial interactions to ensure that program graduates exhibit:

- **Intellectual Vitality:** Professional educators examine diverse perspectives, engage in research and scholarship, contribute to knowledge and practice, and apply innovations in technology.
- **Collaborative Spirit:** Professional educators generate, welcome, and support the collaborative relationships and partnerships that enrich people's lives.
- **Inclusiveness and Equity:** Professional educators create and advocate for learning communities that advance knowledge and ensure the development, support, and inclusion of peoples' abilities, values, ideas, languages, and expressions.
- **Leadership:** Professional educators are committed to the highest standards of ethical behavior in their roles, using professional expertise to improve the communities in which they live and work, and demonstrating the ability to translate theories and principles into transformative educational practice.

We believe that learning must be designed, delivered, and evaluated within the contexts of these core values and program outcomes.

The College of Education offers undergraduate and graduate curricula and programs designed to prepare personnel for various professional roles related to education in a variety of learning environments. The College of Education is accredited by the National Council for Accreditation of Teacher Education (NCATE). Our professional preparation programs are approved by the Alaska Department of Education and Early Development and are based on NCATE standards.

The Alaska Department of Education and Early Development issues certificates and endorsements under the "approved program" process for certification. The University of Alaska Anchorage recommends individuals to the commissioner of Education and Early Development for certification or endorsement after successful completion of one or more of the approved programs. Only the dean of the College of Education is authorized to recommend candidates for the appropriate certificate or endorsement.

In each of the college's curricula and programs, students are introduced to fundamental issues of education in the contemporary world through courses designed to develop perspective and understanding of the relationship of education to society. Courses provide theory and practice in the development of instructional materials and an understanding of methods of instruction. Many courses and programs are offered through distance delivery methods. The college offers high-quality, distance-delivered coursework in order to improve access for rural students and provide flexible scheduling for practicing educators. Additionally, the college partners with UAA community campuses in optimizing the use of technology for distance delivery through intercampus collaboration.

Individuals who desire a UAA degree or certificate, or Alaska State teacher certification or endorsement, must apply for admission to the University of Alaska Anchorage and to the College of Education. Students are formally admitted to an appropriate program on the basis of multiple criteria, including their ability to make a positive contribution to educational professions. Candidates who seek Alaska State licensure must successfully complete a College of Education "approved program," as well as any additional requirements that may be initiated by the Alaska Department of Education and Early Development. Only courses with a grade of C or higher will be applied to meet certification or endorsement requirements. In addition, candidates must demonstrate professional behaviors and dispositions consistent with the College of Education's Conceptual Framework as well as abide by the UAA Student Code of Conduct and the Code of Ethics and Professional Teaching Standards adopted by the Alaska Professional Teaching Practices Commission. These documents are available on the College of Education website. Candidates should be advised that total credits may exceed minimums because of prerequisite requirements, knowledge and skill enhancement, individually selected majors and minors, and areas of specialization and/or emphasis.

The College of Education has three academic departments:

1. The Department of Teaching and Learning with programs in school-age care, early childhood education, elementary education, and secondary education. (907) 786-4481
2. The Department of Counseling and Special Education with programs in counselor education, special education, early childhood special education and opportunities in speech and language pathology. (907) 786-6317
3. The Department of Educational Leadership with programs in educational leadership (principal, superintendent, and teacher leadership preparation). (907) 786-4450

Undergraduate Program Options

The College of Education offers several program options for candidates interested in working with children.

- School Age Care Occupational Endorsement Certificate: Practitioner (*admission suspended*)
- School Age Care Occupational Endorsement Certificate: Administrator (*admission suspended*)
- Early Childhood Development Certificate
- Associate of Applied Science in Early Childhood Development
- Bachelor of Arts in Early Childhood Education*
- Bachelor of Arts in Elementary Education*
- Post-Baccalaureate Certificate in Elementary Education*
- Post-Baccalaureate Certificate in Early Childhood Pre-K-Third Grade*

*Programs fulfill Alaska Department of Education and Early Development teacher certification or endorsement requirements. Refer to Chapter 11, Post-Baccalaureate Certificate Programs, for more information.

High School Preparation

All programs in the College of Education build upon the candidates' strong high school preparation in the following areas:

- a. English composition and writing
- b. Oral communication
- c. World languages
- d. Algebra
- e. Computer literacy
- f. Social sciences
- g. Natural sciences

Field Placements

All College of Education undergraduate programs require field experiences in school or agency settings.

Criminal History Background Clearance

The College of Education requires compliance with specific background clearance policies and procedures for candidates participating in university-sponsored fieldwork and those enrolling in coursework offered at the Providence Early Learning Lab (PELL). In some cases, criminal history background clearance is required for admission to a department or program. In addition to self disclosure of criminal history to the College of Education and its partners, a check of the Alaska and National Sex Offender Registries, a fingerprint-based check by the Federal Bureau of Investigation, and a name-based check through the Alaska Public Safety Information Network may be required. Various agencies and centers may have additional requirements.

Failure to comply with the College of Education background check requirements will result in denial of access to field placement settings or PELL. Failure to pass the criminal history background check will result in removal from the program. More information is available at <http://www.uaa.alaska.edu/coe/background.cfm>.

Cooperating School/Agency

Practica, internships, and other field placements are made only in cooperation with participating school districts and agencies. The school districts and agencies that work in cooperation with the College of Education reserve the right to request additional information and/or preparation from candidates, as determined by their established policies and practices. Cooperating districts and agencies also determine the number of available spaces and placements for candidates. Placements may become competitive if the number of applicants exceeds the number of spaces. Districts and agencies also reserve the right to refuse or terminate placements when candidates do not meet an acceptable standard of performance. Thus, while the university makes every effort to find appropriate field placements for candidates, admittance to a degree/certificate/endorsement program does not guarantee acceptance by cooperating school districts or agencies. Unacceptable academic performance, an unprofessional attitude, unsatisfactory field reports, violation of professional ethics, or other factors may result in removal from the field placement.

Transfer

Candidates who have taken all or part of an approved program at another university must take at least 9 credits of approved education courses at the University of Alaska prior to being admitted to an advanced practicum or internship.

PROFESSIONAL AND CONTINUING EDUCATION (PACE)

Professional Studies Building (PSB), Room 221, (907) 786-1934
www.uaa.alaska.edu/coe

Quality professional learning enriches the knowledge and skills of educators and improves the educational experiences of all students. Therefore, the Office of Professional and Continuing Education (PACE) partners with UAA academic units, schools, professional societies, and other organizations to support learning opportunities such as 500-level courses and academies. The flexible structure of PACE allows for rapid response to the dynamic learning needs of educators and related-services professionals around the state.

SCHOOL-AGE CARE

Professional Studies Building (PSB), Room 220, (907) 786-4481

Admission to School-Age Care program has been suspended; the Occupational Endorsement Certificate, School-Age Care: Practitioner and Occupational

Endorsement Certificate, School-Age Care: Administrator have been suspended. Please contact the department for information.

EARLY CHILDHOOD

Professional Studies Building (PSB), Room 220, (907) 786-4481

www.uaa.alaska.edu/coe

The Early Childhood program at UAA blends theory and practice in the preparation of early childhood educators who can deliver quality care and education for young children from birth through age 8 years.

Within the Early Childhood program are four options:

- Early Childhood Development Certificate
- Associate of Applied Science in Early Childhood Development
- Bachelor of Arts in Early Childhood Education
- Post-Baccalaureate Certificate in Early Childhood Pre-K-Third Grade (see Chapter 11).

Program Description and Outcomes

The Early Childhood Development Certificate program and the Associate of Applied Science in Early Childhood Development program prepare paraeducators and other professionals to work in early care and education settings, including the public school system. The Bachelor of Arts in Early Childhood Education prepares professionals to work with young children from birth through age 8. The Post-Baccalaureate Certificate in Early Childhood Pre-K-Third Grade prepares professionals who already have baccalaureate degrees to work with young children from birth through 8 years in preschool/primary school settings. Successful completion of either the Bachelor of Arts in Early Childhood Education or the Post-Baccalaureate Certificate in Early Childhood Pre-K-Third Grade program requirements leads to an institutional recommendation for initial teacher certification with an endorsement in Pre-K-Third Grade. All programs are developed to meet the National Association for the Education of Young Children guidelines for personnel preparation.

Student outcomes for the four early childhood programs are based on the Standards for Alaska’s Teachers located at www.eed.state.ak.us/standards. Outcomes are also based on the professional preparation standards of the National Association for the Education of Young Children (NAEYC) found at www.naeyc.org. The students will demonstrate the following outcomes:

1. Create a healthy, respectful, supportive, and challenging learning environment based on knowledge of child development.
2. Create respectful, reciprocal relationships that support and empower families, and involve all families in their children’s development and learning.
3. Use systematic observations, documentation, and other effective assessment strategies in a responsible way, in partnership with families and other professionals, to positively influence children’s development and learning.
4. Design effective approaches to teaching and learning, implement and evaluate experiences that promote positive development and learning for all children.
5. Incorporate knowledge of content areas to create appropriate experiences for young children.
6. Use ethical guidelines and other professional standards related to early childhood practice.
7. Demonstrate knowledgeable, reflective, and critical perspectives on professional practice, making informed decisions that integrate knowledge from a variety of sources.

The expected mastery of student outcomes differs in accordance with program level. Students who complete the Undergraduate Certificate and AAS in Early Childhood will be proficient entry-level child care workers, have knowledge of child development, and demonstrate basic abilities in child care paraprofessional skills. Students who complete the Bachelor of Arts in Early Childhood Education or the equivalent post-baccalaureate certificate will demonstrate advanced integrated knowledge and skills

in preparation for careers in teaching primary grades (K-3) as well as in infant, toddler, and preschool educational programs.

Undergraduate Certificate, Early Childhood Development

Admission Requirements

Applicants must satisfy the Admission to Certificate and Associate Degree Programs Requirements in Chapter 7, Academic Standards and Regulations. In order to be admitted to the Early Childhood Development program, applicants must complete an application to the Early Childhood Development Certificate Program. Applications may be obtained from the Department of Teaching and Learning. To be admitted to the Early Childhood Development practicum course (EDEC A295), applicants must meet all requirements for and be admitted by an advisor into the practicum course and have earned a grade of C or above in all EDEC courses.

Academic Progress

All candidates in the Early Childhood Development Certificate program must maintain a cumulative GPA of 2.00 or above in all EDEC courses.

Background Check Requirements

See Field Placements located at the beginning of the College of Education section of this chapter.

Certificate Requirements

1. Complete the following required courses:

| | | |
|------------|---|---|
| DN A145 | Child Nutrition | 3 |
| EDEC A105 | Introduction to the Field of Early Childhood | 3 |
| EDEC A106 | Creativity and the Arts in Early Childhood | 3 |
| EDEC A201 | Early Childhood Practitioner Roles and Responsibilities | 2 |
| EDEC A206 | Integrated Curriculum for Young Children | 3 |
| EDEC A210 | Guiding Young Children | 3 |
| EDEC A241 | Infant and Toddler Development | 3 |
| EDEC A242 | Family and Community Partnerships | 3 |
| EDEC A292 | Early Childhood Practicum Seminar | 1 |
| EDEC A295 | Early Childhood Practicum | 3 |
| EDEC A303 | Young Children in Inclusive Settings | 3 |
| EDSE A212 | Human Development and Learning (3) | 3 |
| | or | |
| PSY A245 | Child Development (3) | |
| EDSE A212L | Human Development and Learning Lab (1) | 1 |
| | or | |
| PSY A245L | Child Development Laboratory (1) | |

2. A total of 34 credits is required for the certificate.

Associate of Applied Science, Early Childhood Development

Admission Requirements

Applicants must satisfy the Admission to Certificate and Associate Degree Programs Requirements in Chapter 7, Academic Standards and Regulations. In order to be admitted to the Early Childhood Development program, applicants must complete an application to the Associate of Applied Science Early Childhood Development program. Applications may be obtained from the Department of Teaching and Learning. To be admitted to the Early Childhood Development practicum course (EDEC A295), applicants must meet all requirements for and be admitted by an advisor into the practicum course and have earned a grade of C or above in all EDEC courses.

Academic Progress

All candidates in the Associate of Applied Science Early Childhood Development program must maintain a cumulative GPA of 2.00 or above in all EDEC courses.

General University Requirements

Complete the General University Requirements for Associate Degrees located at the beginning of this chapter.

Communication and General Requirements

1. Oral Communication Requirements: 3
 - COMM A111 Fundamentals of Oral Communication (3)
or
 - COMM A235 Small Group Communication (3)
or
 - COMM A237 Interpersonal Communication (3)
or
 - COMM A241 Public Speaking (3)
2. Written Communication Requirements: 6
 - ENGL A111 Methods of Written Communication (3)
and one of the following:
 - ENGL A211 Academic Writing About Literature (3)
 - ENGL A212 Technical Writing (3)
 - ENGL A213 Writing in the Social and Natural Sciences (3)
 - ENGL A214 Persuasive Writing (3)
3. General Requirements: 6
 - MATH A105 Intermediate Algebra (or higher) (3)
and

Choose 3 credits from humanities, natural sciences, or social sciences courses from the General Course Requirement Classification List located at the beginning of this chapter.

Background Check Requirements

See Field Placements located at the beginning of the College of Education section of this chapter.

Major Requirements

1. Complete the following required courses:
 - DN A145 Child Nutrition 3
 - EDEC A105 Introduction to the Field of Early Childhood 3
 - EDEC A106 Creativity and the Arts in Early Childhood 3
 - EDEC A201 Early Childhood Practitioner Roles and Responsibilities 2
 - EDEC A206 Integrated Curriculum for Young Children 3
 - EDEC A210 Guiding Young Children 3
 - EDEC A241 Infant and Toddler Development 3
 - EDEC A242 Family and Community Partnerships 3
 - EDEC A292 Early Childhood Practicum Seminar 1
 - EDEC A295 Early Childhood Practicum 3
 - EDEC A303 Young Children in Inclusive Settings 3
 - EDSE A212 Human Development and Learning (3) 3
or
 - PSY A245 Child Development (3)
 - EDSE A212L Human Development and Learning Lab (1) 1
or
 - PSY A245L Child Development Laboratory (1)
2. Complete 12 credits of electives. EDEC A100 Fundamentals in Early Childhood is recommended. Candidates are encouraged to discuss elective choices with an advisor.
3. A total of 61 credits is required for the degree.

Bachelor of Arts, Early Childhood Education

An individual interested in undergraduate early childhood preparation may obtain a Bachelor of Arts in Early Childhood Education to work with children from the ages of birth to age 8. Individuals with baccalaureate degrees should refer to Chapter 11, Post-Baccalaureate Certificate Programs, for more information

The Bachelor of Arts in Early Childhood is a professional degree. Unique features of the program include a foundation in liberal studies with coursework in child development and families. Candidates will engage in field experiences throughout their coursework to directly apply teaching and learning principles. In addition, candidates will engage in an internship(s) in early childhood settings. Admission to the program occurs in two stages (see below) and admission to the internship requires academic achievement, written and oral communication skills, and community involvement. See Field Placements located at the beginning of the College of Education section of this chapter.

Admission Requirements

Admission to the University of Alaska Anchorage: Early Childhood Major

Applicants must complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations. Application forms are available at www.uaa.alaska.edu/admissions.

Admission to the Department of Teaching and Learning, College of Education: Early Childhood Major

Admission to the Department of Teaching and Learning is a prerequisite for all upper division coursework in early childhood. In order to be admitted to the Department of Teaching and Learning, applicants must:

1. Complete the application to the Department of Teaching and Learning, Early Childhood major.
2. Complete Tier 1: Basic College-Level Skills General Education Requirements (transfer credits may be used).
3. Complete a minimum of 9 lower division credits from the Early Childhood Major Requirements with a grade of C or higher.
4. Have a cumulative GPA of 2.75.
5. Successfully complete the Praxis I: Pre-Professional Skills Test (PPST). Contact the Department of Teaching and Learning for current passing scores.
6. Submit an Interested Person Report.

Note: Admission to the Department of Teaching and Learning is competitive. Qualified applicants are accepted on a space-available basis. Admission to the university as an Early Childhood major does not guarantee admission to the department.

Admission to Early Childhood Internship

1. Meet all the requirements for and be admitted to the Department of Teaching and Learning as an Early Childhood major.
2. Submit an application form for admission to internship. Contact the Office of Clinical Services and Certification for appropriate deadlines.
3. Submit one letter of recommendation from someone who can speak to the applicant's potential as a future early childhood educator.
4. Demonstrate general content knowledge competency through successful completion of 70 percent of required coursework with a 2.75 GPA and a passing score on Praxis II: Elementary Education: Content Knowledge (0014) or Elementary Education: Curriculum, Instruction and Assessment (0011).
5. Submit a resume that provides evidence of working with children.
6. Interview for placement.
7. Initiate fingerprinting and criminal background check process.
8. Provide evidence of a current physical examination. This service is available free at the UAA Student Health Center.
9. Maintain student health insurance throughout internship. Candidates may purchase this insurance through UAA.

Note: Qualified applicants are accepted on a space-available basis. Admission to the Department of Teaching and Learning does not guarantee admission to the internship.

Academic Progress

Internship(s) must be completed successfully and all Early Childhood Major Requirements, the Alaska Studies requirement, MATH A205, and Foundation Requirements in Child Development and Social Relationships and Inclusive Environments must be completed with a grade of C or higher in order to obtain an institutional recommendation for teacher certification.

Graduation Requirements

Candidates must complete the following requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. Background Check Requirements

See Field Placements located at the beginning of the College of Education section of this chapter.

D. Foundation Requirements

Complete the following foundation courses. The courses are selected to provide future early childhood educators with the skills and background knowledge in the various subjects they will be expected to teach. The selection is based on national and state standards for content preparation. Some of the foundation courses may also be used to meet General Education Requirements.

Child Development (6 credits)

| | | |
|-----------|------------------------------------|---|
| DN A145 | Child Nutrition | 3 |
| EDSE A212 | Human Development and Learning (3) | 3 |
| | or | |
| PSY A245 | Child Development (3) | |

Social Relationships and Inclusive Environments (11–12 credits)

| | | |
|-----------|--------------------------------------|---|
| EDEC A242 | Family and Community Partnerships | 3 |
| EDEC A303 | Young Children in Inclusive Settings | 3 |

Select two courses from the following: 5-6

| | | |
|-----------|---|--|
| CEL A292 | Introduction to Civic Engagement (3) | |
| EDEL A327 | Teaching Social Studies in Elementary Schools (2) | |
| EDSE A474 | Special Children from Birth through Five (3) | |
| EDSE A482 | Inclusive Classrooms for All Children (3) | |
| SWK A342 | Human Behavior in the Social Environment (3) | |
| SWK A409 | Introduction to Child Welfare (3) | |

Liberal Studies Humanities and Social Sciences Core* (18 credits)

*Students must meet General Education Requirements (GER) for Baccalaureate Degrees including 6 credits of social science (SS), from two different disciplines, and 6 credits of humanities (HUM).

Complete the following courses:

Select one course from GER fine arts list (3 credits)

| | | |
|-----------|--|---|
| EDEC A105 | Introduction to the Field of Early Childhood (SS GER) | 3 |
| LSSS A111 | Cultural Foundations of Human Behavior (SS GER) (3) | 3 |
| | or | |
| SWK A243 | Cultural Diversity and Community Service Learning (SS GER) (3) | |
| HIST A132 | History of United States II (HUM GER) | 3 |

Select one Alaska Studies course from the following: 3

| | | |
|-----------|---|--|
| ANTH A200 | Natives of Alaska (SS GER) (3) | |
| EDFN A478 | Issues in Alaska Native Education, K-12 (3) | |

HIST A341 History of Alaska (HUM GER) (3)

Select one course from the following: 3

ANTH A250 The Rise of Civilization (SS GER) (3)

GEOG/
INTL A101 Local Places/Global Regions:
Introduction to Geography
(SS GER) (3)

HIST A131 History of United States I (HUM GER) (3)

HNRS A292 Honors Seminar in Social Science
(SS GER) (3)

LSIC A331 Power, Authority, and Governance (3)

PS A101 Introduction to American Government
(SS GER) (3)

PS A102 Introduction to Political Science
(SS GER) (3)

Liberal Studies Integrated Sciences Core (10 credits)

LSIS A102 Origins: Earth-Solar System-Life
(NS GER) 5

LSIS A201 Life on Earth (NS GER) 5

Mathematical Skills (6-7 credits)

Select one course from GER quantitative skills list 3-4

MATH A205 Communicating Mathematical Ideas 3

Oral and Written Communication Skills (9 credits)

Select one course from GER oral communication list 3

Select two courses from GER written communication list 6

E. Major Requirements

1. Complete the following core courses (29 credits). Field experience in early childhood programs may be required as part of the courses.

EDEC A106 Creativity and the Arts in Early Childhood 3

EDEC A206 Integrated Curriculum for Young Children 3

EDEC A210 Guiding Young Children 3

EDEC A241 Infant and Toddler Development 3

EDEC A407 Observation and Documentation in Early
Childhood 4

EDEC A408 Children's Literature: Early Childhood Years 3

EDFN A300 Philosophical and Social Context of
American Education (GER Capstone) (3) 3

or
EDFN A304 Comparative Education (GER Capstone) (3)

EDFN A301 Foundations of Literacy and Language
Development 3

EDFN A302 Foundations of Educational Technology 2

PEP A345 Incorporating Health and Physical
Activity into the Pre-K-6 Classroom 2

2. Complete the following methodology requirements (6 credits):

EDEC A403 Mathematics and Science in Early Childhood 3

EDEC A404 Literacy for Young Children 3

3. Complete the following internship and seminar requirements (14 credits):

EDEC A492 Early Childhood Seminar (1+1) 2

EDEC A495 Early Childhood Internship (3+9) 12*

*Special note: Completion of 12 credits required for degree and certification.

4. Complete an additional 12 credits of electives.

5. A total of 121-123 credits is required for the degree of which 42 must be upper division.

Institutional Recommendation Pre-K-3 Teacher Certification

Candidates who complete an internship in the primary grades (Pre-K-3rd grade) may apply for teacher certification, Pre-K-3rd grade. Following are the requirements for an institutional recommendation:

1. Major Requirements completed with a grade of C or higher.

2. Alaska Studies requirement, MATH A205, and Foundation Requirements in Child Development and Social Relationships and Inclusive Environments completed with a grade of C or higher.
3. Cumulative GPA of 2.75.
4. Cumulative GPA of 2.75 in all Major Requirements.
5. Passing scores on the Praxis I (PPST) and Praxis II (0011 or 0014) exams.
6. Internships satisfactorily completed.
7. Bachelor of Arts in Early Childhood Education degree conferred.

ELEMENTARY EDUCATION

Professional Studies Building (PSB), Room 224, (907) 786-4481

www.uaa.alaska.edu/coe

Bachelor of Arts, Elementary Education (with Teacher Certification)

Individuals interested in undergraduate elementary teacher preparation may obtain either a BA in Elementary Education or a Post-Baccalaureate Certificate in Elementary Education with elementary teacher certification. See Chapter 11, Post-Baccalaureate Certificate Programs, for more information.

The BA in Elementary Education is a professional degree nationally recognized by the Association of Childhood Education International (ACEI). Unique features of the program include an emphasis on culturally responsive teaching in Alaska's context; a strong liberal studies focus; exposure to a range of teaching and curriculum design approaches, including integration of educational technology; and focused field experiences, developmentally sequenced and in a variety of school/classroom settings. Applicants are encouraged to take EDFN A101 Introduction to Education (3 credits) to learn more about the field of education.

Student Outcomes

Student outcomes for the program are based on the Standards for Alaska's Teachers located at www.eed.state.ak.us/standards and the Association for Childhood Education International (ACEI) standards located at www.acei.org. Within a culturally responsive framework, program graduates will:

1. Construct learning opportunities that support K-6 students' development, acquisition of knowledge, and motivation.
2. Design and implement curriculum that supports K-6 students' learning of language arts, science, mathematics, social studies, the arts, health, and physical education.
3. Plan and implement instruction based on knowledge of K-6 students, learning, theory, curriculum, and community.
4. Create appropriate instructional opportunities to address diversity.
5. Use teaching strategies that encourage development of critical thinking and problem solving.
6. Foster active engagement in learning and create supportive learning environments.
7. Use effective communication strategies to foster inquiry and support interaction among K-6 students.
8. Use formal and informal assessments to inform and improve instructional practice.
9. Reflect on practice and engage in professional growth activities.
10. Establish positive collaborative relationships with families, colleagues, and the community.

Admission Requirements

Admission to the University of Alaska Anchorage: Elementary Education Major

Applicants must complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations. Application forms are available at: www.uaa.alaska.edu/admissions.

Admission to the Department of Teaching and Learning, College of Education: Elementary Education Major

In order to be admitted to the Department of Teaching and Learning, students must:

1. Submit an application to the Department of Teaching and Learning.
2. Complete the Tier I Basic College-Level Skills General Education Requirements.
3. Have a cumulative GPA of 2.75.
4. Have a GPA of 3.00 in Major Requirements.
5. Successfully complete the Praxis I: Pre-Professional Skills Test (PPST). Contact the Department of Teaching and Learning for current passing scores.
6. Successfully complete the following courses with a grade of C or higher: EDEL A205 Becoming an Elementary Teacher and EDSE A212 Human Development and Learning or PSY A245 Child Development.
7. Submit Interested Person Report.

Note: Admission to the Department of Teaching and Learning is competitive. Qualified applicants are accepted on a space-available basis. Admission to the university as an Elementary Education major does not guarantee admission to the department.

Admission to Field Experiences

Admission to field experiences is separate from admission to the program and may be limited by community partners. See Field Placements located at the beginning of the College of Education section of this chapter. Applications for practica and internship courses must be submitted by February 15 or October 15. Qualified applicants are accepted on a space-available basis. Admission to the Department of Teaching and Learning does not guarantee admission to the field experiences.

The Elementary Programs Admission Committee determines a candidate's readiness to enroll in all field experiences. The candidate must realize that requirements set forth below constitute minimum preparation, and it may be the judgment of the committee that the candidate needs further work to develop content knowledge or skills to work with children.

Elementary Practicum I Admission Criteria

Practicum I includes blocked courses in literacy and social studies methodology, a seminar in culturally responsive teaching, and a supervised experience in an elementary classroom with a diverse student population.

1. Meet all the requirements for and be admitted to the Department of Teaching and Learning as an Elementary Education major.
2. Submit an application form for Practicum I by the department's published deadline.
3. Complete EDFN A301 with a minimum grade of C.
4. Have a cumulative GPA of 2.75.
5. Have a GPA of 3.00 in Major Requirements.
6. Submit a current Interested Person Report.

Elementary Practicum II Admission Criteria

Practicum II includes blocked courses in mathematics and science methodology, a seminar in designing learning environments, and a supervised experience in an elementary classroom.

1. Meet all requirements for Practicum I.
2. Submit an application form for Practicum II, including a resume and letter of introduction, by the department's published deadline.
3. Complete EDFN A300 or EDFN A304, EDFN A302, and EDFN A392 with a minimum grade of C and EDEL A395 with a P.
4. Participate in a screening interview.
5. Apply for the Student Teaching Authorization Certificate. This application includes fingerprinting and a criminal background check. Contact COE Clinical Services and Certification for more information.

6. Provide evidence of current physical examination. This service is available free at the UAA Student Health Center.
7. Maintain student health insurance throughout Practicum II. Candidates may purchase this insurance through UAA.

Elementary Internship Admission Criteria

The Elementary Internship includes a capstone seminar and extensive, supervised teaching experiences in an elementary classroom. Emphasis will be placed on meeting the Alaska Beginning Teacher Standards.

1. Meet all the requirements for and be admitted to the Department of Teaching and Learning as an Elementary Education major.
2. Submit an application form for admission to internship by the department's published deadline.
3. Complete all degree courses with the exceptions of EDEL A492B and EDEL A495B.
4. Successfully complete the Praxis II: Elementary Content Knowledge (0014). Contact the Department of Teaching and Learning for current passing score.
5. Have a cumulative GPA of 2.75.
6. Have a GPA of 3.00 in Major Requirements.
7. Submit a current Student Teaching Authorization Certificate.

Academic Progress

Satisfactory progress in the practicum courses (EDEL A395 and EDEL A495A) is required for enrollment in the internship (EDEL A495B). All Major Requirements, EDSE A212/PSY A245, and MATH A205 must be completed with a grade of C or higher in order to obtain an institutional recommendation for elementary teacher certification.

Graduation Requirements

Candidates must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. Background Check Requirements

See Field Placements located at the beginning of the College of Education section of this chapter.

D. Liberal Studies Area

Complete the liberal studies area. These courses are selected to provide future elementary teachers with the skills and background knowledge in the various subjects they will be expected to teach. The selection is based on national and state standards for content preparation. Some of the liberal studies courses may also be used to meet General Education Requirements (GERs).

Liberal Studies Integrated Sciences Core (15 credits)

| | | |
|-----------|--|---|
| LSIS A102 | Origins: Earth-Solar System-Life | 5 |
| LSIS A201 | Life on Earth | 5 |
| LSIS A202 | Concepts and Processes: Natural Sciences | 5 |

Liberal Studies Integrative Core (9 credits)

| | | |
|-----------|----------------------------------|---|
| LSIC/ | | |
| PHIL A231 | Truth, Beauty, and Goodness | 3 |
| LSIC A331 | Power, Authority, and Governance | 3 |
| LSIC A332 | Science, Technology, and Culture | 3 |

Liberal Studies Social Sciences (SS) and Humanities (HUM) Core (27 credits)

Students must meet GERs for Baccalaureate Degrees including 6 credits of social sciences (SS) from two different disciplines and 6 credits of humanities (HUM).

| | | |
|-----------|-----------------------------------|---|
| ANTH A250 | The Rise of Civilization (SS GER) | 3 |
|-----------|-----------------------------------|---|

| | | |
|-----------|---|---|
| HIST A131 | History of United States I (HUM GER) (3) | 3 |
| | or | |
| HIST A132 | History of United States II (HUM GER) (3) | |
| | or | |
| HIST A355 | Major Themes in US History (3) | |
| EDSE A212 | Human Development and Learning (3) | 3 |
| | or | |
| PSY A245 | Child Development (3) | |
| ENGL A121 | Introduction to Literature (HUM GER) (3) | 3 |
| | or | |
| ENGL A201 | Masterpieces of World Literature I (HUM GER) (3) | |
| | or | |
| ENGL A202 | Masterpieces of World Literature II (HUM GER) (3) | |
| HUM A211 | Introduction to Humanities I (HUM GER) (3) | 3 |
| | or | |
| HUM A212 | Introduction to Humanities II (HUM GER) (3) | |
| LSSS A111 | Cultural Foundations of Human Behavior (SS GER) | 3 |
| LSSS A311 | People, Places, and Ecosystems | 3 |
| LSSS A312 | Individuals, Groups, and Institutions | 3 |
| | Select one course from GER fine arts list | 3 |

Mathematical Skills (9-13 credits)

| | | |
|-----------|--|-----|
| MATH A205 | Communicating Mathematical Ideas and Elementary Statistics (3) | 3-4 |
| STAT A252 | Elementary Statistics (3) | 3-4 |
| | or | |
| STAT A253 | Applied Statistics for the Sciences (4) | |
| | and | |
| | Select one additional course from the GER quantitative skills list | 3-6 |

Oral and Written Communication Skills (9 credits)

Select one course from GER oral communication list 3
 Select two courses from GER written communication list

E. Major Requirements

It is recommended that students complete EDFN A101 Introduction to Education prior to enrolling in the following major courses. Field experiences in public schools are required as part of most courses.

1. Complete the following core courses (20 credits)

| | | |
|-----------|--|---|
| EDEC A242 | Family and Community Partnerships | 3 |
| EDEL A205 | Becoming an Elementary Teacher | 2 |
| EDFN A206 | Introduction to Assessment in Education | 1 |
| EDFN A300 | Philosophical and Social Context of American Education (3) | 3 |
| | or | |
| EDFN A304 | Comparative Education (3) | |
| EDFN A301 | Foundations of Literacy and Language Development | 3 |
| EDFN A302 | Foundations of Educational Technology | 2 |
| EDFN A478 | Issues in Alaska Native Education, K-12 | 3 |
| EDSE A482 | Inclusive Classrooms for All Children | 3 |
2. Complete the following method courses (18 credits)**

| | | |
|-----------|---|---|
| EDEC A106 | Creativity and the Arts in Early Childhood Education | 3 |
| EDEL A325 | Teaching Literacy in Elementary Schools | 6 |
| EDEL A327 | Teaching Social Studies in Elementary Schools | 2 |
| EDEL A426 | Teaching Mathematics in Elementary Schools | 3 |
| EDEL A428 | Teaching Science in Elementary Schools | 2 |
| PEP A345 | Incorporating Health and Physical Activity into the Pre-K-6 Classroom | 2 |

***Concurrent enrollment in a seminar and a practicum or internship may be required.*

3. Complete the following internships (21 credits)

| | | |
|------------|---|---|
| EDEL A392 | Elementary Education Seminar I: Culturally Responsive Teaching | 2 |
| EDEL A395 | Elementary Education Practicum I: Diversity, Literacy, Social Studies | 2 |
| EDEL A492A | Elementary Education Seminar II: Learning Environment | 2 |
| EDEL A492B | Elementary Education Seminar III: Teaching Capstone | 3 |
| EDEL A495A | Internship I | 3 |
| EDEL A495B | Elementary Education Internship | 9 |
4. A total of 128-132 credits is required for the degree, of which 42 credits must be upper division.

Institutional Recommendation, Elementary Teacher Certification (K-6)

Following are the requirements for an institutional recommendation:

1. Major requirements completed with a grade of C or higher.
2. Cumulative GPA of 2.75.
3. Cumulative GPA of 3.00 in all Major Requirements, EDSE A212/PSY A245, and MATH A205.
4. Passing scores on the Praxis I (PPST) and Praxis II (0014) exams.
5. Internship satisfactorily completed.
6. BA in Elementary Education degree conferred.

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COLLEGE OF HEALTH AND SOCIAL WELFARE

The College of Health and Social Welfare comprises the Department of Health Sciences, the Department of Human Services, the Justice Center, the School of Nursing and the School of Social Work. The Gerontology minor is also housed in the college. The college offers a variety of certificates, undergraduate and graduate degree options for students who are attracted to people-oriented careers. It also provides a special opportunity for cross-disciplinary studies as they relate to the human aspects of our culture, and helps to prepare graduates for the increasingly integrated approaches to service delivery demanded by society.

Professional programs housed within this college share a common interest in issues that impact the development, health and well-being of individuals and communities. The instructional, service and scholarship efforts of the faculty in the various curricula are enhanced and supported by collaborative research and service activities in the Center for Alcohol and Addiction Studies, the Center for Human Development, the Alaska Area Health Education Center, the Justice Center, the Institute for Circumpolar Health Studies and the National Resource Center for American Indian, Alaska Native and Native Hawaiian Elders. Together, through multidisciplinary approaches, the schools, departments, centers and institutes take direct action to address the needs and potentials of Alaska's peoples and communities.

CENTER FOR COMMUNITY ENGAGEMENT AND LEARNING

*Consortium Library (LIB), Room 211G
 (907) 786-4062, www.uaa.alaska.edu/engage*

The Center for Community Engagement and Learning serves the entire university and connects academic programs with community needs to use scholarship and action for the mutual benefit of the university and state, its communities, and its diverse peoples. The center offers a baccalaureate Civic Engagement Certificate, support for faculty members interested in community engaged teaching and research, and provides opportunities for students who wish to pursue public issues, action research, and service projects.

Undergraduate Certificate, Civic Engagement

The Certificate in Civic Engagement prepares undergraduates and people with bachelor's degrees to become active, effective, ethical citizens in their professional and personal lives. Students from any major degree program develop the reflective, analytic, and practical skills to link curricular and co-curricular learning to civic engagement outside the academy through service-learning classes, internships, and community-engaged scholarship and creative activity. The certificate is intended for motivated students committed to action for the greater good.

Civic, personal, and academic growth are equally important in this program. Civic and personal growth are best accomplished through experiential education in the community together with critical reflection. Community-based service-learning is defined as a course or competency-based, credit-bearing educational experience in which students:

1. Participate in an organized service activity that meets identified community needs;
2. Gain an enhanced sense of civic responsibility; and

3. Reflect on the service activity in such a way as to gain further understanding of course content and a broader appreciation of the discipline.

Critical reflection entails describing activities, examining them in light of specific learning objectives, and articulating lessons and action plans from them. Reflection is widely recognized as a key means of linking scholarly ideas with the empirical world in everyday life.

Certificate Learning Outcomes & Competencies

Students who earn the Certificate in Civic Engagement will gain competencies in three domains: academic, personal, and civic.

Academically, students will achieve the outcomes of their majors and will be able to:

- Relate service and professional ethics to civic engagement frameworks;
- Identify and analyze social, cultural, economic, environmental, technical, and political aspects of public problems;
- Translate theoretical perspectives and frameworks of their disciplinary majors into actions solving concrete public problems affecting Alaskan, U.S. and international communities, with substantive emphases on ethics, community building or public policy, human and civil rights or sustainability; and
- Apply critical thinking skills and empirical evidence to make judgments regarding public problems outside the classroom.

Personally, students will be able to:

- Develop moral dispositions of judgment, civic participation and public commitments related to their personal values;
- Enter unfamiliar situations with confidence and participate effectively;
- Identify the disciplinary, societal, and cultural values that shape their own and others' commitments to human and civil rights and sustainability; and
- Assume responsibility for enacting public uses of their education and civic engagement in their anticipated vocational and personal trajectories.

Civically, students will be able to:

- Utilize communication and problem-solving skills in addressing public problems at multiple levels;
- Evaluate the places, interests and competing demands of others in the community and consider ethical implications to resolving them;
- Demonstrate commitment to resolving public problems beyond their college careers and to fostering others' involvement;
- Transform civic imaginations to enhance abilities of individuals, groups, and communities to embrace a vision for the future; and
- Assume leadership roles in groups and organizations capable of taking action on matters of common concern.

Admission Requirements

A student must satisfy the Admission to Certificate Requirements in Chapter 7, Academic Standards and Regulations.

A student must be enrolled in a major or pre-major baccalaureate degree program or have completed a baccalaureate degree.

A student must submit a plan of study demonstrating integration of the certificate with her/his major course of study, formulated in conjunction with certificate and departmental advisors. Regular advising is a crucial component of the certificate program. Although the CEL Curriculum Committee approves courses as meeting certificate criteria, the certificate faculty advisor approves courses with and for individual students.

Graduation Requirements

1. Meet all General University Requirements for undergraduate certificates.

2. Concurrent completion of a baccalaureate degree program or completed baccalaureate degree.
3. Submission of a final Program of Study, which indicates all approved classes, to the certificate faculty advisor, the director of the Center for Community Engagement and Learning, and the dean of the College of Health & Social Welfare. The program of study must be forwarded to Degree Services at least two semesters prior to graduation.
4. Completion of the following according to the student's individual Program Plan:

Certificate core courses:

| | | |
|----------|------------------------------------|---|
| CEL A292 | Introduction to Civic Engagement | 3 |
| CEL A395 | Civic Engagement Internship* (3-9) | 9 |
| CEL A450 | Civic Engagement Capstone* | 3 |

**Special note: Students in the Certificate for Civic Engagement may substitute a major-departmental internship and/or capstone course if specified civic engagement instructional goals are achieved, the minimum number of hours are realized, and the certificate faculty advisor approves.*

Area concentration courses, approved for certificate by CEL Curriculum Committee, approved for student by certificate faculty advisor:

- Course with human and civil rights or environmental sustainability as a substantive focus. A course that has a community-based learning component is preferred. 3
- Course with community-building or public policy as a substantive focus. A course that has a community-based learning component is preferred. 3
- Course with ethics as a substantive focus. Course must have a community-based learning component. 3

Electives (must have community-based learning component), approved for certificate by CEL Curriculum Committee, approved for student by certificate faculty advisor:

- 1 lower division (100-299) 3
- 1 upper division (300-499) 3

5. A total of 30 credits is required for the certificate.

6. Certificate portfolio.

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CENTER FOR HUMAN DEVELOPMENT

2702 Gambell Street, Suite 103, Anchorage, AK 99503, (907) 272-8270 or (800) 243-2199

<http://alaskachd.org>

Occupational Endorsement Certificate, Children's Behavioral Health

The Occupational Endorsement Certificate, Children's Behavioral Health is a 16-credit occupational endorsement for paraprofessionals currently working or planning to work with children and youth in therapeutic residential settings. By completing the endorsement certificate requirements, students gain skills essential to become effective members of therapeutic treatment teams.

Student Outcomes:

Students who successfully complete this program will be able to:

- Use knowledge of therapeutic techniques, child development, and cultural responsiveness to interpret treatment plans in therapeutic settings for children and youth.
- Apply an array of strategies to support and shape behavior of children and youth with challenging behaviors.
- Abide by professional practices accepted in the field of children's behavioral health.
- Blend concepts and skills to develop trauma-informed practices in children's behavioral health services.

Admission Requirements

Complete the Admission to Occupational Endorsement Certificates requirements in Chapter 7, Academic Standards & Regulations.

Academic Progress Requirements:

In order to earn the occupational endorsement, all courses must be completed with a grade of C or better. Students who audit a course in Disability & Long Term Supports or who are unable to earn a grade of a C or better in the course may repeat it following the procedures outlined in Chapter 7, Academic Standards & Regulations.

Certificate Requirements

Complete 16 credits in the following courses:

| | | |
|----------|---|---|
| DLS A101 | Introduction to Children's Behavioral Health | 3 |
| DLS A201 | Skill Basics in Children's Behavioral Health | 3 |
| DLS A205 | Teaching Social Skills to Youth in Children's Behavioral Health | 4 |
| DLS A206 | Positive Behavioral Supports in Children's Behavioral Health | 3 |
| DLS A385 | Working with Traumatized Children | 3 |

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GERONTOLOGY

Social Sciences Building (SSB), Room 374, (907) 786-1955

www.uaa.alaska.edu/gerontology

Gerontology is the study of the aging process as individuals mature from middle age through later life. It includes the study of physical, mental, emotional, and social changes in older people as they age. Gerontology investigates changes in society that result from an aging population and applies this knowledge to policies and programs. This field is multidisciplinary and the study of aging combines and/or integrates information from academic and applied areas of study.

The field of gerontology is diverse and offers many different employment opportunities. Jobs may be found in:

- Community, human service, and religious organizations
- Health care and long-term care institutions
- Federal, state, and local government agencies
- Retirement communities
- Academic and other educational and research settings
- Professional organizations
- Business organizations

The minor is comprised of a selection of courses that specifically relate to issues concerning the aging process. Because of its multidisciplinary emphasis, there is no one preferred student major background necessary for working towards a minor. Please also read the policy section regarding Minors at the beginning of this chapter.

Minor, Gerontology

The undergraduate Minor in Gerontology is comprised of a selection of courses that specifically relate to issues concerning the aging process. A total of 18 credit hours is required for the minor.

1. Complete required minor core courses:

| | | |
|----------|---|---|
| SOC A110 | Introduction to Gerontology: Multidisciplinary Approach | 3 |
| SOC A310 | Sociology of Aging | 3 |
| PSY A450 | Adult Development and Aging | 3 |
2. Complete 9 additional credits from the list below. Six of the credits must be upper division courses. Up to 6 credits may be from approved practicum courses related to gerontology.

| | | |
|-----------|--|---|
| AKNS A492 | Seminar: Cultural Knowledge of Native Elders (3) | 9 |
| HUMS A416 | Substance Abuse and the Older Adult (3) | |
| NS A434 | Health Care of the Elderly (3) | |
| PSY A143 | Death and Dying (3) | |
| SWK A470 | Social Work with the Aging and Elderly (3) | |

Approved selected/special topics course(s) related to Gerontology (1-3)*
Approved practica related to Gerontology (3-6)**

* Selected or special topics courses related to aging will be periodically offered by various departments. These courses are typically listed under A490. Topics must be reviewed and approved by the gerontology committee.

** Practica related to gerontological issues may also be used to meet minor program requirements. Practica are individualized and represent an applied or practical side of the minor and are offered by various departments. Practica must be approved by the gerontology committee. A maximum of 6 credits may be from practicum courses.

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HEALTH SCIENCES

Diplomacy Building (DPL), Room 404, (907)786-6565

<http://hs.uaa.alaska.edu/dept>

Bachelor of Science, Health Sciences

The Bachelor of Science in Health Sciences degree (BSHS) offers the Physician Assistant Track; and two tracks for Allied Health professionals: the Pre-Professional Track, and the Allied Health Education Track. The Physician Assistant Track provides a BS degree for students who have completed a physician assistant program. The Pre-Professional Track provides education for Allied Health professionals preparing for graduate or professional health career educational programs. The Allied Health Education Track provides education for Allied Health professionals wishing to teach in Allied Health education programs.

Physician Assistant Track

The Physician Assistant Track provides a BS degree for students who have completed the required education and clinical experience to work as a physician assistant.

The UAA BSHS degree program consists of a minimum of two years of pre-major coursework and health care experience in addition to the Medex curriculum requirements. The Medex curriculum includes one year of clinical and didactic instruction at approved training sites, and a year of clinical and family practice clerkships.

Physician assistants (PAs) are health care professionals licensed to practice medicine with physician supervision. As part of their comprehensive responsibilities, PAs conduct physical exams, diagnose and treat illnesses, order and interpret tests, counsel on preventive health care, assist in surgery, and can write prescriptions in most states.

Physician assistants practice in primary care medicine - family medicine, internal medicine, pediatrics, obstetrics and gynecology and in surgery and the surgical subspecialties. Within the physician-PA relationship, physician assistants exercise autonomy in medical decision making and provide a broad range of diagnostic and therapeutic services. PA practice may also include education, research, and administrative services.

Typical PA applicants come from a diversity of health care backgrounds, such as LPN, RN, paramedic, corpsman, and community health practitioners.

Program Outcomes

Graduates of the BSHS Physician Assistant Track will:

- Perform data collection, medical interviewing and physical examination skills, and communicate the acquired information effectively.
- Formulate medical decisions and treatment plans.
- Perform procedural skills appropriate to the physician assistant's role.
- Work with patients to educate them about appropriate treatments and interventions to maximize health.
- Have knowledge of pharmacology and other treatment modalities to enable the physician assistant to function at the full scope of practice as allowed by individual state law.
- Provide assessment and care for common mental health conditions and concerns.
- Understand the unique features of the physician assistant role, including the physician assistant's legal relationship with supervising and delegating physicians.
- Increase health care access by providing primary care services to under-served populations.

Physician Assistant Students Enrolled at MEDEX

Completion of the BSHS degree requires a year of intense didactic instruction that will be taught in Alaska through the University of Washington (UW) MEDEX program starting in 2009. While students may earn a PA certificate through a number of training programs, special arrangements have been made with UW so that the UAA BSHS degree, with a Physician Assistant Track may be awarded in conjunction with coursework taken through the UW MEDEX Program. Students will receive their first year of coursework at UAA but will be admitted and registered at UW. Students will be co-enrolled during their summer year clerkship to meet the UAA degree requirements. Students must complete both their junior year courses and their senior year clerkship courses at UAA to receive the certificate from UW and their BSHS from UAA.

Procedures for Participation of UAA Students in the UW MEDEX Northwest Physician Assistant Program

Up to 20 students may be admitted to the Anchorage training site of the UW MEDEX program annually, in accordance with the joint selection process established in the collaborative agreement between UAA and UW. Applicants are evaluated on their previous clinical experience and their commitment to practice in Alaska, particularly in under-served areas, in addition to their overall academic performance in the pre-physician assistant curriculum.

Alaska students admitted into the MEDEX program spend their junior year of the PA program at the UAA training site where they receive intense clinical and didactic instruction. The senior year of the BSHS program is spent in training sites throughout Alaska and the WWAMI region currently utilized by the MEDEX program.

The practicum year corresponds to UW's year of clinical placement and supervision that completes the MEDEX certificate program. The clinical year begins in September and ends in early September the following year. The clinical placements call for 35-40 hours a week in supervised clinical training and 10-20 hours a week in self-study.

At the completion of the MEDEX PA program, students are eligible to sit for the National Certifying Examination for Physician Assistants. The University of Washington School of Medicine grants a Physician Assistant Certificate upon successful completion of the MEDEX PA program. Upon

successful completion of degree requirements (see below), the University of Alaska Anchorage awards a Bachelor of Science in Health Sciences.

For more information about the MEDEX Northwest Physician Assistant Program go to www.washington.edu/medicine/som/depts/medex.

Practicing PAs of other programs may contact the BSHS Department to obtain details about entering this degree pathway.

BSHS Physician Assistant Track Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations. Students who declare a Health Sciences major and do not meet the additional admission requirements listed below, but do meet the university's general admission requirements, will be admitted as Health Sciences pre-majors (see pre-major admission below).

Health Care Experience

Students without health care experience should note that admission to the MEDEX program requires a minimum of two years of recent, full-time, hands-on experience in the direct delivery of medical care to patients, in addition to specific academic requirements. (See Note below, under Full Admission). Students should meet with an advisor in the Health Sciences Department to discuss what type of work experience will meet this admission requirement.

For more information about the MEDEX Northwest Physician Assistant Program admission requirements visit www.washington.edu/medicine/som/depts/medex/applicants/prerequisites.htm.

Pre-Major Admission

Students admitted as pre-majors must contact an advisor in the Health Sciences Department and plan their academic schedule carefully in order to satisfy both the UAA BSHS admission and degree requirements and the MEDEX admission and program requirements.

Full Admission

To apply for full admission to the BSHS PA Track program, students must:

1. Have completed UW MEDEX admission requirements and have received formal notification of admission to the MEDEX program OR have graduated from an ARC-PA accredited program.
2. Complete a Change of Major Form requesting a change of admission status from pre-major to full major.

Note: Students seeking admission to the MEDEX program must complete the following UAA BSHS pre-major courses: ENGL A111, ENGL A212, BIOL A111/L, BIOL A112/L and CHEM A103/L or BIOL A102 or BIOL A240. PSY A111 or PSY A150 is also highly recommended. (The MEDEX program requires a minimum grade of B- in each course applied toward the UW admission requirements.)

Academic Progress

Students in pre-major admission status who are unsuccessful after three attempts to be admitted into the MEDEX program will be removed from the BSHS degree program. MEDEX students who do not successfully complete or are dismissed from the MEDEX program may be removed from the BSHS program.

Certified Physician Assistant's Degree Completion Admission Requirements

Students who have graduated from the UW MEDEX program or another accredited PA program, and hold current NCCPA certification may be admitted to the UAA BSHS degree program to complete their degrees. They must meet the Baccalaureate Degree Programs Admission Requirements in Chapter 7 of this catalog and must submit official transcripts and official documentation of successful PA program completion.

Students admitted to the BSHS program who hold a current PA Certificate through an ARC-PA accredited program and satisfy all UAA requirements may be awarded credits for the certificate and apply those credits toward the BSHS. Contact the Health Sciences Department for details.

BSHS Physician Assistant Track Graduation Requirements

Students must complete the following requirements:

A. General University Requirements

All students, with the exception of the following, must complete all General University Requirements for All Baccalaureate Degrees at the beginning of this chapter.

In conjunction with a collaborative agreement between the University of Washington MEDEX program and UAA, students who hold a MEDEX PA certificate may use their MEDEX courses to meet the UAA General University Requirements that 24 upper division credits must be completed in residence at UAA and 12 credits in the major must be completed in residence at UAA. These students will, however, be required to meet all other General University Requirements including completion of at least 30 credits in residence at UAA.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees at the beginning of this chapter.

C. Major Requirements

- Complete the following course:

| | | |
|---------|-------------------------|---|
| HS A491 | Health Issues in Alaska | 3 |
|---------|-------------------------|---|
- MEDEX students concurrently admitted to the BSHS degree program at UAA and the UW MEDEX program must complete the following:

| | | |
|---------|--|----|
| HS A463 | Physician Assistant Clinical Clerkship I | 12 |
| HS A464 | Physician Assistant Clinical Clerkship II | 12 |
| HS A465 | Physician Assistant Family Practice Clerkship I | 12 |
| HS A466 | Physician Assistant Family Practice Clerkship II | 12 |
- A total of 120 credits is required for the degree, of which 42 must be upper division.

Minor, Public Health

Public health is a diverse field that focuses on improving the health of the entire population through community-based health promotion and disease prevention activities and policies. Students majoring in a subject other than Health Sciences who wish to minor in Public Health must complete the following requirements. A total of 18 credits is required, of which 9 must be upper division.

- Complete the following minor core courses (9 credits):

| | | |
|---------|----------------------------------|---|
| HS A220 | Core Concepts in Health Sciences | 3 |
| HS A230 | Introduction to Global Health | 3 |
| HS A326 | Introduction to Epidemiology | 3 |
- Complete 9 additional credits from the list below:

| | | |
|------------|--|---|
| HS A210 | Introduction to Environmental Health | 3 |
| HS A345 | Planning and Implementation of Health Education Programs | 3 |
| HS/ | | |
| HUMS A420 | Introduction to Program Evaluation | 3 |
| HS/NS A433 | Health Education: Theory and Practice | 3 |
| HS A492 | Senior Seminar: Contemporary Health Policy | 3 |

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HUMAN SERVICES

Professional Studies Building (PSB), Room 212, (907) 786-6437

<http://hums.uaa.alaska.edu>

The Department of Human Services offers both an Associate of Applied Science degree in Human Services, which prepares students for entry-level employment, and a Bachelor of Human Services practitioner's degree, which holds as its mission preparing human service generalists through competency-based, community-oriented programs encompassing classroom and practical learning opportunities. The AAS is articulated with the baccalaureate degree in a two-plus-two sequence. Employing a multidisciplinary approach, the degree objective is to provide students with a conceptual and skill foundation suitable for successful human service practice in both urban and rural settings. Human service practice requires multicultural understanding and respect of clients through a collaborative relationship founded upon a developmental model. Specific skill courses combined with practica are strengthened through conceptual coursework in Human Services, Social Work, Sociology and Psychology. The program also offers specialized areas in substance abuse, disabilities, diversity issues, general human services, and family and youth. These are coordinated with practicum placements to give students firsthand experience in their desired specialty.

An important part of the Human Services program is advising. Prospective students should contact a Human Services advisor before entering the program. Students are assigned an academic advisor when they declare the Human Services major. Entrance into the Human Services practicum requires admission to the degree, successful completion of specified courses and recommendation by the academic advisor. Call the Human Services Department at 786-6437 for an appointment with an advisor.

Both the Human Services AAS and BHS are accredited by the Council for Standards in Human Services Education.

Occupational Endorsement Certificate, Conflict Resolution

The Human Services Occupational Endorsement Certificate in Conflict Resolution provides students the opportunity to acquire skills used in various conflict resolution methods used in human service agencies. The 18-credit program provides a balanced education in the study of family mediation, alternative dispute resolution, paraprofessional counseling and group facilitation. Instruction is delivered through classroom lectures, demonstrations, case studies and role plays.

Outcomes

Students completing this certificate are prepared to:

- Understand the nature of conflict through theory and collaborative practices.
- Demonstrate enhanced communication skills and interpersonal skills to include negotiation.
- Incorporate conflict management skills in human service practice.
- Integrate concepts of diversity into various collaborative practices.

Admission Requirements

Satisfy the admission requirements for Occupational Endorsements found in Chapter 7, Academic Standards and Regulations.

Certificate Requirements

- Complete the General University Requirements for Occupational Endorsement Certificates found at the beginning of this chapter.
- Complete the following required courses:

| | | |
|-----------|--|---|
| HUMS A223 | Introduction to Paraprofessional Counseling I | 3 |
| HUMS A224 | Conflict and Collaborative Systems | 3 |
| HUMS A324 | Introduction to Paraprofessional Counseling II | 3 |
| HUMS A333 | Alternative Dispute Resolution | 3 |

| | | |
|-----------|--|---|
| HUMS A334 | Family Mediation | 3 |
| HUMS A434 | Group Facilitation for Human Service Professionals | 3 |

3. A total of 18 credits is required for the occupational endorsement certificate.

Associate of Applied Science, Human Services

Graduates of this program are able to:

- Analyze and navigate community-based human services agencies and service delivery systems and secure a variety of community resources.
- Utilize a strengths-based approach to working with people and their problems in living.
- Effectively use intervention and core paraprofessional counseling skills
- Apply their acquired human services skills in a service agency, to include assessment, interviewing, treatment planning, service delivery, and paraprofessional counseling.
- Demonstrate consolidation of knowledge through three areas of learning including:
 - Understanding of an agency, its target population and services delivered, and interaction with their community partners.
 - Development of their professional selves and identities with appropriate use of supervision.
 - Application of client/community intervention skills.
- Qualify for employment in the human services workforce.
- Build on their human services degrees as a foundation for further education.

Admission Requirements

Satisfy the Admission Requirements for Certificate and Associate Degree programs found in Chapter 7, Academic Standards and Regulations.

General University Requirements

- Complete the General University Requirements for Associate of Applied Science Degrees found at the beginning of this chapter.
- Complete the General Course Requirements for Associate of Applied Science General Degrees located at the beginning of this chapter.

Major Requirements

- Complete the following required courses:

| | | |
|------------|--|---|
| ANTH A200 | Natives of Alaska (3) | 3 |
| | or | |
| ANTH A202 | Cultural Anthropology (3) | |
| HUMS A101 | Introduction to Human Services | 3 |
| HUMS/ | | |
| SWK A106 | Introduction to Social Welfare | 3 |
| HUMS A223 | Introduction to Paraprofessional Counseling I | 3 |
| HUMS A295A | Human Services Practicum I | 3 |
| HUMS A295B | Human Services Practicum II | 3 |
| HUMS A324 | Introduction to Paraprofessional Counseling II | 3 |
| PSY A111 | General Psychology | 3 |
| PSY A150 | Lifespan Development | 3 |
- Complete 6 credits from one of the emphasis areas: 6

****Note:** Each Human Service degree (Associate of Applied Science and Bachelor of Human Services) requires a 6-credit emphasis area. BHS students may complete 6 credits from a different emphasis area or an additional 6 credits from the emphasis area used for the AAS.

General Human Services Emphasis

Complete 6 credits from the following: 6

| | |
|----------|---------------------|
| HUMS/ | |
| PSY A153 | Human Relations (3) |

| | |
|--------------|--|
| HUMS A256 | Groups and Organizations (3) |
| HUMS A350 | Men and Masculinity (3) |
| PSY A245 | Child Development (3) |
| PSY A261 | Research Methods in Psychology (4) |
| PSY A345 | Abnormal Psychology (3) |
| SOC A202 | Social Institutions (3) |
| SOC A242 | Introduction to Family, Marriage, and Intimate Relationships (3) |
| SOC A246 | Adolescence (3) |
| SOC/PSY A453 | Application of Statistics to the Social Sciences (3) |

Substance Abuse Emphasis

Complete 6 credits from the following: 6

| | |
|-----------|--|
| HUMS A122 | Substance Abuse as a Contemporary Problem (3) |
| HUMS A123 | Public Education and Prevention in Substance Abuse (3) |
| HUMS A124 | Introduction to Physiology and Pharmacology of Substance Abuse (3) |
| HUMS A226 | Intervention Continuum in Substance Abuse Counseling (3) |
| HUMS A416 | Substance Abuse and the Older Adult (3) |

Family and Youth Emphasis

Complete 6 credits from the following: 6

| | |
|-----------|--|
| HUMS A350 | Men and Masculinity (3) |
| HUMS A416 | Substance Abuse and the Older Adult (3) |
| PSY A245 | Child Development (3) |
| SOC A242 | Introduction to Family, Marriage, and Intimate Relationships (3) |
| SOC A246 | Adolescence (3) |

Disabilities Emphasis

Complete 6 credits from the following: 6

| | |
|----------|---|
| ASL A101 | Elementary American Sign Language I (4) |
| ASL A102 | Elementary American Sign Language II (4) |
| ASL A201 | Intermediate American Sign Language I (4) |
| PSY A445 | Strategies of Behavior Change (3) |
| PSY A455 | Mental Health Services in Alaska (3) |

Diversity Issues Emphasis

Complete 6 credits from the following: 6

| | |
|-----------|--|
| AKNS A101 | Alaska Native Languages I (4) |
| AKNS A102 | Alaska Native languages II (4) |
| AKNS A109 | Alaska Native Language Orthography (4) |
| AKNS A201 | Alaska Native Perspectives (3) |
| AKNS A492 | Seminar: Cultural Knowledge of Native Elders (3) |
| ANTH A270 | Women in Cross-cultural Perspective (3) |
| HUMS A350 | Men and Masculinity (3) |
| HUMS A416 | Substance Abuse and the Older Adult (3) |
| WS A200 | Introduction to Women's Studies and Gender Studies (3) |

- Choose 12 credits of electives. Consultation with faculty advisor recommended. 12
- A total of 60 credits is required for the degree.

Bachelor of Human Services

Admission Requirements

Complete the Requirements for Admission to Baccalaureate Degree programs in Chapter 7 of this catalog. Students must complete an Associate of Applied Science, Human Services degree from an accredited institution recognized by UAA. See the Human Services website at <http://hums.uaa.alaska.edu> or the Human Services Student Handbook for the Bachelor of Human Services admission process.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. Major Requirements

1. Complete the following Bachelor of Human Services core requirements:*

| | | |
|------------|--|---|
| HUMS A321 | Diversity Issues in Human Services Practice | 3 |
| HUMS A322 | Service Coordination in Human Services Practice | 3 |
| HUMS A333 | Alternative Dispute Resolution | 3 |
| HUMS A412 | Ethical Issues in Human Services Practice | 3 |
| HUMS A414 | Rural Treatment Strategies for Human Service Professionals | 3 |
| HUMS A417 | Substance Abuse Counseling for Human Service Professionals | 3 |
| HUMS A424 | Advanced Counseling for Human Service Professionals | 3 |
| HUMS A434 | Group Facilitation for Human Service Professionals | 3 |
| HUMS A461 | Crisis Intervention | 3 |
| HUMS A495A | Human Services Practicum III | 3 |
| HUMS A495B | Human Services Practicum IV | 3 |

* Note: Cannot be used in emphasis areas.

2. Complete an additional 6 credits (to total 12 credits) from the AAS Major Requirements Emphasis Areas.

**Note: Each Human Service degree (Associate of Applied Science and Bachelor of Human Services) requires a 6-credit emphasis area. BHS students may complete 6 credits from a different emphasis area or an additional 6 credits from the emphasis area used for the AAS.

3. A total of 120 credits is required for the degree, of which 42 credits must be upper division.

Minor, Addiction Studies

The Addiction Studies Minor, coordinated by the Human Services Department, provides students with the opportunity to gain knowledge about the process and effects of addictive behaviors, and their treatment. By providing students with contemporary information, and an opportunity to select from an array of courses that meet their professional interests and goals, the minor prepares students for entry-level positions in treatment programs, substance abuse agencies, or for graduate study in this or related areas. The minor also enhances the capabilities of students in human service fields, such as human services, social work, nursing, justice, and psychology, to acquire knowledge about substance abuse, a major factor in many human dilemmas. Coursework may also apply toward certification from the state of Alaska as a substance abuse counselor. Please note that additional coursework and practicum hours may be required for this certification.

The Addiction Studies minor requires a total of 18 credits, of which a minimum of 9 must be upper division.

1. Complete 6 credits from the following courses: 6

| | |
|-----------|--|
| HUMS A122 | Substance Abuse as a Contemporary Problem (3) |
| HUMS A226 | Intervention Continuum in Substance Abuse Counseling (3) |
2. Complete 12 credits from the following: 12

| | |
|-----------|--|
| HS A480 | Contemporary Issues in Addiction Studies (1-3) |
| HUMS A123 | Public Education and Prevention in Substance Abuse (3) |
| HUMS A124 | Introduction to Physiology and Pharmacology of Substance Abuse (3) |
| HUMS A416 | Substance Abuse and the Older Adult (3) |
| HUMS A417 | Substance Abuse Counseling for Human Services Professionals (3) |
| JUST A110 | Introduction to Justice (3) |
| NS A428 | Nursing the Chemically Dependent Client (3) |

3. A total of 18 credits is required for the minor.

FACULTY

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Ira Rosnel, Assistant Professor, AFIR@uaa.alaska.edu

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JUSTICE

Consortium Library (LIB), Room 213, (907) 786-1810

<http://justice.uaa.alaska.edu>

The Justice Center has statewide responsibility for higher education and research related to the areas of crime, law, and the administration of justice. The center offers a baccalaureate degree program for students interested in the justice area. In addition, a Paralegal Studies Certificate is available for qualified students who wish to pursue a paralegal career.

Justice faculty have professional research and service obligations beyond classroom teaching. The center is an organized research unit which, at its own initiative or in response to requests from outside the university, conducts research and public education programs. Efforts are made to ensure that all undergraduate students who major in Justice have opportunities to work with faculty members on Justice Center research and service projects.

Justice Research Honors

The Justice Center recognizes those undergraduate students who develop exceptional social science research skills by awarding them Justice Research Honors. Students majoring in Justice are eligible to graduate with Justice Research Honors upon satisfactory completion of all of the following requirements:

1. Meet the requirements for a BA degree in Justice.
2. Meet the requirements for membership in the national justice honor society, Alpha Phi Sigma (including, 3.20 GPA in UAA Justice courses, 3.00 overall).
3. Complete the following courses with a grade of B or better:

| | |
|-----------|--------------------------------------|
| JUST A400 | Advanced Research Methods |
| JUST A401 | Inferential Data Analysis in Justice |
| JUST A488 | Research Practicum |
4. Students intending to graduate with Justice Research Honors must notify the Justice Center undergraduate program coordinator, in writing, on or before the date they file their Application for Graduation with the Office of the Registrar.

Bachelor of Arts, Justice

The Bachelor of Arts degree in Justice satisfies the educational prerequisites for a variety of administrative, operational, research, and planning positions related to crime, law and the administration of justice. Those graduates with records of high achievement in the Justice undergraduate program are prepared to pursue advanced education in graduate and professional degree programs at the University of Alaska Anchorage and other universities.

Graduates who receive a Bachelor of Arts degree in Justice have both broad educational preparation for productive citizenship and the specialized knowledge and skills required for the evaluation,

administration and improvement of police, court, and correctional policies and organizations.

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. Major Requirements

- Complete the following required courses:

| | | |
|-----------------------------------|-------------------------------------|----|
| JUST A110 | Introduction to Justice | 3 |
| JUST A200 | Introduction to Research Methods | 3 |
| JUST A201 | Justice Data Analysis | 3 |
| JUST A221 | Justice Organization and Management | 3 |
| JUST A250 | Development of Law | 3 |
| JUST/SOC A251 | Crime and Delinquency | 3 |
| JUST A330 | Justice and Society | 3 |
| JUST A360 | Theory and Policy Analysis | 3 |
| *Upper division Justice electives | | 15 |
| *Justice electives, any level | | 6 |

**Paralegal Studies courses can be counted as Justice electives. Only 6 credits of JUST A490 may be counted toward the Justice electives required for the BA in Justice.*
- Complete a university-approved minor in another discipline. Specific requirements for minors are listed in the catalog by school or department. 18-21
- All Justice majors must take the Justice Exit Examination. There is no minimum score required for graduation.
- A total of 120 credits is required for the degree of 42 credits must be upper division.

Minor, Justice

Students majoring in another subject who wish to minor in Justice must complete the following requirements. A total of 18 credits is required for the minor, 9 of which must be upper division.

| | | |
|-----------------------------------|-------------------------|---|
| JUST A110 | Introduction to Justice | 3 |
| JUST/SOC A251 | Crime and Delinquency | 3 |
| *Upper division Justice electives | | 9 |
| *Justice electives, any level | | 3 |

**Paralegal Studies courses can be counted as Justice electives. Only 6 credits of JUST A490 may be counted toward the Justice electives required for the minor in Justice.*

FACULTY

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PARALEGAL STUDIES

Consortium Library (LIB), Room 213, (907) 786-1810

<http://justice.uaa.alaska.edu>

Undergraduate Certificate, Paralegal Studies

The Paralegal Studies Undergraduate Certificate Program is approved by the American Bar Association.

Program Goals

- Broad-based knowledge achieved through general college education.
- Exceptionally strong competency in critical thinking and in written and oral communication skills.
- Comprehensive understanding of ethical responsibilities as assistants to attorneys, governed by the rules of professional responsibility.
- Legal vocabulary and understanding of procedure required to perform paralegal duties in a civil practice.
- Operational knowledge of the interviewing and investigatory techniques required for paralegal performance.
- Command of skills required for both law library and computerized legal research, and for memoranda of legal analysis.
- Knowledge of the variety of legal specialties performed by paralegals.
- Practical experience in a law office or agency that allows students to apply classroom skills.

Admission Requirements

- Students must have completed ENGL A111 with a minimum grade of B and [(ENGL A211 or ENGL A212 or ENGL A213 or ENGL A214 or ENGL A311 or ENGL A312 or ENGL A313 or ENGL A414 or ENGL A487) with minimum grade of B].
- Students must have a 2.00 overall GPA to be admitted to the Paralegal Studies Certificate program.
- Students must apply and be admitted to the program at the Anchorage campus before completing 12 credits of the paralegal core curriculum.

Note: Special admission requirements for this certificate are enforced and certificates cannot be completed at extended campuses. Certain courses required for the certificate must be taken only at the Anchorage campus.

Students are encouraged to complete a Bachelor of Arts or Associate of Arts in conjunction with the Paralegal Certificate. Paralegal courses fulfill the Justice elective requirements for the Justice BA and the General Elective requirements for the Associate of Arts. Students who have already completed a degree at an accredited institution whose composition courses meet UAA's written communication and program admission requirements need only complete the Paralegal core courses. Transfer credit for some core courses may be determined at the departmental level.

Students interested in the Paralegal Studies Certificate program should consult a faculty advisor in the Justice Center before enrolling in paralegal courses.

Certificate Requirements

- Complete 6 credits of written communications courses with a minimum grade of B

| | | |
|---------------------------|--|---|
| ENGL A111 | Methods of Written Communication | 3 |
| and one of the following: | | 3 |
| ENGL A211 | Academic Writing About Literature (3) | |
| ENGL A212 | Technical Writing (3) | |
| ENGL A213 | Writing in the Social and Natural Sciences (3) | |
| ENGL A214 | Persuasive Writing (3) | |
| ENGL A311 | Advanced Composition (3) | |
| ENGL A312 | Advanced Technical Writing (3) | |
| ENGL A313 | Professional Writing (3) | |
| ENGL A414 | Research Writing (3) | |
| ENGL A487 | Standard Written English (3) | |

2. Complete the following required core courses (28 credits):

| | | |
|-----------|--|---|
| JUST A495 | Internship (1-6) | 3 |
| PARL A101 | Introduction to Law | 3 |
| PARL A215 | Paralegal Studies | 3 |
| PARL A235 | Factual Investigation and Interviewing | 2 |
| PARL A236 | Ethics and Paralegals | 1 |
| PARL A238 | Civil Procedure | 3 |
| PARL A356 | Legal Research | 3 |
| PARL A375 | Litigation | 3 |
| PARL A456 | Advanced Legal Analysis and Writing | 4 |
| PARL A470 | Law of Government Regulation | 3 |
3. Complete one of the following elective courses (3 credits):

| | | |
|--------------------|------------------------------|---|
| PARL/ JUST A340 | Family Law (3) | 3 |
| PARL/ JUST A352 | Substantive Criminal Law (3) | |
| PARL/ JUST A354 | Criminal Procedure (3) | |
| PARL A362 | Commercial Law (3) | |

 Other upper division law course from Justice or Paralegal curriculum with paralegal coordinator approval (3)
4. Complete at least 20 credits, in addition to the preceding core courses, from the General Education Requirements for Baccalaureate Degrees list. 20
5. Complete 3 credits of any elective at the 100-level or above. 3
6. Students must achieve a minimum grade of C in each paralegal core course to receive the certificate. Courses may be repeated to improve grades according to university or program policy.
7. A total of 60 credits is required for the certificate.

Note: Graduates are not authorized to provide direct legal services to the public. The Paralegal Studies Certificate program is a training program for paralegals who are authorized to perform substantive legal work under the supervision of an attorney. The program does not train lawyers or legal administrators.

FACULTY

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SCHOOL OF NURSING

Professional Studies Building (PSB), Room 103, (907) 786-4550
<http://nursing.uaa.alaska.edu>

The mission of the Nursing program is to educate students for productive citizenship, personal growth, and professional nursing practice. The department offers potential students interested in becoming qualified to practice as a registered nurse two options: the Associate of Applied Science degree in Nursing and the Bachelor of Science degree in Nursing Science. The programs are designed to reflect Alaska's needs and health care delivery systems, although graduates are prepared for beginning practice positions in other geographic areas as well. An AAS Direct Articulation program is available for individuals who already hold the LPN license in Alaska. A baccalaureate completion program is available

for individuals who already hold the RN license in Alaska. The nursing programs are approved by the Alaska Board of Nursing and accredited by the National League for Nursing Accreditation Commission (61 Broadway, New York, NY 10006; (212) 363-5555, ext 153). Graduates of the programs are eligible to write the National Council Licensing Examination (NCLEX) for licensure as a Registered Professional Nurse in Alaska and other nursing jurisdictions. The baccalaureate program also provides students with the academic base for graduate study in nursing.

Information sessions are available to interested students. Times and locations are recorded on (907) 786-4560.

Undergraduate Certificate, Practical Nursing

Admission to the Practical Nursing Certificate program has been suspended. Please contact the department for information.

Associate of Applied Science, Nursing

Graduates of the Associate of Applied Science, Nursing program are prepared to use the nursing process to provide effective nursing services to individuals receiving care in inpatient settings and in structured outpatient settings. The academic program provides students with a closely related mix of theory and clinical practice; students gain experience in hospitals, nursing homes, clinics, and community agencies.

Admission Requirements

Students may complete the Associate of Applied Science, Nursing program in two academic years (four semesters); admission to the clinical sequence is determined by a ranking process, admission is selective, and admission requirements must be completed prior to February 1 (see items 1-6 below). Students are encouraged to submit an application to the university by August to ensure complete processing of application and transcript evaluation by February 1. Students are encouraged to complete corequisite courses while waiting for admission to the clinical sequence.

In order to have a student file ranked for possible admission to the nursing sequence, the following items must be completed no later than February 1:

1. UAA Certificate of Admission from the Office of Admissions, including transcripts from both high school/GED and college, with transcript evaluations (if any). Documentation from transcripts must show successful completion of the following courses with grades of C or above: algebra, biology with laboratory, and chemistry with laboratory. Courses may have been taken at the high school or college level. Equivalent college-level courses in lieu of high school are: MATH A055, BIOL A102 and BIOL A103, CHEM A055.
2. Student attends an advising session with the coordinator of student affairs, School of Nursing. Call (907) 786-4560 for a recorded message.
3. School of Nursing Application and Confidential Required Information Form sent to the coordinator of student affairs, School of Nursing.
4. Three letters of reference sent to the coordinator of student affairs, School of Nursing.
5. Upon completion of items 1-4, student has an interview with a member of the AAS Admissions Committee.
6. Take the Nurse Entrance Test (NET) through Advising and Testing. Call (907) 786-4500 for specific dates and to sign up.
7. Upon completion of items 1-6, student's file is ranked based on a point system.

Please contact the department for further details. Students are contacted in March with the results.

Once admitted to associate's degree clinical nursing courses, students are required to provide the following before beginning clinical coursework:

1. Evidence of:
 - a. Immunity to rubella and rubeola, confirmed by titer;

- b. Immunity to hepatitis A and hepatitis B, confirmed by titer (first-semester clinical students may be in the process of completing the immunization series; for those students, documentation of immunity by titer is required prior to entry into second-year courses);
 - c. Immunity to chicken pox documented by history, titer or current immunization;
 - d. Diphtheria/tetanus vaccination within the past 10 years (with booster required at the time of expiration);
 - e. Freedom from active tuberculosis, documented annually by negative PPD skin test or by health examination by a nurse practitioner, physician, or physician's assistant;
 - f. Documentation of HIV testing annually (results not required).
2. Current Health Provider Certification in Cardiopulmonary Resuscitation for infants, children, and adults. First year students will have until the third week of the semester to complete this certification which then must be kept current until graduation.
 3. Professional liability insurance in the amount of \$1 million/\$3 million; insurance must be maintained throughout the duration of the student's enrollment in clinical nursing courses. Specific information regarding acceptable professional liability insurance policies may be obtained directly from the program.
 4. Results of a national-level criminal background check.

Students enrolled in clinical courses must provide their own transportation to clinical assignments and will be required to purchase uniforms and specialized equipment. The school assumes no responsibility for illnesses and injuries experienced by students in conjunction with their clinical experiences; students who are injured while completing clinical assignments are responsible for all associated medical costs. It is strongly recommended that students maintain personal medical insurance.

Academic Progress

In order to progress within the Associate of Applied Science, Nursing program, students must earn a satisfactory grade (C or higher or P) in all nursing courses. Students who are unable to earn an acceptable grade in a nursing course during their initial enrollment may attempt to earn a satisfactory grade one additional time on a space-available basis. Students enrolled in one course must be concurrently enrolled in all courses with that common number (NURS A120 and NURS A120L; NURS A125 and NURS A125L; NURS A220 and NURS A220L; NURS A222 and NURS A222L; NURS A225 and NURS A225L; NURS A250 and NURS A250L).

The four-semester clinical course sequence, which begins with NURS A120/120L must be completed within four years.

General University Requirements

1. Complete the General University Requirements for Associate Degrees located at the beginning of this chapter.
2. Complete the Associate of Applied Science General Degree Requirements (15 credits) located at the beginning of this chapter. At least 3 of the 6 credits of general requirements must be a social science course.

Major Requirements

1. Complete the following required courses:

| | | |
|------------|---|---|
| BIOL A111 | Human Anatomy and Physiology I | 4 |
| BIOL A112 | Human Anatomy and Physiology II | 4 |
| BIOL A240 | Introductory Microbiology for Health Sciences | 4 |
| DN A203 | Nutrition for Health Sciences | 3 |
| NURS A120 | Nursing Fundamentals | 3 |
| NURS A120L | Nursing Fundamentals Lab | 4 |
| NURS A125 | Adult Nursing I | 3 |
| NURS A125L | Adult Nursing I Lab | 4 |
| NURS A180 | Basic Nursing Pharmacology | 3 |
| NURS A220 | Perinatal Nursing | 3 |
| NURS A220L | Perinatal Nursing Lab | 1 |

| | | |
|------------|--|---|
| NURS A221 | Advanced Parenteral Therapy Lab | 1 |
| NURS A222 | Pediatric Nursing | 3 |
| NURS A222L | Pediatric Nursing Lab | 1 |
| NURS A225 | Adult Nursing II | 3 |
| NURS A225L | Adult Nursing II Lab | 3 |
| NURS A250 | Psychiatric Nursing | 3 |
| NURS A250L | Psychiatric Nursing Lab | 1 |
| NURS A255 | Staff Nurse: Legal, Ethical, and Organizational Issues | 1 |
| PSY A150 | Lifespan Development | 3 |

2. A total of 70 credits is required for the degree.

Associate of Applied Science, Nursing Licensed Practical Nurse Option

Licensed practical nurses may complete the AAS Nursing program in three semesters. Admission to the clinical sequence is selective and determined by a ranking process. Students are encouraged to complete corequisite courses while waiting to qualify for admission to the clinical sequence.

Admission Requirements

Student files entered into the admission ranking process must include documentation of the following by February 1:

1. UAA Certificate of Admission from the Office of Admissions, including high school transcripts or GED certificate and transcripts of all college work, together with UAA transcript evaluations (if needed). Transcripts must provide evidence of completion of the following courses at the high school or college level with grades of C or higher: algebra, biology with laboratory, and chemistry with laboratory. Students may use courses equivalent to the following UAA courses in lieu of work at the high school level: MATH A055, BIOL A102 and BIOL A103 and CHEM A055.
2. Successful completion of or concurrent enrollment in the following college courses or their equivalents:

| | |
|-----------|----------------------------------|
| BIOL A111 | Anatomy and Physiology I |
| ENGL A111 | Methods of Written Communication |
| PSY A150 | Lifespan Development |
3. Current active Alaska LPN license.
4. Completed School of Nursing Application and Confidential Information Form sent to the coordinator of student affairs, School of Nursing.
5. Three letters of references mailed directly to the coordinator of student affairs, School of Nursing.
6. Interview with a member of the AAS Admissions Committee (scheduled after items 1-5 above are completed).

When items 1-6 are complete, the student's file will be entered into the ranking process; further details about the ranking process may be obtained directly from the AAS Nursing program. Students are notified of the results of the ranking process by March 30. Once admitted to the associate's degree clinical courses, students are required to provide documentation of health, CPR, and liability insurance before actually beginning clinical coursework.

Requirements marked with an asterisk (*) are considered valid only if the expiration date does not occur prior to the end of the semester):

1. Evidence of:
2. Immunity to rubella and rubeola, confirmed by titer;
 - a. Immunity to hepatitis A and hepatitis B, confirmed by titer (first-semester clinical students may be in the process of completing the immunization series; for those students, documentation of immunity by titer is required prior to entry into second-year courses);
 - b. Immunity to chicken pox documented by history, titer or current immunization;

- c. Diphtheria/tetanus vaccination within the past 10 years (with booster required at the time of expiration);
 - d. Freedom from active tuberculosis, documented annually by negative PPD skin test or by health examination by a nurse practitioner, physician, or physician's assistant;*
 - e. Documentation of HIV testing annually (results not required).
3. Current Health Provider certification in Cardiopulmonary Resuscitation for infants, children, and adults (information regarding acceptable courses may be obtained from the department).*
 4. Professional liability insurance in the amount of \$1 million/\$3 million; insurance must be maintained throughout the duration of the student's enrollment in clinical nursing courses. Specific information regarding acceptable professional liability insurance policies may be obtained directly from the program.*
 5. Results of a national-level criminal background check.

Students enrolled in clinical courses must provide their own transportation to clinical assignments and will be required to purchase uniforms and specialized equipment. The school assumes no responsibility for illnesses and injuries experienced by students in conjunction with their clinical experiences; students who are injured while completing clinical assignments are responsible for all associated medical costs. It is strongly recommended that students maintain personal medical insurance.

General University Requirements

1. Complete the General University Requirements for Associate Degrees.
2. Complete the Associate of Applied Science General Degree Requirements (15 credits). At least 3 of the 6 credits of general requirements must be earned in a social science course.

Major Requirements

Within the LPN Option, licensed practical nurse students returning to school to complete the AAS degree in nursing will be in the LPN Direct Articulation track.

LPN Direct Articulation Track

Licensed practical nurse students with a current unencumbered Alaska LPN license are eligible for the LPN Direct Articulation track. This track enables the LPN to enter NURS A125/A125L of the AAS nursing program. Upon successful completion of NURS A125 with a C or higher grade, and NURS A125L with a "pass," the student would be granted UAA course credits for NURS A120 and NURS A120L, for a total of 7 credits. To receive credit, the student must complete the appropriate form and pay an administrative fee per UAA policy.

Note: Any direct articulation LPN student not passing NURS A125/A125L would not receive credit for NURS A120/A120L, and would need to take these courses to continue toward the AAS degree in Nursing.

1. Complete the following required courses:

| | | |
|------------|--|---|
| BIOL A111 | Human Anatomy & Physiology I | 4 |
| BIOL A112 | Human Anatomy & Physiology II | 4 |
| BIOL A240 | Introductory Microbiology for Health Sciences | 4 |
| DN A203 | Nutrition for Health Sciences | 3 |
| NURS A180 | Basic Nursing Pharmacology | 3 |
| NURS A220 | Perinatal Nursing | 3 |
| NURS A220L | Perinatal Nursing Lab | 1 |
| NURS A221 | Advanced Parenteral Therapy Lab | 1 |
| NURS A222 | Pediatric Nursing | 3 |
| NURS A222L | Pediatric Nursing Lab | 1 |
| NURS A225 | Adult Nursing II | 3 |
| NURS A225L | Adult Nursing II Lab | 3 |
| NURS A250 | Psychiatric Nursing | 3 |
| NURS A250L | Psychiatric Nursing Lab | 1 |
| NURS A255 | Staff Nurse: Legal, Ethical, and Organizational Issues | 1 |
| PSY A150 | Lifespan Development | 3 |
2. Complete electives to total 70 credits. 6

3. A total of 70 credits is required for the degree.

Bachelor of Science, Nursing Science

Students pursuing the baccalaureate degree in Nursing Science are provided both the theory and clinical base to enable them to assess, plan, implement, and evaluate health care to meet the needs of individuals, families, groups, and communities whose health status varies qualitatively and quantitatively. Students working on a degree in Nursing Science may choose from two options: the Basic Student Option and the Registered Nurse Option.

Honors in Nursing

Students majoring in Nursing are eligible to graduate with departmental honors by satisfying the following requirements:

1. Meet the requirements for Graduation with Honors as listed in Chapter 7, Academic Standards and Regulations.
2. Meet the requirements for a BS in Nursing Science.
3. Earn a grade point average of 3.50 or higher in courses within the School of Nursing (courses with NS prefix).
4. Complete the following process
 - a. Obtaining written support for the intent to graduate with honors from the individual's faculty advisor.
 - b. Notifying the chair of the baccalaureate program and the Baccalaureate Curriculum Committee in writing of the intent to graduate with honors prior to enrolling in the first semester of senior year classes.
 - c. Obtaining approval to enroll in the honors electives from the baccalaureate chair and Baccalaureate Curriculum Committee prior to enrolling for first semester of senior year classes.
5. Satisfactorily complete the two honors electives* courses during the senior year of the baccalaureate Nursing program.

NS A440 Nursing Honors I - Project Exploration
NS A441 Nursing Honors II - Project Implementation

** These courses satisfy the required 3 hours of Nursing electives in the baccalaureate Nursing program.*

Basic Student Option

Admission Requirements

Students who apply to the baccalaureate nursing major and who qualify for admissions to baccalaureate nursing majors are admitted as pre-nursing majors. Admissions as a pre-nursing major does not guarantee admission to the Nursing program. There are a limited number of seats available in each nursing course. Students must apply for admission to the nursing major during the semester in which they are completing the final prerequisites for the first nursing courses (see No. 6 below). Applications must be submitted prior to October 1 in the fall semester, and February 1 in the spring semester. The School of Nursing strongly recommends that students submit their university application up to six months prior to the School of Nursing deadlines to ensure complete processing of the application and transcript evaluation. The process for advancement to the major and the formal admission to the Nursing program are:

1. UAA Certificate of Admission and transcript evaluations (if any) from the Office of Admissions.
2. Advising sessions with a School of Nursing advisor. The student attends a group advising session (call 907-786-4560 for pre-recorded information on group advising session).
3. An extracted minimum grade point average of 2.70 for courses required for the Bachelor of Science, Nursing Science. The GPA is calculated using grades from all courses required for the nursing major and completed at the time of application to the Nursing major.
4. A grade of C or higher in all specified courses required for the nursing major.
5. Completion of specified prerequisite courses:
(GER refers to UAA General Education Requirement)

- | | | |
|---|--|---|
| BIOL A111/L | Human Anatomy and Physiology I with Laboratory (4) and | 8 |
| BIOL A112/L | Human Anatomy and Physiology II with Laboratory (4) | |
| CHEM A103/L | Survey of Chemistry with Laboratory (4) and | 8 |
| CHEM A104/L | Introduction to Chemistry and Biochemistry with Laboratory (4) | |
| ENGL A111 | Methods of Written Communication (3) and | 6 |
| ENGL A213 | Writing in the Social and Natural Sciences (3) | |
| (ENGL A120, PHIL A101 or PHIL A201) or PSY A150 | | 3 |
| Oral communication GER | | 3 |
| Humanities or fine arts or social science GER | | 3 |
| PSY or SOC from GER social science list | | 3 |
- For students not required to take ENGL A111, another GER written communication course must be completed to total 6 credits. For transfer students, grades from equivalent courses are substituted.
- Enrollment in, or credit for,

| | | |
|---|--|---|
| BIOL A240/L | | 4 |
| PSY A150 or (ENGL A120, PHIL A101 or PHIL A201) | | 3 |
| ANTH or ECON from social science GER list | | 3 |
| Humanities or fine arts or social science GER | | 6 |
 - Applicants may not repeat any prerequisite course more than once.
 - Application to the baccalaureate nursing major. After completion of the first 34 credits, as outlined in No. 5, and during enrollment in courses outlined in No. 6, the student meets with the coordinator of student affairs to verify course completion and GPA and completes the application to the nursing major. The student may call (907) 786-4550 to set up an appointment.
 - School of Nursing Application and Confidential Required Information Form on file in the school.
 - Three letters of reference.
 - A current Plan of Study signed by a School of Nursing advisor on file with the School of Nursing.
 - After completion of all the above steps, the student's file is forwarded to the school's Admissions Committee for acceptance into the nursing major. Formal admission to the nursing program is based on the student's relative standing on the minimum requirements outlined above. There are two deadlines for consideration by the committee: October 1 in the following fall semester and February 1 in the following spring semester.
 - Achievement of a C or higher in the specified courses for the major that are in progress when admission is sought (i.e., PSY A150, BIOL A240), and maintenance of a minimum 2.70 GPA until the semester of enrollment in beginning nursing courses (NS A204 and NS A216).
 - Preference will be given to residents of the State of Alaska as defined by the university's policy on residency for tuition purposes.

Clinical Requirements

All students who are admitted to clinical nursing courses are required to provide copies of documentation of health, CPR and personal liability insurance prior to beginning those courses. Requirements marked with an asterisk (*) are considered valid only if the expiration date does not occur prior to the end of the semester of current enrollment:

- Evidence of:
 - Immunity to rubella and rubeola confirmed by titer;
 - Immunity to hepatitis A and hepatitis B confirmed by titer (first-semester clinical students may be in the process of completing the immunization series, for those students, documentation of immunity by titer is required prior to entry into second-year courses);
 - Diphtheria/tetanus vaccination within the last 10 years (booster required at time of expiration);

- Freedom from active tuberculosis, documented annually by negative PPD skin test or by health examination by a nurse practitioner, physician, or physician's assistant.*
 - Immunity to chicken pox confirmed by health history, titer, or immunization;
 - Documentation of HIV testing annually (results not required).
- Current Health Provider Certification in Cardiopulmonary Resuscitation for infants, children and adults (information regarding acceptable courses may be obtained from the department).*
 - Professional liability insurance in the amount of \$1 million/\$3 million; insurance must be maintained throughout the duration of the student's enrollment in clinical nursing courses. (Specific information regarding acceptable professional liability insurance policies may be obtained directly from the program).*
 - Results of a national level criminal background check. Students enrolled in clinical courses must provide their own transportation to clinical assignments and will be required to purchase uniforms and specialized equipment. The school assumes no responsibility for illnesses and injuries experienced by students in conjunction with their clinical experiences; students who are injured while completing clinical assignments are responsible for all associated medical costs. It is strongly recommended that students maintain personal medical insurance.

Academic Progress

In order to progress within the baccalaureate nursing program, students must earn a satisfactory grade (C or higher or P) in all Nursing Sciences courses.

Re-enrollment: Students who are unable to earn an acceptable grade in a nursing course during their initial enrollment may attempt to earn a satisfactory grade one additional time on a space available basis.

Concurrent enrollment: Students enrolled in one course must be concurrently enrolled in all courses with that common number (NS A313, NS A313L; NS A315, NS A315L; NS A401, NS 401L; NS A406, NS A406L; NS A411, NS A411L, NS A416, NS A416L).

Basic student option progress: The four-semester clinical sequence must be completed in seven semesters and no more than a one-semester delay between sequential clinical courses will be permitted without validation of continued competence and currency.

Graduation Requirements

Students must complete the following graduation requirements:

General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter. In the nursing program, some required prerequisite courses fulfill general education requirements.

Major Requirements

- Complete all 44 credits of support courses for the Nursing Science major with a grade of C or better. Courses marked with an asterisk (*) must be completed prior to admission to clinical nursing courses:

| | |
|---|---|
| **ANTH or ECON General Education Requirement | 3 |
| *BIOL A111 Human Anatomy and Physiology I | 4 |
| *BIOL A112 Human Anatomy and Physiology II | 4 |
| *BIOL A240 Introductory Microbiology for Health Sciences | 4 |
| *CHEM A103/L Survey of Chemistry with Laboratory | 4 |
| *CHEM A104/L Introduction to Organic Chemistry and Biochemistry with Laboratory | 4 |
| *DN A203 Nutrition for the Health Sciences | 3 |
| *ENGL A213 Writing in the Social and Natural Sciences | 3 |
| PHIL A302 Biomedical Ethics | 3 |

- | | | |
|---------------------------------------|--------------------------------|---|
| *PSY A150** | Lifespan Development | 3 |
| PSY or SOC | General Education Course | 3 |
| *Reasoning Skills:** | | 3 |
| ENGL A120, or PHIL A101, or PHIL A201 | | |
| STAT A252 | Elementary Statistics (3) | 3 |
| | or | |
| STAT A307 | Probability and Statistics (4) | |
- **Must be in addition to the required General Education Requirements.*
- Nursing Courses: Complete required nursing courses for the Nursing Science major (64 credits).

| | | |
|----------|--|-----|
| NS A204 | Technology and Nursing Informatics | 3 |
| NS A216 | Pathophysiology | 4 |
| NS A300 | Foundations of Nursing I | 4 |
| NS A303 | Foundations of Nursing II | 3 |
| NS A303L | Foundations of Nursing II Lab | 5 |
| NS A309 | Pharmacology in Nursing | 3 |
| NS A313 | Health Disruptions I | 3 |
| NS A313L | Health Disruptions I Lab | 3 |
| NS A315 | Health I: Nursing Therapeutics | 3 |
| NS A315L | Health I: Nursing Therapeutics Lab | 3 |
| NS A400 | Research in Nursing | 3 |
| NS A401 | Health Disruptions II | 3 |
| NS A401L | Health Disruptions II Lab | 2.5 |
| NS A406 | Nursing Therapeutics in Complex Health Disruptions | 2 |
| NS A406L | Nursing Therapeutics in Complex Health Disruptions Lab | 2.5 |
| NS A411 | Health II: Nursing Therapeutics | 3 |
| NS A411L | Health II: Nursing Therapeutics Lab | 3 |
| NS A415 | Nursing Management and Legal Perspectives | 4 |
| NS A416 | Concentration in Clinical Nursing | 0.5 |
| NS A416L | Concentration in Clinical Nursing Lab | 3.5 |
| | Nursing elective (upper division) | 3 |
 - A total of 126 credits is required for the degree; 42 credits must be upper division.

Registered Nurse Option

For students who hold current licensure as a Registered Professional Nurse in the state of Alaska, the school offers "RN-only" courses and sections within the nursing major designed to build upon the RN's basic preparation and experience and to facilitate progress in meeting program objectives. Previous college credits are evaluated for comparability to established requirements within the program and may be accepted for transfer; in addition, credit by examination is available to satisfy some General Education Requirements. Additional information is available upon request.

Admission Requirements

Registered nurses returning to complete the baccalaureate degree in Nursing Science must successfully complete the same academic prerequisites as basic students. Students who apply to the baccalaureate nursing major and who qualify for admission to baccalaureate study are admitted as pre-nursing majors. Admission as a pre-nursing major does not guarantee admission to the nursing program. Registered Nurses must apply for admission to the nursing major during the semester in which they are completing the final prerequisites for NS A204. The deadlines for RN admission are twice a year on November 1 and March 1 for the following summer. Formal admission to the nursing program is based on the registered nurse's relative standing on the following minimum requirements:

- UAA Certificate of Admission and transcript evaluations from the Office of the Registrar.
- Current licensure as a Registered Professional Nurse in the state of Alaska. Copy of licensure on file with the school.
- A current Plan of Study signed by a nursing advisor and the RN student on file with the School of Nursing and Health Sciences. The student may call (907) 786-4550 to set up an advising session.

- An extracted minimum grade point average of 2.00. The grade point average will be calculated using grades from all courses which are required for the nursing major that have been completed at the time of application to the major.
- A grade of C or better in all specified courses required for the nursing major.
- Completion of or credit for specified prerequisite courses (17 credits):

| | | |
|---|-------------------------------------|---|
| BIOL A111 | Human Anatomy and Physiology I | 4 |
| CHEM A103/L | Survey of Chemistry with Laboratory | 4 |
| ENGL A111 | Methods of Written Communication | 3 |
| COMM A111, ENGL A120, PHIL A101, PHIL A201, or PSY A150 | | 3 |
| | General Education Requirement | 3 |

For students not required to take ENGL A111, another English composition course will be substituted. For transfer students, grades from equivalent courses will be substituted.
- Enrollment in, or credit for,

| | | |
|------------------------------------|--|---|
| BIOL A112 | Human Anatomy and Physiology II | 4 |
| CHEM A104/L | Introduction to Organic Chemistry and Biochemistry with Laboratory | 4 |
| ENGL A120, PHIL A101, or PHIL A201 | | 3 |
| ENGL A213 | Writing in the Social and Natural Sciences | 3 |

at the time of application to the major, on achieving a C in the specified courses for the major that are in progress when admission is sought (i.e., CHEM A104/L, BIOL A112), and on maintaining a minimum 2.00 grade point average until beginning nursing courses.
- A School of Nursing and Health Sciences application on file in the school.
- Three letters of reference, one of which must be a professional reference.

Registered Nurse students not formally admitted by UAA as a baccalaureate seeking student in the nursing program or admitted as pre-nursing majors are eligible to take the following courses:

Nursing electives for which prerequisites have been met.

RN Clinical Requirements

See Clinical Requirements under the Basic Student Option.

RN Academic Progress

See Academic Progress under the Basic Student Option.

Graduation Requirements

Students must complete the following graduation requirements:

General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter. In the Nursing program, some required prerequisite courses fulfill general education requirements.

Major Requirements

- Support Courses: Complete support courses for the Nursing Science major (44 credits). All support courses must be completed with a grade of C or better prior to admission to 300-level clinical nursing courses:

| | | |
|---------------|---|---|
| ANTH or ECON* | General Education Requirement | 3 |
| BIOL A111 | Human Anatomy & Physiology I | 4 |
| BIOL A112 | Human Anatomy & Physiology II | 4 |
| BIOL A240 | Introductory Microbiology for Health Sciences | 4 |
| CHEM A103/L | Survey of Chemistry/Lab | 4 |

| | | |
|---------------------------------------|--|---|
| CHEM A104/L | Introduction to Organic Chemistry and Biochemistry/Lab | 4 |
| DN A203 | Nutrition for the Health Sciences | 3 |
| ENGL A213 | Writing in the Social and Natural Sciences | 3 |
| PHIL A302 | Biomedical Ethics | 3 |
| PSY A150* | Lifespan Development | 3 |
| PSY or SOC | General Education Requirement Reasoning Skills:* | 3 |
| ENGL A120, or PHIL A101, or PHIL A201 | | |
| STAT A252 | Elementary Statistics (3) or | 3 |
| STAT A307 | Probability and Statistics (4) | |

*Must be in addition to the required General Education Requirements.

RN Licensure Credit

An accepted, degree-seeking UAA nursing student who has successfully passed the National Council Licensing Examination (NCLEX) and has current RN licensure in the state of Alaska may be granted the following UAA course credits (26.5 credits) upon admission to the nursing major:

| | | |
|----------|-------------------------------|-----|
| NS A216 | Pathophysiology | 4 |
| NS A309 | Pharmacology in Nursing | 3 |
| NS A303 | Foundations of Nursing II | 3 |
| NS A303L | Foundations of Nursing II Lab | 5 |
| NS A313 | Health Disruptions I | 3 |
| NS A313L | Health Disruptions I Lab | 3 |
| NS A401 | Health Disruptions II | 3 |
| NS A401L | Health Disruptions II Lab | 2.5 |

An administrative fee will be charged for these credits. To receive credits, the student must complete the appropriate form with a nursing advisor. Contact the School of Nursing (907) 786-4550 for further information.

- Nursing courses for academic credit: Complete the following required nursing courses within the Nursing Science major (34 credits). Courses marked with an asterisk (*) must be completed with a grade of C or better prior to admission to 400-level clinical nursing courses.

| | | |
|-----------|--|---|
| *NS A205 | Nursing Informatics | 3 |
| *NS A305 | Health Assessment of Individuals | 2 |
| *NS A305L | Health Assessment of Individuals Laboratory | 1 |
| *NS A308 | Dimensions of Professional Nursing Practice | 3 |
| *NS A314 | Health I for Registered Nurses | 2 |
| *NS A314L | Health I for Registered Nurses Laboratory | 2 |
| NS A400 | Nursing Research | 3 |
| NS A408 | Complex Health Disruptions: Nursing Therapeutics | 2 |
| NS A408L | Complex Health Disruptions: Nursing Therapeutics Lab | 2 |
| NS A411 | Health II: Nursing Therapeutics | 3 |
| NS A411L | Health II: Nursing Therapeutics Lab | 3 |
| NS A417 | Management in Nursing | 3 |
| | Nursing electives (upper division) | 6 |

Three credits of nursing elective may be met with a current recognized nursing certification.

- Complete elective credits to total 126 credits.
- A total of 126 credits is required for the degree, 42 credits of which must be upper division.

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SCHOOL OF SOCIAL WORK

Gordon Hartlieb Hall (GHH), Room 106, (907) 786-6900
<http://www.uaa.alaska.edu/socialwork>

The educational purpose of the Bachelor of Social Work (BSW) program at the University of Alaska Anchorage is to prepare graduates for beginning professional social work practice. Preparation for professional practice builds on a broad-based liberal arts education accomplished through completion of General Education and major degree requirements.

Social work is a profession committed to assisting individuals, families, groups, organizations, communities, and society as a whole in the improvement of the quality of life through the amelioration of social problems, equitable distribution of social resources, and client empowerment. Within an overall emphasis on consumer-centered planned change, the Bachelor of Social Work degree program at University of Alaska Anchorage is guided by the following principles:

- Social work practice is based on selective use of knowledge in planned efforts with human systems and social problems.
- Social work practice recognizes human diversity as a strength.
- Social work practice is based on professional values and ethics.

- Social work practice is based on professional relationships.
- Social work practice is based on reciprocal role performance.
- Social work practice is based on a strengths perspective.

Social work education engages the student in carefully planned experiences to achieve the knowledge, skills, and values necessary for beginning professional practice. These experiences take place in the classroom, laboratory, volunteer experience, small seminars, and selected field work practicum placements. The practicum placement is an essential component for completion of the professional degree for the BSW.

The Bachelor of Social Work degree program is accredited by the Council on Social Work Education (CSWE). BSW program admission and curriculum requirements are consistent with BSW licensing requirements for the state of Alaska.

Bachelor of Social Work

Mission and Goals of the BSW Program

The mission of the UAA BSW program is to prepare generalist social workers who enhance human well-being and promote social and economic justice for people of all backgrounds, particularly those in Alaska.

Alaska's unique and rich multicultural populations, geographic remoteness and frontier status allow the real potential for skilled social work professionals to make a profound impact on social and economic injustice in our state.

Based upon the mission established for the BSW program, the program goals are to prepare generalist social work practitioners who are:

- Competent in multiple entry-level practice roles across client systems, particularly within the state of Alaska.
- Committed to the enhancement of human well-being.
- Committed to the promotion of social and economic justice for people of all backgrounds, particularly those in Alaska.
- Guided by the values and ethical standards of the social work profession.
- Prepared to enhance the quality of service delivery systems.
- Knowledgeable, skillful, and sensitive with people from diverse backgrounds.

Admission Requirements

When students declare Social Work as their major they are assigned to the current catalog year. Declaration of Social Work as a major does not guarantee admission to the Social Work program. Students must apply for admission to the Social Work program during the fall semester of their junior year. Full admission to the Social Work program is based upon the requirements listed below.

Social work credits earned through other CSWE-accredited social work programs may be transferred to UAA and applied toward the Bachelor of Social Work degree. Approval from the UAA School of Social Work is required for acceptance of social work transfer credits.

Requirements for Full Admission to the Social Work Program

To apply for full admission to the Social Work program, students must have completed, prior to entering practicum the following:

1. General Education Requirements for Baccalaureate Degrees.
2. Specified Liberal Arts Foundation courses (see Major Requirements) with a grade of C or better.
3. The following Social Work courses with a grade of C or better (25 credits):

| | | |
|----------|---|---|
| SWK A106 | Introduction to Social Welfare | 3 |
| SWK A206 | Introduction to Social Work | 3 |
| SWK A243 | Cultural Diversity and Community Service Learning | 3 |
| SWK A330 | Social Work Practice I | 4 |

| | | |
|----------|--|---|
| SWK A331 | Social Work Practice II: Organizations and Communities | 3 |
| SWK A342 | Human Behavior in the Social Environment | 3 |
| SWK A424 | Social Work Research | 3 |
| SWK A481 | Case Management in Social Work Practice | 3 |

Students must submit the following application materials to the School of Social Work by the last Friday in October prior to intended entry into field work:

1. The School of Social Work Application for Admission to the BSW degree and practicum for fall enrollment.
2. Admissions statement.
3. Social Work faculty advisor's approval to apply.
4. A Student Practicum Interest sheet.
5. A Change of Major Form indicating change of status from pre-major to full major.

The Admission Committee reserves the right to request additional information if necessary.

Students participate in an admission interview with faculty and community members to assess the student's readiness to enter the Social Work program and participate in practicum. The School of Social Work will notify applicants of their admission status by December 15.

Admission to the Social Work program is based on 1) successful completion of the requirements listed above; 2) beginning competence in client-centered communication skills as demonstrated in SWK A330; and 3) professional judgment of Social Work faculty.

Many students do not have all required courses completed at the time of application. In this event, the student may be admitted to the BSW program conditionally, and will be required to complete the courses with a grade of C or better prior to the fall semester in which they plan to enter practicum.

Field Practicum

Placements may become competitive if the number of applicants exceeds the number of spaces. The program and agencies also reserve the right to refuse and/or terminate students who do not meet a minimum standard of performance. Thus, while the School of Social Work makes every effort to find appropriate field placements for students, admittance to the BSW program does not guarantee acceptance by cooperating social services agencies.

Only students eligible to receive state licensure will be admitted to the BSW degree program. Please contact the School of Social Work for further information.

The BSW program does not grant Social Work course credit for life experience or previous work experience.

Honors in Social Work

The Bachelor of Social Work program recognizes exceptional performance by conferring Departmental Honors in Social Work. In order to receive Honors in Social Work, a student must meet the following requirements:

1. Complete all requirements for the BSW degree. A minimum of 30 credits applicable to the BSW degree must be completed at UAA.
2. Have a GPA of 3.75 or higher in upper division (300- and 400-level) Social Work courses.
3. Completion of:

| | |
|----------|-----------------------------------|
| SWK A363 | Great Books in Social Work |
| SWK A498 | Advanced Community-Based Research |
4. One course in applied statistics, with a grade of C or better.
5. Notify the BSW program coordinator in writing, on or before the date of submitting the Application for Graduation with the Office of the Registrar, of the intent to graduate with departmental honors.

Successful completion of Departmental Honors in Social Work in the UAA BSW program earns the right to waive a regular review of an admission packet to the foundation curriculum of the Master of Social Work program. Students are responsible for completing a UAA Graduate

Application for Admission and a program application for admission to the MSW program. The application packet should be submitted to the MSW Admissions Committee by the application deadline, with request to waive the regular review process. Admission to the full program will be granted if the applicant meets all of the requirements for departmental honors. Students interested in waiving the foundation curriculum must apply for advanced standing with a full review.

Academic Progress

Students in the Social Work program must earn a grade of C or better in the required liberal arts and the required Social Work courses. Adherence to the Code of Ethics established by the National Association of Social Workers is required.

Course Content Currency Requirement

All upper division courses with a Social Work subject code (SWK) must be completed within seven years prior to graduation.

Graduation Requirements

Students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.

C. Major Requirements

1. Complete the following liberal arts foundation courses, with a grade of C or better:

| | | |
|-----------|-------------------------------------|-----|
| ANTH A200 | Natives of Alaska (3) | 3 |
| | or | |
| ANTH A202 | Cultural Anthropology (3) | |
| BA A151 | Introduction to Business (3) | 3 |
| | or | |
| ECON A201 | Principles of Macroeconomics (3) | |
| BIOL A102 | Introductory Biology (3) | 3-4 |
| | or | |
| BIOL A111 | Human Anatomy and Physiology I (4) | |
| | or | |
| BIOL A112 | Human Anatomy and Physiology II (4) | |
| | or | |
| BIOL A115 | Fundamentals of Biology I (4) | |
| | or | |
| BIOL A116 | Fundamentals of Biology II (4) | |
| ENGL A311 | Advanced Composition (3) | 3 |
| | or | |
| ENGL A313 | Professional Writing (3) | |
| | or | |
| ENGL A414 | Research Writing (3) | |
| ENGL A120 | Critical Thinking (3) | 3 |
| | or | |
| PHIL A101 | Introduction to Logic (3) | |
| | or | |
| PHIL A201 | Introduction to Philosophy (3) | |
| | or | |
| PHIL A301 | Ethics (3) | |
| | or | |
| PHIL A421 | Philosophy of the Sciences (3) | |
| PSY A150 | Life Span Development | 3 |
| SOC A101 | Introduction to Sociology | 3 |

2. Complete the following required core courses, with a grade of C or better:

| | | |
|-----------|--------------------------------|---|
| SWK/ | | |
| HUMS A106 | Introduction to Social Welfare | 3 |
| SWK A206 | Introduction to Social Work | 3 |

| | | |
|-----------|--|---|
| SWK A243 | Cultural Diversity and Community Service Learning | 3 |
| SWK A330 | Social Work Practice I | 3 |
| SWK A331 | Social Work Practice II: Organizations and Communities | 3 |
| SWK A342 | Human Behavior in the Social Environment | 3 |
| SWK A406 | Social Welfare: Policies and Issues | 3 |
| SWK A424 | Social Work Research | 3 |
| SWK A430 | Social Work Practice III: Groups and Families | 3 |
| SWK A431 | Social Work Practice IV: Integrative Capstone | 3 |
| SWK A481 | Case Management in Social Work Practice | 3 |
| SWK A495A | Social Work Practicum I | 6 |
| SWK A495B | Social Work Practicum II | 6 |
| | Upper division Social Work electives | 6 |

3. Complete electives to total 120 credits.
4. A total of 120 credits is required for the degree, of which 42 must be upper division.
5. Note: It is recommended that students take one or two 3-credit electives each semester to bring total credits to 120.

Minor, Social Welfare Studies

Students majoring in another subject who wish to minor in Social Welfare Studies must complete the following requirements. A total of 18 credits is required for the minor.

| | | |
|-----------|---|---|
| SWK/ | | |
| HUMS A106 | Introduction to Social Welfare | 3 |
| SWK A206 | Introduction to Social Work | 3 |
| SWK A243 | Cultural Diversity and Community Service Learning | 3 |
| SWK A342 | Human Behavior in the Social Environment | 3 |
| SWK A406 | Social Welfare: Policies and Issues | 3 |
| | Upper division Social Work electives | 3 |

FACULTY

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COMMUNITY & TECHNICAL COLLEGE

The UAA Community & Technical College (CTC) is dedicated to the development and delivery of quality career and technical, community, and continuing education programs. CTC strives to meet community and industry demand for these types of education and training.

In keeping with the mission of the University of Alaska Anchorage, the Community & Technical College has a commitment to innovation and flexibility that makes high-quality education and training available to all who have the ability and interest to pursue an education or profession. To accomplish this, the college delivers career and technical education to both non-degree-seeking and certificate- or degree-seeking students; continuing education courses to professionals and the community; instruction and services for under-prepared, linguistically diverse, or at-risk students; as well as cultural and community service programs for all.

CTC provides educational and learning support opportunities through the student success units: College Preparatory & Developmental Studies, Learning Resources Center, Military Programs, and Chugiak-Eagle River. These units support students in all colleges and in all majors. CTC provides training for personal and professional development through specialized training units: Community Education, Workforce Development, and the North Pacific Fisheries Observer Training Center.

Faculty within the college are highly trained professionals, many with years of experience in the technical specialties related to their teaching areas. Career and Technical Education Advisory Committees help ensure that programs are closely linked to the needs of the state economy. Graduates of CTC programs generally find immediate employment in their chosen field of study.

CTC's career and technical education leads to undergraduate and graduate degrees in over 20 program areas. CTC career and technical programs focus on eight areas: Allied Health Sciences; Aviation Technology; Career & Technical Education; Computer Networking & Office Technologies; Construction & Design Technology; Culinary Arts, Hospitality, Dietetics & Nutrition; Health, Physical Education & Recreation; and Transportation & Power.

Advising

Prospective students should call the CTC academic advisor at (907) 786-6480 for more information on CTC programs.

Tech Prep Articulation with High School Programs

The Community & Technical College has a close and positive working relationship with Alaska school districts that eases the transition from high school to college. Students may earn college credit for Tech Prep courses while still in high school. For more information this program, call the Community & Technical College Tech Prep Office at 786-6464, refer to Tech Prep Program in Chapter 9, or visit <http://techprep.uaa.alaska.edu>.

Regional Coordination

The Community & Technical College serves as a resource to the Southcentral region extended campuses in the area of career and technical education. The dean of the college serves as regional career and technical education coordinator and provides assistance to the campus directors and faculty in coordinating the development and delivery of career and technical education programs and coursework in Kenai, Kodiak, and Palmer. The goal of regional coordination of career and technical education is to allow the student maximum flexibility within acceptable academic guidelines. Many courses are offered between UAA and the Southcentral extended campuses, and may be easily transferred from one campus to another.

College Preparatory & Developmental Studies

The College Preparatory & Developmental Studies Department (CPDS) helps under-prepared, linguistically diverse, and nontraditional students develop the academic and language skills necessary to successfully pursue their lifelong learning goals.

The CPDS department offers composition, English as a Second Language (ESL), mathematics, reading, and study skills courses that prepare students to advance to the next academic level. The department uses placement and retention advising, tutoring, and a developmental teaching philosophy to help students succeed.

College Preparatory & Developmental Studies focuses on academic and professional English as a Second Language at the intermediate and advanced levels. These courses strengthen ESL students' usage of Standard American English and build ESL students' confidence in their English abilities.

Developmental math courses (MATH A050, MATH A054, MATH A055, and MATH A105) are taught to ensure mastery of the required course material. Classes incorporate in-class lectures, work in the math lab with instructors and certified tutors, untimed testing in the math lab with flexible hours, and the opportunity to retake examinations. Computer supplements, videotapes, CD-ROMs, workshops, web courses, and graphing calculators are available. CPDS math courses are found under the MATH prefix, and are identified with the "8_" in the section number. Example: MATH A054 section 080, or MATH A055 section 685.

Developmental English classes (grammar, reading, study skills, vocabulary, and writing) are found under the PRPE prefix (Preparatory English). They offer traditional classroom instruction as well as individualized reading labs. Students are supported through use of a computer-assisted writing lab staffed with certified tutors.

The Math Lab and Writing Center are staffed by certified tutors for composition and math. CPDS and the Learning Resource Center operate these labs.

CPDS offers an interdisciplinary learning community called "Smart Start." Collaborative instruction in math, writing, reading, and academic success skills provides a high degree of support for at-risk students. These classes are team-taught by developmental faculty with the help of certified tutors.

AIR FORCE ROTC

*Aviation Complex (AVNC) 2811 Merrill Field Drive, Room 116,
(907) 786-7266, AFROTC@uaa.alaska.edu*

Air Force ROTC educates and trains UAA students to serve as officers in the United States Air Force. Air Force ROTC has two-, three-, and four-year programs that lead to a commission as a second lieutenant. The curriculum consists of academic courses and a leadership laboratory. Air Force ROTC is not a degree- or certificate-granting program. The academic courses cover the history, organization, and mission of the Air Force, as well as leadership, management, and national security affairs. Any UAA student may take these academic courses (except AIRS A150) without joining the Cadet Corps or the Air Force. However, certain courses require prerequisites or faculty permission.

The leadership laboratory provides practical military training. Activities include field trips to Air Force bases, physical fitness training, marching, and leadership exercises. To attend the leadership laboratory, UAA students must join the Cadet Corps and not have a medical condition that would preclude service in the Armed Forces.

To become an officer through Air Force ROTC, a student must, at a minimum, complete the two-year program (300- and 400-level courses plus leadership laboratory), a summer field training encampment, and earn a baccalaureate degree in any major from UAA. Upon graduation and commissioning, new lieutenants must serve four years in the Air Force. Those who successfully complete Air Force pilot training must serve 10 years after training.

In order to receive a minor in National Defense, Strategic Studies and Leadership: Air Force Emphasis, students must complete the declaration of a minor form on the UAA website (https://www.uaa.alaska.edu/records/graduation/declaration_minor_form_login.cfm).

Two hours of mandatory physical training (PT) are required each week. Times and location of PT sessions will be announced each term.

Two-Year Program

- Available to UAA students with two years remaining until graduation. Cadets must take the courses listed below and attend a summer field training encampment either before starting the 300-level courses or in the summer prior to starting the 400-level courses.

| | | |
|-----------|---|---|
| AIRS A301 | US Air Force Leadership and Management I | 3 |
| AIRS A302 | US Air Force Leadership and Management II | 3 |
| AIRS A401 | National Security Affairs I | 3 |
| AIRS A402 | National Security Affairs II/Prep for Active Duty | 3 |
| AIRS A150 | US Air Force Leadership Laboratory (1) | 4 |
- Cadets take AIRS A150 (US Air Force Leadership Laboratory) each semester for a total of four semesters and 4 credits. Academic courses are taken in the order listed, beginning with AIRS A301 in the fall semester.

Three-Year Program

- Available to UAA students with three years remaining until graduation. Cadets must take the courses listed below and attend a summer field training encampment prior to starting the 300-level courses.

| | | |
|-----------|---|---|
| AIRS A201 | Evolution of Air and Space Power I | 2 |
| AIRS A202 | Evolution of Air and Space Power II | 2 |
| AIRS A301 | US Air Force Leadership and Management I | 3 |
| AIRS A302 | US Air Force Leadership and Management II | 3 |
| AIRS A401 | National Security Affairs I | 3 |
| AIRS A402 | National Security Affairs II/Prep for Active Duty | 3 |
| AIRS A150 | US Air Force Leadership Laboratory (1) | 6 |
- Cadets take AIRS A150 US Air Force Leadership Laboratory each semester for a total of six semesters and 6 credits. Academic courses are taken in the order listed, beginning with AIRS A201 in the fall semester.

Four-Year Program

- Available to UAA students with four or more years remaining until graduation. Cadets must take the courses listed below and attend a summer field training encampment prior to starting the 300-level courses.

| | | |
|-----------|---|---|
| AIRS A101 | Foundations of the US Air Force I | 1 |
| AIRS A102 | Foundations of the US Air Force II | 1 |
| AIRS A201 | Evolution of Air and Space Power I | 2 |
| AIRS A202 | Evolution of Air and Space Power II | 2 |
| AIRS A301 | US Air Force Leadership and Management I | 3 |
| AIRS A302 | US Air Force Leadership and Management II | 3 |
| AIRS A401 | National Security Affairs I | 3 |
| AIRS A402 | National Security Affairs II/Prep for Active Duty | 3 |
| AIRS A150 | US Air Force Leadership Laboratory (1) | 8 |
- Cadets must take AIRS A150 (US Air Force Leadership Laboratory) each semester for a total of eight semesters and 8 credits. Academic courses are taken in the order listed, beginning with AIRS A101 in the fall semester.

Minor, National Defense, Strategic Studies, and Leadership: Air Force Emphasis

Students majoring in another subject who wish to minor in National Defense, Strategic Studies and Leadership: Air Force Focus, must complete the following requirements. A minimum of 20 credits are

required for the minor, 12 of which must be upper division. Students must earn at least 6 credits in residence in this field. They must also earn a UAA cumulative GPA of at least 3.0 (B). Students must complete the program's upper division coursework in its entirety. Students must declare this minor utilizing the declaration of a minor form on the UAA website (https://www.uaa.alaska.edu/records/graduation/declaration_minor_form_login.cfm) no later than the deadline to submit an application for graduation.

Air Force Program

Term 1

| | | |
|-----------|--|---|
| AIRS A301 | US Air Force Leadership and Management I | 3 |
| AIRS A150 | US Air Force Leadership Laboratory | 1 |

Term 2

| | | |
|-----------|---|---|
| AIRS A302 | US Air Force Leadership and Management II | 3 |
| AIRS A150 | US Air Force Leadership Laboratory | 1 |

Term 3

| | | |
|-----------|------------------------------------|---|
| AIRS A401 | National Security Affairs I | 3 |
| AIRS A150 | US Air Force Leadership Laboratory | 1 |

Term 4

| | | |
|-----------|---|---|
| AIRS A402 | National Security Affairs II/Prep for Active Duty | 3 |
| AIRS A150 | US Air Force Leadership Laboratory | 1 |

May be taken during any term

| | | |
|-----------|-------------------------------------|---|
| AIRS A201 | Evolution of Air and Space Power I | 2 |
| AIRS A202 | Evolution of Air and Space Power II | 2 |

Scholarships and Incentive Payments

Air Force ROTC has numerous scholarship and incentive programs for high school seniors planning to enroll at UAA and for college students currently enrolled or planning to enroll at UAA. All students receiving a scholarship or incentive payment must join the Cadet Corps and be a full-time student (at least 12 semester credits for undergraduate or 9 semester credits for graduate students).

- High school seniors can compete for Air Force ROTC scholarships that pay tuition, fees, and books at any university with an Air Force ROTC program. The scholarship includes a monthly stipend. Students can submit applications to the Air Force ROTC (www.afrotc.com). Applications must be postmarked no later than December 1 of a student's senior year.
- Air Force ROTC at UAA has several scholarship options for college students. These scholarships cover tuition, fees, and books for sophomores, juniors, and seniors. Scholarships also include a monthly stipend. Students compete for these scholarships during the academic year prior to activation. For example, a 100-level cadet can compete for a scholarship that would start in the fall of the cadet's 200-level year.
- All scholarships and incentives are subject to federally mandated age restrictions. Contact Air Force ROTC at UAA for more information.

Commissioning

After completing the AFROTC program, graduating from UAA and passing a commissioning physical, cadets will receive a commission as a second lieutenant in the US Air Force.

- Cadets selected for pilot training will usually begin the training within one year of commissioning. Officers who successfully complete Air Force pilot training must serve 10 years. Cadets compete for pilot training slots in their 300-level year. The pilot selection board considers GPA, cadet ranking, Physical Fitness Test scores, previous flight time, and pilot aptitude test scores when assessing candidates. Air Force ROTC at UAA has more information on medical and age requirements for Air Force pilots.
- Cadets not qualified for pilot training can compete for slots in other career fields. The Air Force has a variety of operations, administrative, engineering, and scientific assignments. Cadets

compete for and receive career assignments during the 400-level year and will serve four years in the US Air Force after commissioning.

- Cadets may also compete for medical school appointments. Scholarships cover tuition, fees, and books for a cadet's undergraduate and medical school programs. Air Force ROTC at UAA has more information on this highly competitive program.

FACULTY

Major Troy Basnett, Assistant Professor
1lt David Froemming, Assistant Professor
Lt Col Glen Lehman, Professor/Chair

APPRENTICESHIP TECHNOLOGIES

University Center (UC), Room 130, (907) 786-6423

www.uaa.alaska.edu/ctc/programs/academic/cte/academics/apprenticeship/index.cfm

The Apprenticeship Technologies program is a 60-credit Associate of Applied Science degree coordinated and delivered collaboratively by UAA, UAF, and UAS. The curriculum specifically reflects the commitment of the university to provide high-quality instruction and service to the public through a practical integration of general coursework and training for career and technical occupations. Individuals receiving this degree must complete a formal apprenticeship program registered by the U.S. Department of Labor, Office of Apprenticeship, and hold journeyworker status in that occupation.

Students declaring a major in Apprenticeship Technologies must present documentation of acceptance into a registered apprenticeship program approved by the U.S. Department of Labor, Office of Apprenticeship. The department will review the documentation and may recommend up to 38 credits be transcribed following completion of the apprenticeship. Students are encouraged to begin the courses listed below while participating in the apprenticeship program in order to expand the quality and breadth of training. Students who complete this program will be eligible to enroll in the Bachelor of Science, Technology program at UAA, the Bachelor of Technology program at UAF, or other appropriate degree programs.

Associate of Applied Science, Apprenticeship Technologies

Degree Outcomes

At the completion of this program, students will be able to:

- Demonstrate effective communication skills needed in the workplace.
- Display human relations skills.
- Show proficiency in computational skills needed for the occupation.

Admission Requirements

- See Associate of Applied Science admissions requirements in Chapter 7, Academic Standards and Regulations.
- Present documentation of acceptance into a registered apprenticeship program approved by the U.S. Department of Labor, Office of Apprenticeship.

Advising

Students should contact the Apprenticeship Technologies advisor for assistance with course planning toward the Associate of Applied Science degree.

A. General University Requirements

Complete the Associate of Applied Science Degree Requirements located at the beginning of this chapter.

B. Major Requirements

- Complete the following required courses:

| | | |
|-----------|--|---|
| ENGL A111 | Methods of Written Communication | 3 |
| ENGL A212 | Technical Writing | 3 |
| MATH A105 | Intermediate Algebra (or any MATH course for which MATH A105 is a prerequisite) (3) | 3 |
| | or | |
| STAT A252 | Elementary Statistics (or any STAT course for which STAT A252 is a prerequisite) (3) | 3 |
- Complete one of the following:

| | | |
|------------|---|--|
| HUMS/ | | |
| PSY A153 | Human Relations (3) | |
| CIOS A261A | Interpersonal Skills in Organizations* (3) | |
| | Social sciences General Education Requirement (3) | |
- Complete one of the following:

| | | |
|-----------|--|---|
| COMM A111 | Fundamentals of Oral Communication (3) | 3 |
| COMM A235 | Small Group Communication (3) | |
| COMM A237 | Interpersonal Communication (3) | |
| COMM A241 | Public Speaking (3) | |
- Complete 6 credits of safety, computer, business, technical or other advisor-approved courses linked to an identified education or career pathway.

*Complete 3 credits General Course Requirements if CIOS A261A is taken for #2 above.
- Technical credits from approved apprenticeship program. See Chapter 8, Educational Delivery Methods & Nontraditional Credit.
Up to 38
- Electives to complete 60 credits as needed.
- Keep a portfolio of required work.
- A total of 60 credits is required for the degree.

FACULTY

Maria Angela Dirks, Assistant Professor, angela.dirks@uaa.alaska.edu
Sally Spieker, Term Assistant Professor, AFSAS3@uaa.alaska.edu

ARCHITECTURAL AND ENGINEERING TECHNOLOGY

Division of Construction and Design Technology (CDT)

University Center (UC), Room 130, (907) 786-6465

www.uaa.alaska.edu/ctc/programs/cdt/aet/index.cfm

The Architectural and Engineering Technology (AET) program provides entry-level skills, continuing education, and advanced technical skills in several specialized fields, including computer-aided design and drafting (CADD), 3-D modeling, and rendering. The AET program offers an Occupational Endorsement Certificate in CAD for Building Construction, four Undergraduate Certificates in the specialized areas of Architectural Drafting, Civil Drafting, Mechanical & Electrical Drafting, and Structural Drafting, and an Associate of Applied Science (AAS) degree in Architectural and Engineering Technology which encompasses all of these fields.

Students are trained to become skilled workers on architectural and engineering design teams. AET certificate and degree graduates are employed as drafters or technicians and work in private industry as well as municipal, state, or federal agencies. Drafters and technicians work in support of professional architects and engineers to produce the technical drawings used by construction workers to build everything from roads

and bridges, to homes and office buildings, to oil and gas pipelines. Their drawings provide the visual guidelines that show the technical details of the products and structures to be constructed. These drawings specify size, materials to be used, and procedures to be followed. Drafters and technicians fill in technical details using drawings, rough sketches, specifications, codes, and calculations previously made by engineers, surveyors, or architects. Drafters and technicians use technical handbooks, tables, calculators, and computers to do this. Because many drafters and technicians may assist in design work, creativity is desirable. Good communication skills and the ability to work well with others are also important since they are part of a team of architects, engineers, and other technicians.

The AET Occupational Endorsement Certificate requires one to two semesters to complete.

AET Undergraduate Certificates require two to three semesters to complete.

The AET AAS degree requires four to five semesters to complete.

The AET faculty can assist students with curriculum planning to prepare for the Associate Technician Qualifying Examination offered by the National Institute for the Certification of Engineering Technicians (NICET), and for Construction Specification Institute (CSI) certification examinations. Courses are also available through the CDT Department to help intern architects prepare for the Architects Registration Examination.

Although courses taken may apply to the first two years of a four-year degree program (i.e., BS in Technology), the AET AAS degree should not be considered preparatory or a substitute for professional degree programs in architecture or engineering. Students pursuing a four-year degree in engineering should contact the School of Engineering at UAA. Those students who anticipate pursuing a degree in architecture should contact the AET program for academic counseling prior to registration.

In addition to tuition and fees, student should expect to purchase books and equipment required for each course.

Advising

All students should meet with an academic advisor prior to their first semester and each subsequent semester for the purpose of reviewing their academic status and planning future courses. Attention should be specifically directed to the proof of eligibility for placement in MATH A105 and ENGL A111 as a non-coded registration restriction, checked during the first day of class, for the introductory classes within the programs. It is particularly important for students to meet with their advisor whenever academic difficulties arise.

Students are encouraged to consult the faculty in the AET program for assistance in designing their course of study to ensure all prerequisites have been met and that university and major degree requirements are understood and followed.

Subject to scheduling, students may select either 5-week or 15-week blocks of instruction for each AET course. The content is the same; only the amount of time a course meets per week is different. Students should expect to spend at least one hour on outside work for each hour in the class. Computer lab facilities are available for students' use seven days a week. Course offerings vary between fall and spring semesters with occasional short courses offered during the summer. Certain courses require prerequisites or faculty permission. Call (907) 786-6465 for further information.

Occupational Endorsement Certificate, CAD For Building Construction

Attention should be specifically directed to the proof of eligibility for placement in MATH A105 and ENGL A111 as a registration restriction for the introductory classes within the programs.

Occupational Endorsement Certificate Outcomes

At the completion of this program students are able to demonstrate:

1. Proficiency in the use of computer-aided design and drafting software in the creation and modification of construction documentation.
2. Proficiency in the management of the computer-aided design and drafting software environment for the accurate application and integration of industry standards.

Admission Requirements

See Occupational Endorsement Certificate Admission Requirements in chapter 7, Academic Standards and Regulations.

Occupational Endorsement Certificate Requirements

In order to receive the occupational endorsement certificate offered by the Architectural and Engineering Technology program, students must achieve a grade of C or better in all courses required for the occupational endorsement certificate.

1. Complete the following courses:

| | | |
|----------|---|-----|
| AET A101 | Fundamentals of CADD for Building Construction | 4 |
| AET A181 | Intermediate CADD for Building Construction and one of the following: | 4 |
| AET A282 | Advanced CADD Techniques (4) or | 3-4 |
| AET A283 | CADD Software Customization (3) | |
2. A minimum of 11 credits are required for the occupational endorsement certificate.

The choice of AET A282 Advanced CADD Techniques is for students who wish to pursue skills for advanced rendering and animation within the software environment, while the AET A283 CADD Software Customization is for students who wish to pursue skills for developing and managing unique software environments, tools, and solutions outside of the default capabilities of the software.

Undergraduate Certificates

The AET program offers four Undergraduate Certificates in the specialized areas of Architectural Drafting, Civil Drafting, Mechanical & Electrical Drafting, and Structural Drafting. While the introductory coursework for all certificates is the same to establish a common theoretical foundation, the majority of the coursework is specific and focused for standards and professional practice of each industry.

Admission Requirements

Satisfy the Admission to Certificate and Associate Degree Programs Requirements in Chapter 7, Academic Standards and Regulations.

Course Requirements

Certain courses require prerequisites or faculty permission. Call (907) 786-6465 for further information.

Graduation Requirements

In order to receive a certificate offered by the AET Department, students must achieve a grade of C or better in all courses required for the certificate.

Undergraduate Certificate, Architectural Drafting

Program Outcomes

The specific educational outcomes that support the program objectives are to produce graduates who are able to:

- Demonstrate skill and proficiency in computer-aided drafting and design.

- Demonstrate knowledge of drafting conventions including symbols, linetypes, lineweights, and dimension styles as applicable to architectural drafting.
- Visualize and translate drawing information to actual physical objects and completed architectural projects.
- Understand the role and purpose of building codes and standards as they pertain to the life, health, and safety of the public.
- Understand the role, duties, and responsibilities of the members of the design team, including the working relationship between technicians and architects.
- Understand the architectural elements of the construction document set and the role of construction documents as communication tools for the construction contract.
- Understand the construction process from the transformation of an idea or need into a completed architectural project.
- Demonstrate communication skills to be successful in the employment environment.
- Demonstrate critical thinking and problem solving skills in the employment environment.

Architectural Drafting Certificate Requirements

1. Complete the following required courses:

| | | |
|-----------|--|---|
| AET A101 | Fundamentals of CADD for Building Construction | 4 |
| AET A102 | Methods of Building Construction | 3 |
| AET A121 | Architectural Drafting | 3 |
| AET A123 | Codes and Standards | 3 |
| AET A181 | Intermediate CADD for Building Construction | 4 |
| AET A286 | Design Project | 4 |
| ENGL A111 | Methods of Written Communication | 3 |
| MATH A105 | Intermediate Algebra | 3 |
| | <i>Oral communication course</i> | 3 |
| | Choose from one of the following: COMM A111, COMM A235, COMM A237, or COMM A241 | |

2. A total of 30 credits is required for the certificate.

Undergraduate Certificate, Civil Drafting

Program Outcomes

The specific educational outcomes that support the program objectives are to produce graduates who are able to:

- Demonstrate skill and proficiency in computer-aided drafting and design.
- Demonstrate knowledge of drafting conventions including symbols, linetypes, lineweights, and dimension styles as applicable to civil drafting.
- Visualize and translate drawing information to actual physical objects and completed civil construction projects.
- Understand the role and purpose of building codes and standards as they pertain to the life, health, and safety of the public.
- Understand the role, duties, and responsibilities of the members of the design team, including the working relationship between technicians and civil engineers.
- Understand the civil elements of the construction document set and the role of construction documents as communication tools for the construction contract.
- Understand the construction process from the transformation of an idea or need into a completed civil project.
- Demonstrate communication skills to be successful in the employment environment.

- Demonstrate critical thinking and problem solving skills in the employment environment.

Civil Drafting Certificate Requirements

1. Complete the following required courses:

| | | |
|-----------|--|---|
| AET A101 | Fundamentals of CADD for Building Construction | 4 |
| AET A102 | Methods of Building Construction | 3 |
| AET A111 | Civil Drafting | 3 |
| AET A181 | Intermediate CADD for Building Construction | 4 |
| AET A213 | Civil Technology | 4 |
| AET A286 | Design Project | 4 |
| ENGL A111 | Methods of Written Communication | 3 |
| MATH A105 | Intermediate Algebra | 3 |
| | <i>Oral communication course</i> | 3 |
| | Choose from one of the following: COMM A111, COMM A235, COMM A237, or COMM A241 | |

2. A total of 31 credits is required for the certificate.

Undergraduate Certificate, Mechanical and Electrical Drafting

Program Outcomes

The specific educational outcomes that support the program objectives are to produce graduates who are able to:

- Demonstrate skill and proficiency in computer-aided drafting and design.
- Demonstrate knowledge of drafting conventions including symbols, linetypes, lineweights, and dimension styles as applicable to the mechanical/electrical drafting.
- Visualize and translate drawing information to actual physical objects and completed mechanical/electrical construction projects.
- Understand the role and purpose of building codes and standards as they pertain to the life, health, and safety of the public.
- Understand the role, duties, and responsibilities of the members of the design team, including the working relationship between technicians and mechanical and electrical engineers.
- Understand the mechanical/electrical elements of the construction document set and the role of construction documents as communication tools for the construction contract.
- Understand the construction process from the transformation of an idea or need into a completed mechanical/electrical project.
- Demonstrate communication skills to be successful in the employment environment.
- Demonstrate critical thinking and problem solving skills in the employment environment.

Mechanical and Electrical Drafting Certificate Requirements

1. Complete the following required courses:

| | | |
|-----------|--|---|
| AET A101 | Fundamentals of CADD for Building Construction | 4 |
| AET A102 | Methods of Building Construction | 3 |
| AET A142 | Mechanical & Electrical Technology | 4 |
| AET A143 | Mechanical & Electrical Drafting | 3 |
| AET A181 | Intermediate CADD for Building Construction | 4 |
| AET A286 | Design Project | 4 |
| ENGL A111 | Methods of Written Communication | 3 |
| MATH A105 | Intermediate Algebra | 3 |
| | <i>Oral communication course</i> | 3 |
| | Choose from one of the following: COMM A111, COMM A235, COMM A237, or COMM A241 | |

2. A total of 31 credits is required for the certificate.

Undergraduate Certificate, Structural Drafting

Program Outcomes

The specific educational outcomes that support the program objectives are to produce graduates who are able to:

- Demonstrate skill and proficiency in computer-aided drafting and design.
- Demonstrate knowledge of drafting conventions including symbols, linetypes, lineweights, and dimension styles as applicable to structural drafting.
- Visualize and translate drawing information to actual physical objects and completed structural construction projects.
- Understand the role and purpose of building codes and standards as they pertain to the life, health, and safety of the public.
- Understand the role, duties, and responsibilities of the members of the design team, including the working relationship between technicians and structural engineers.
- Understand the structural elements of the construction document set and the role of construction documents as communication tools for the construction contract.
- Understand the construction process from the transformation of an idea or need into a completed structural project.
- Demonstrate communication skills to be successful in the employment environment.
- Demonstrate critical thinking and problem solving skills in the employment environment.

Structural Drafting Certificate Requirements

1. Complete the following required courses:

| | | |
|-----------|--|---|
| AET A101 | Fundamentals of CADD for Building Construction | 4 |
| AET A102 | Methods of Building Construction | 3 |
| AET A131 | Structural Drafting | 3 |
| AET A181 | Intermediate CADD for Building Construction | 4 |
| AET A231 | Structural Technology | 4 |
| AET A286 | Design Project | 4 |
| ENGL A111 | Methods of Written Communication | 3 |
| MATH A105 | Intermediate Algebra | 3 |
| | <i>Oral communication course</i> | 3 |

Choose from one of the following:

COMM A111, COMM A235, COMM A237, or COMM A241

2. A total of 31 credits is required for the certificate.

Associate of Applied Science, Architectural and Engineering Technology

Program Outcomes

The specific educational outcomes that support the program objectives are to produce graduates who are able to:

- Demonstrate skill and proficiency in computer-aided drafting and design.
- Demonstrate knowledge of drafting conventions including symbols, linetypes, lineweights, and dimension styles as applicable to the design discipline.
- Visualize and translate drawing information to actual physical objects and completed construction components.
- Understand the role and purpose of building codes and standards as they pertain to the life, health, and safety of the public.

- Understand the role, duties, and responsibilities of the members of the design team, including the working relationship between technicians and professionals.
- Understand the elements of the construction document set and the role of construction documents as communication tools for the construction contract.
- Understand the construction process from the transformation of an idea or need into a completed project.
- Demonstrate communication skills to be successful in the employment environment.
- Demonstrate critical thinking and problem solving skills in the employment environment.

Admission Requirements

See Certificate and Associate Degree Program Admission Requirements at the beginning of Chapter 7, Academic Standards and Regulations.

Course Requirements

Certain courses require prerequisites or faculty permission. Call (907) 786-6465 for further information.

Graduation Requirements

In order to receive the AAS degree offered by the AET Department, students must achieve a grade of C or better in all courses required for the AAS degree.

Advising

Certain courses require prerequisites or faculty permission. Call (907) 786-6465 for further information.

Academic Progress

In order to receive the AAS degree offered by the AET Department, students must achieve a grade of C or better in all courses required for the AAS degree.

General University Requirements

1. Complete the General University Requirements for Associate Degrees located at the beginning of this chapter.
2. Complete the Associate of Applied Science General Degree Requirements (15 credits) located at the beginning of this chapter. As part of the general course requirements, GEOL A111 is recommended.

Major Requirements

1. Complete the following required courses (45 credits):

| | | |
|-----------|--|---|
| AET A101 | Fundamentals of CADD for Building Construction | 4 |
| AET A102 | Methods of Building Construction | 3 |
| AET A111 | Civil Drafting | 3 |
| AET A121 | Architectural Drafting | 3 |
| AET A123 | Codes & Standards | 3 |
| AET A131 | Structural Drafting | 3 |
| AET A142 | Mechanical & Electrical Technology | 4 |
| AET A143 | Mechanical & Electrical Drafting | 3 |
| AET A181 | Intermediate CADD for Building Construction | 4 |
| AET A213 | Civil Technology | 4 |
| AET A231 | Structural Technology | 4 |
| AET A286 | Design Project | 4 |
| MATH A105 | Intermediate Algebra* | 3 |

2. Electives

AET A295 is strongly recommended.

3. A total of 60 credits is required for the degree.

* This course satisfies the General Course Requirements

Recommended Course Sequence

Not all AET courses are offered every semester. Students should consult the faculty in the AET program for assistance in designing their course of study to ensure that university and major degree requirements are understood and followed. The sequence for a particular program is based on the semester of admission to the program and is available on the department's webpage at: www.uaa.alaska.edu/ctc/programs/cdt/aet.

FACULTY

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ARMY ROTC

Eugene Short Hall (ESH), Room 211, (907) 786-6094

The Army Reserve Officers' Training Corps (ROTC) program is America's primary officer training program. Army ROTC is a cooperative effort by the United States Army and UAA to educate, train, and prepare students to serve as officers in the regular Army, Army Reserve, or Army National Guard. Army ROTC has two-, three-, and four-year programs that lead to a commission as a second lieutenant. Army ROTC is divided into a 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. Prior to completing Army ROTC, students may receive a minor in National Defense, Strategic Studies, and Leadership: Army Emphasis. The courses focus on military history, Army force structure, leadership, time and stress management, decision-making through academic instruction, and operations in the contemporary operating environment. Non-contracted students may take the 100- and 200-level academic courses without incurring a military obligation. However, certain courses require prerequisites or faculty permission.

The leadership and physical training laboratory provides practical military training. Activities include staff rides to Army bases, physical fitness training, conducting drill and ceremony, and leadership exercises. To attend the leadership laboratory, UAA students must not have a medical condition that would preclude service in the Armed Forces.

To become an officer through Army ROTC, a student must, at a minimum, complete the two-year program (300- and 400-level courses plus leadership laboratory), the leader development and assessment course, and earn a baccalaureate degree in any major from UAA. Upon graduation and commissioning, new lieutenants must serve eight years in the regular Army, Army Reserves, and/or Army National Guard.

In order to receive a minor in National Defense, Strategic Studies, and Leadership: Army Emphasis, students must complete the declaration of a minor form on the UAA website (www.uaa.alaska.edu/records/graduation/declaration_minor_form_login.cfm)

Three hours of mandatory physical training (PT) are required each week along with a one hour lab. Times and location of PT sessions to be announced.

Requirements

Two-Year Program

- Available to UAA students with two years remaining until graduation. Students must take the courses listed below and complete Leader's Training Course before starting the 300-level courses and complete Leader Development and Assessment Course before starting the 400-level courses.

| | | |
|-----------|-----------------------------------|---|
| MILS A250 | History of the United States Army | 3 |
| MILS A301 | Adaptive Team Leadership | 3 |
| MILS A302 | Applied Team Leadership | 3 |
| MILS A401 | Adaptive Leadership | 3 |
| MILS A402 | Leadership in a Complex World | 3 |

| | | |
|-----------|---|---|
| MILS A150 | Army ROTC Leadership and Physical Training Laboratory (1) | 4 |
|-----------|---|---|

- Students take MILS A150 Army ROTC Leadership and Physical Training Laboratory each semester for a total of four semesters and 4 credits. Academic courses are taken in the order listed, beginning with MILS A301 Adaptive Team Leadership in the fall semester. MILS A250 may be taken at any time throughout the program.

Three-Year Program

- Available to UAA students with three years remaining until graduation. Cadets must take the courses listed below and complete Leader Development and Assessment Course before starting the 400-level courses.

| | | |
|-----------|---|---|
| MILS A201 | Foundations of Leadership | 3 |
| MILS A202 | Foundations of Tactical Leadership | 3 |
| MILS A250 | History of the United States Army | 3 |
| MILS A301 | Adaptive Team Leadership | 3 |
| MILS A302 | Applied Team Leadership | 3 |
| MILS A401 | Adaptive Leadership | 3 |
| MILS A402 | Leadership in a Complex World | 3 |
| MILS A150 | Army ROTC Leadership and Physical Training Laboratory (1) | 6 |

- Students take MILS A150 Army ROTC Leadership and Physical Training Laboratory each semester for a total of six semesters and 6 credits. Academic courses are taken in the order listed, beginning with MILS A201 Foundations of Leadership in the fall semester. MILS A250 may be taken at any time throughout the program.

Four-Year Program

- Available to UAA students with four years remaining until graduation. Cadets must take the courses listed below and complete Leader Development and Assessment Course before starting the 400-level courses.

| | | |
|-----------|---|---|
| MILS A101 | Leadership and Personal Development | 3 |
| MILS A102 | Introduction to Tactical Leadership | 3 |
| MILS A201 | Foundations of Leadership | 3 |
| MILS A202 | Foundations of Tactical Leadership | 3 |
| MILS A250 | History of the United States Army | 3 |
| MILS A301 | Adaptive Team Leadership | 3 |
| MILS A302 | Applied Team Leadership | 3 |
| MILS A401 | Adaptive Leadership | 3 |
| MILS A402 | Leadership in a Complex World | 3 |
| MILS A150 | Army ROTC Leadership and Physical Training Laboratory (1) | 8 |

- Students take MILS A150 Army ROTC Leadership and Physical Training Laboratory each semester for a total of eight semesters and 8 credits. Academic courses are taken in the order listed, beginning with MILS A201 Foundations of Leadership in the fall semester. MILS A250 may be taken at any time throughout the program.

Minor, National Defense, Strategic Studies, and Leadership: Army Emphasis

Students majoring in another subject who wish to minor in National Defense, Strategic Studies, and Leadership: Army Emphasis must complete the following requirements. A minimum of 19 credits are required for the minor, 12 credits of which must be upper division. Students must earn at least 6 credits in residence in this field. They must also earn a UAA cumulative GPA of at least 3.00 (B). Students must declare this minor utilizing the declaration of a minor form on the UAA website (www.uaa.alaska.edu/records/graduation/declaration_minor_form.cfm) no later than the deadline to submit an application for graduation.

Term 1

| | | |
|-----------|---------------------------------|---|
| MILS A301 | Adaptive Team Leadership | 3 |
| MILS A150 | Army ROTC Leadership Laboratory | 1 |

Term 2

| | | |
|-----------|---------------------------------|---|
| MILS A302 | Applied Team Leadership | 3 |
| MILS A150 | Army ROTC Leadership Laboratory | 1 |

Term 3

| | | |
|-----------|---------------------------------|---|
| MILS A401 | Adaptive Leadership | 3 |
| MILS A150 | Army ROTC Leadership Laboratory | 1 |

Term 4

| | | |
|-----------|---------------------------------|---|
| MILS A402 | Leadership in a Complex World | 3 |
| MILS A150 | Army ROTC Leadership Laboratory | 1 |

May be taken during any term:

| | | |
|-----------|-----------------------------------|---|
| MILS A250 | History of the United States Army | 3 |
|-----------|-----------------------------------|---|

Scholarships and Incentive Payments

Army ROTC has numerous scholarship and incentive programs for high school seniors planning to enroll at UAA and for college students currently enrolled or planning to enroll at UAA. All students receiving a scholarship or incentive payment must be a full-time student (at least 12 semester credits for undergraduate or 9 semester credits for graduate students).

- High school seniors can compete for Army ROTC scholarships that pay tuition, fees, and books at any university with an Army ROTC program. The scholarship includes a monthly stipend. Students can obtain applications from www.goarmy.com/rotc/scholarships.jsp, the UAA Army ROTC office or from a high school guidance counselor. Applications must be postmarked no later than January 10 of a student's senior year. High school seniors may also compete for an Army ROTC scholarship locally at the UAA level. Contact UAA Army ROTC for more information.

Army ROTC at UAA has several scholarship options for college students. These scholarships cover tuition, fees, and books for both undergraduate and graduate students. Scholarships also include a monthly stipend. Students compete for these scholarships during the academic term prior to activation. For example, a fall 100-level student can compete for a scholarship that would start in the spring of the student's 100-level year.

- All scholarships and incentives are subject to federally mandated age restrictions. Contact Army ROTC at UAA or go to www.goarmy.com/rotc/scholarships.jsp for more information.

Commissioning

After completing the Army ROTC program, graduating from UAA, and passing a commissioning physical, cadets will receive a commission as a second lieutenant in the United States Army.

- Second lieutenants will usually begin their Basic Officer Leaders Course Phase II within one year of commissioning. Students compete nationally for their branch based on a combined score consisting of their GPA, on-campus evaluations, and Leader Development and Assessment Course evaluation. The United States Army has 17 branches with multiple careers in each one. Students receive the branch assignments during the 400-level year and will serve four years in the United States Army after commissioning.
- Students may also compete for medical and law school appointments. Scholarships cover tuition, fees, and books for a student's undergraduate and medical school programs. Army ROTC at UAA has more information on this highly competitive program.

FACULTY

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 Lieutenant Colonel Steven J. Patin, Assistant Professor, (907) 786-6094
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AUTOMOTIVE AND DIESEL TECHNOLOGY

*Auto & Diesel Technology Building (ADT), Room 207, (907) 786-1485
www.uaa.alaska.edu/ctc/programs/transportation/index.cfm*

State of Alaska and federal Departments of Labor projections show an above average increase in the need for qualified maintenance and repair technicians in the automotive and heavy duty transportation and equipment industries. Consumer demands for increased performance and fuel economy, coupled with government regulations on vehicle emissions, are driving rapid developments in technology. The Automotive and Diesel Department offers AAS degrees in Automotive Technology and in Heavy Duty Transportation and Equipment that are designed to equip students with knowledge and skills necessary to meet the needs of employers in the industry. Both the AAS degrees and undergraduate certificate programs are accredited by the National Institute for Automotive Service Excellence.

There are three options for the AAS Automotive Technology degree. The General Automotive Technology option for the AAS degree and undergraduate certificate are designed to prepare students for a career in the automotive maintenance and repair industry. Curriculum design is based on automotive task lists developed by the National Institute for Automotive Excellence. The Ford ASSET option for the AAS degree is designed to prepare students for a career in Ford and Lincoln-Mercury dealerships. Students train on current technology vehicles and components donated by Ford Motor Company. The General Motors ASEP option for the AAS degree is designed to prepare students for a career in General Motors dealerships. Students train on current technology vehicles and components donated by General Motors Corporation. Graduates from the two corporate-sponsored AAS degree options receive factory credentials upon graduation. These credentials are recognized by the respective dealerships across the country.

The AAS degree and Undergraduate Certificate in Heavy Duty Transportation and Equipment (HDTE) are designed to prepare students to work as repair and maintenance technicians in the HDTE industry. Much of the curriculum is based on medium and heavy duty maintenance and repair task lists developed by the National Institute for Automotive Service Excellence. Students train on vehicles, equipment, and components provided by or procured from major manufacturers of medium and heavy duty trucks and equipment.

Occupational Endorsement Certificates, Automotive**Certificate Description and Outcomes**

Four occupational endorsement certificate programs are available: Automotive Electrical; Automotive Brakes, Suspension and Alignment; Automotive Power Trains; and Automotive Engine Performance. These programs allow students to develop focused skill sets in high-demand areas of automotive maintenance and repair. At the completion of this certificate program, students are able to demonstrate:

- Proficiency in diagnosis and repair of electrical/electronic systems OR automotive brakes, suspension, and alignment OR automotive power trains OR automotive engine performance.
- Specialized employability skills for maintenance and repair technicians.

Admission Requirements

See Occupational Endorsement Certificate admissions requirements in Chapter 7, Academic Standards and Regulations.

Advising

Students should consult the ADT faculty for assistance in curriculum planning toward the occupational endorsement certificate.

Computer Competency Requirement

Automotive Technology Occupational Endorsement Certificates require demonstrated computer competency. Computer competency may be demonstrated in any of the following ways:

1. A 3-credit course in a computer language or an introductory course in data processing or microcomputers.
2. Work-related experience verifying computer competency as approved by the faculty advisor.
3. Self-initiated computer competency as approved by the faculty advisor.

Occupational Endorsement Certificate Requirements

1. Satisfy the General University Requirements for Occupational Endorsement Certificates at the beginning of this chapter.
2. Satisfy the program requirements for the emphasis area selected below.

A. Automotive Electrical

- 1) Complete the following courses:

| | | |
|----------|---------------------------------------|---|
| ADT A102 | Introduction to Automotive Technology | 3 |
| ADT A121 | Basic Electrical Systems | 3 |
| ADT A131 | Auto Electrical II | 3 |
| ADT A195 | Automotive Practicum I (1-6) | 6 |
| ADT A227 | Auto Electrical III | 3 |
- 2) A total of 18 credits is required for the occupational endorsement certificate.

B. Automotive Brakes, Suspension and Alignment

- 1) Complete the following courses:

| | | |
|----------|---------------------------------------|---|
| ADT A102 | Introduction to Automotive Technology | 3 |
| ADT A121 | Basic Electrical Systems | 3 |
| ADT A131 | Auto Electrical II | 3 |
| ADT A150 | Brake Systems | 4 |
| ADT A162 | Suspension and Alignment | 4 |
| ADT A195 | Automotive Practicum I (1-6) | 6 |
- 2) A total of 23 credits is required for the occupational endorsement certificate.

C. Automotive Power Trains

- 1) Complete the following courses:

| | | |
|----------|--|---|
| ADT A102 | Introduction to Automotive Technology | 3 |
| ADT A160 | Manual Drive Trains and Axles | 4 |
| ADT A260 | Electronic and Automatic Transmissions | 3 |
| ADT A121 | Basic Electrical Systems | 3 |
| ADT A131 | Auto Electrical II | 3 |
| ADT A195 | Automotive Practicum I(1-6) | 6 |
- 2) A total of 22 credits is required for the occupational endorsement certificate.

D. Automotive Engine Performance

- 1) Complete the following courses:

| | | |
|----------|---------------------------------------|---|
| ADT A102 | Introduction to Automotive Technology | 3 |
| ADT A121 | Basic Electrical Systems | 3 |
| ADT A122 | Engine Theory and Diagnosis | 3 |
| ADT A131 | Auto Electrical II | 3 |
| ADT A140 | Automotive Engine Repair | 3 |
| ADT A202 | Auto Fuel and Emissions Systems | 4 |
| ADT A222 | Engine Performance | 3 |
| ADT A295 | Automotive Practicum II | 3 |
- 2) A total of 25 credits is required for the occupational endorsement certificate.

Automotive Technology

These programs are modeled after a variety of very successful corporate training programs. Each program is four semesters long. The programs incorporate a prearranged, supervised, evaluated practicum in each of the first three semesters, with the possibility of an additional practicum during the last semester. Many students also choose to complete a summer practicum while enrolled in the program.

Students experience training on a wide variety of modern domestic and imported vehicles, light trucks, and vans. Laboratory and shop objectives are met on training vehicles, components, and live shop projects. Automotive Technology graduates have been placed in dealerships, independent shops, service stations, mass merchandisers, aviation ground support, and fleet repair facilities. Employers require a current vehicle operator's license and a good driving record. The student should have physical capabilities required of the trade which typically include standing long hours; lifting heavy objects; contacting hazardous materials; operating machinery; exposure to noise, heat, cold, vapors, and other workplace hazards; manipulating tools; and working with small parts in confined and awkward positions.

Technicians must be able to distinguish colors in minimal light, transcribe numbers up to 17+ digits, and work up to 10 hours a day, six days per week. Equal opportunities are available for men and women.

Undergraduate Certificate, Automotive Technology

Certificate Description and Outcomes

This certificate program prepares students to understand the theory of, diagnose, and repair engines, transmissions, transaxles, suspension, steering, brake systems, electrical/electronic systems, heating and air conditioning systems, as well as fuel and ignition systems of modern vehicles. At the completion of this undergraduate certificate program, students are able to:

- Demonstrate technical knowledge and skills necessary for success in the automotive maintenance and repair industry.
- Demonstrate academic proficiency necessary to pass national examinations.
- Demonstrate proficiency in performing occupationally related tasks in a professional setting.
- Integrate knowledge from diverse areas to develop effective diagnostic and repair strategies involving complex systems.
- Demonstrate effective oral and written communication skills necessary for success in the workplace.

Admission Requirements

Satisfy the Undergraduate Certificate Admissions Requirements in Chapter 7, Academic Standards and Regulations.

Advising

Students should consult the ADT faculty for assistance in curriculum planning toward the undergraduate certificate.

Computer Competency Requirement

The Automotive Technology certificate requires demonstrated computer competency. Computer competency may be demonstrated in any of the following ways:

1. A 3-credit course in a computer language or an introductory course in data processing or microcomputers.
2. Work-related experience verifying computer competency as approved by the faculty advisor.
3. Self-initiated computer competency as approved by the faculty advisor.

Undergraduate Certificate Requirements

1. Satisfy the General University Requirements for Undergraduate Certificates at the beginning of this chapter.

2. Complete the Major Requirements listed below.

Major Requirements

1. Complete the following required courses:

First Semester

| | | |
|----------|---------------------------------------|---|
| ADT A102 | Introduction to Automotive Technology | 3 |
| ADT A121 | Basic Electrical Systems | 3 |
| ADT A131 | Auto Electrical II | 3 |
| ADT A150 | Brake Systems | 4 |
| ADT A195 | Automotive Practicum (1-6) | 2 |

Second Semester

| | | |
|----------|-------------------------------|---|
| ADT A122 | Engine Theory and Diagnosis | 3 |
| ADT A160 | Manual Drive Trains and Axles | 4 |
| ADT A162 | Suspension and Alignment | 4 |
| ADT A195 | Automotive Practicum (1-6) | 2 |

Third Semester

| | | |
|----------|----------------------------|---|
| ADT A140 | Automotive Engine Repair | 3 |
| ADT A225 | Auto Heating and A/C | 3 |
| ADT A227 | Auto Electrical III | 3 |
| ADT A195 | Automotive Practicum (1-6) | 2 |

Fourth Semester

| | | |
|----------|---|---|
| ADT A202 | Fuel and Emissions | 4 |
| ADT A222 | Engine Performance | 3 |
| ADT A260 | Electronic & Automatic Transmissions (3) or | 3 |
| ADT A295 | Automotive Practicum II (3) | |

2. A total of 49 credits is required for the undergraduate certificate

Associate of Applied Science, Automotive Technology

The Associate of Applied Science in Automotive Technology is offered with three options: General Automotive, Ford ASSET and General Motors ASEP. Each option has different admissions requirements based on the policies of the program sponsors.

Students admitted to the degree program in any option complete the same courses with the exception of their final semester. Students in the General Automotive option may complete either ADT A260 or ADT A295. Students in either the Ford ASSET option or the General Motors ASEP option must complete both ADT A260 and ADT A295.

Degree Description and Outcomes

This associate's degree program prepares students to understand the theory of, diagnose, and repair engines, transmissions, transaxles, suspension, steering, brake systems, electrical/electronic systems, heating and air conditioning systems, as well as fuel and ignition systems of modern vehicles. At the completion of this Associate of Applied Science degree program, students are able to:

- Demonstrate technical knowledge and skills necessary for success in the automotive maintenance and repair industry.
- Demonstrate academic proficiency necessary to pass national examinations.
- Demonstrate proficiency in performing occupationally related tasks in a professional setting.
- Integrate knowledge from diverse areas to develop effective diagnostic and repair strategies involving complex systems.
- Demonstrate effective oral and written communication skills necessary for success in the workplace.

Admission Requirements

General Automotive Option

Specific admission requirements apply to this option. See department for criteria.

Automotive Technology

Ford Asset Option

The ASSET (Automotive Student Services Educational Training) path for the Automotive Technology AAS degree is a joint venture with Ford Motor Company and sponsoring Ford Lincoln-Mercury dealerships. Admission to Ford ASSET is only in odd-numbered years and has specific admission requirements. Please contact the Ford ASSET advisor, the department or sponsoring dealership for details. Students enrolled in Ford ASSET attend class for the first 10 weeks of the semester and complete paid work experience the balance of the semester. General Education courses (English, Communications, etc.) are conducted on a half semester format by special arrangement through the College of Arts and Sciences.

Admission Requirements

Ford ASSET Option

Specific admission requirements apply to this option. Student selection occurs up to three months prior to the start of the program. Accepted students will have met admission criteria and been selected by a sponsoring Ford Lincoln-Mercury dealership.

Automotive Technology

General Motors ASEP Option

The GMASEP (Automotive Student Education Program) option for the Automotive Technology AAS degree is a joint venture with General Motors Company and its sponsoring General Motors dealerships. Admission to General Motors ASEP is only even-numbered years and has specific admission requirements. Please contact the General Motors ASEP advisor, the department or sponsoring dealership for details. Students enrolled in General Motors ASEP attend class for the first 10 weeks of the semester and paid work experience the balance of the semester. General Education courses (English, Communications, etc.) are conducted on a condensed semester format by special arrangement through the College of Arts and Sciences.

Admission Requirements

General Motors ASEP Option

Complete the following application procedures:

1. Instructor approval is required for admission to the GMASEP option. Prospective students should provide the UAA GMASEP instructor with a resume and a copy of their driving record.
2. Admission to UAA GMASEP requires employment by a sponsoring Alaskan General Motors dealership or authorized repair facility.
3. Apply for admission to UAA and to the UAA GMASEP program by contacting the Automotive and Diesel Technology Department, University of Alaska Anchorage, 3211 Providence Drive, Anchorage, Alaska 99508. Telephone (907) 786-1485.
4. Have official high school transcripts, or official GED, and any vocational-technical training certificates sent to the UAA Office of Admissions, 3211 Providence Drive, Anchorage, Alaska 99508.
5. Present evidence to UAA GMASEP of math competency equivalent to completion of MATH A055. This may be accomplished by presentation of college transcripts for department evaluation, or by achieving an appropriate score on a UAA-approved placement test administered by the Advising and Testing Center. Call (907) 786-4500 to make arrangements.
6. Demonstrate English language proficiency through appropriate score on a UAA-approved placement test administered by Advising and Testing or through presentation of transcripts for Department of English evaluation. Generally, applicants prepared for entry into ENGL A111 have sufficient proficiency for entry into the UAA GMASEP.

Advising

Students should consult the ADT faculty for assistance in curriculum planning toward the Associate of Applied Science degree.

Computer Competency Requirement

The AAS degree in Automotive Technology requires demonstrated computer competency. Computer competency may be demonstrated in any of the following ways:

1. A 3-credit course in a computer language or an introductory course in data processing or microcomputers.
2. Work-related experience verifying computer competency as approved by the faculty advisor.
3. Self-initiated computer competency as approved by the faculty advisor.

Degree Requirements (All Options)

1. Complete the General University Requirements for Associate of Applied Science Degrees located at the beginning of this chapter.
2. Complete the General Course Requirements for Associate of Applied Science Degrees listed at the beginning of this chapter.
3. Complete the Major Requirements listed below.

Major Requirements

1. Complete the following required courses:

First Semester

| | | |
|------------------------------------|---------------------------------------|---|
| ADT A102 | Introduction to Automotive Technology | 3 |
| ADT A121 | Basic Electrical Systems | 3 |
| ADT A131 | Auto Electrical II | 3 |
| ADT A150 | Brake Systems | 4 |
| ADT A195 | Automotive Practicum I (1-6) | 2 |
| One AAS General Course Requirement | | 3 |

Second Semester

| | | |
|------------------------------------|-------------------------------|---|
| ADT A122 | Engine Theory and Diagnosis | 3 |
| ADT A160 | Manual Drive Trains and Axles | 4 |
| ADT A162 | Suspension and Alignment | 4 |
| ADT A195 | Automotive Practicum I (1-6) | 2 |
| One AAS General Course Requirement | | 3 |

Third Semester

| | | |
|------------------------------------|------------------------------|---|
| ADT A140 | Automotive Engine Repair | 3 |
| ADT A225 | Auto Heating and A/C | 3 |
| ADT A227 | Auto Electrical III | 3 |
| ADT A195 | Automotive Practicum I (1-6) | 2 |
| One AAS General Course Requirement | | 3 |

Fourth Semester

| | | |
|-------------------------------------|--|---|
| ADT A202 | Auto Fuel and Emission System | 4 |
| ADT A222 | Engine Performance | 3 |
| *ADT A260 | Electronic & Automatic Transmissions (3) | 3 |
| | or | |
| *ADT A295 | Automotive Practicum II (3) | 3 |
| Two AAS General Course Requirements | | 6 |

*Students admitted to the ASSET or the ASEP options must complete both ADT A260 and ADT A295

2. A total of 64 credits is required for the degree.

Undergraduate Certificate, Heavy Duty Transportation and Equipment

Certificate Description and Outcomes

The Heavy Duty Transportation and Equipment (HDTE) Undergraduate Certificate is designed to teach students the skills needed to be successful as technicians in the medium and heavy duty truck and equipment service industry. The undergraduate certificate may be completed in five semesters which includes one summer semester of practicum. Laboratory experiences are performed on equipment

and components currently used in the heavy duty transportation, construction and power generation industries.

Career opportunities for HDTE graduates include manufacturer and independent repair and maintenance shops, fleets, construction, mining, aviation ground support, and the seafood processing industry. Employers require technicians to be drug free and physically fit, and to have a current vehicle operator's license with a good driving record. Equal opportunities are available for men and women.

This undergraduate certificate program prepares students to understand the theory of, diagnose, and repair diesel engines, as well as, medium and heavy-duty drive trains, pneumatic and hydraulic brake systems, suspension steering, electrical/electronic systems, and heating and air conditioning systems on medium and heavy duty vehicle applications. At the completion of this undergraduate certificate program, students are able to:

- Demonstrate technical knowledge and skills necessary for success in the heavy-duty diesel maintenance and repair industry.
- Demonstrate academic proficiency necessary to pass national examinations.
- Demonstrate proficiency in performing occupationally related tasks in a professional setting.
- Integrate knowledge from diverse areas to develop effective diagnostic and repair strategies involving complex systems.
- Demonstrate effective oral and written communication skills necessary for success in the workplace.

Admission Requirements

Satisfy the requirements for Admission to Undergraduate Certificate Programs found in Chapter 7, Academic Standards and Regulations.

Students must complete the following admission requirements:

1. Submit UAA Undergraduate Application for Admission for the Heavy-Duty Transportation and Equipment Undergraduate Certificate.
2. Document placement at the MATH A055 entry level or higher. For testing schedule, contact Advising and Testing at (907) 786-4500.
3. Document placement at the ENGL A111 entry level or higher. For testing schedule, contact Advising and Testing at (907) 786-4500.
4. Demonstrate welding competency using one of the following methods:
 - a. A course in welding (see faculty advisor for approved courses).
 - b. Documented work experience verifying welding competency as approved by the faculty advisor.
 - c. Demonstrated competency in welding as approved by the faculty advisor.
5. Demonstrate computer competency using one of the following methods:
 - a. A course in computers (see faculty advisor for approved courses).
 - b. Documented work experience verifying computer competency as approved by the faculty advisor.
 - c. Demonstrated competency in computers as approved by the faculty advisor.

Advising

Students should consult the ADT faculty for assistance in curriculum planning toward the undergraduate certificate.

Certificate Requirements

1. Complete the General University Requirements for Certificates listed at the beginning of this chapter.
2. Complete the Major Requirements listed below.

Major Requirements

- Complete these required courses:

| | | |
|----------|------------------------------------|---|
| ADT A121 | Basic Electrical Systems | 3 |
| ADT A131 | Auto Electrical II | 3 |
| ADT A151 | Medium/Heavy-Duty Engine Repair | 3 |
| ADT A152 | Heavy-Duty Suspension and Steering | 4 |
| ADT A153 | Medium/Heavy-Duty Engine Lab | 3 |
| ADT A155 | Heavy-Duty Brake Systems | 4 |
| ADT A156 | Heavy-Duty Maintenance Inspection | 6 |
| ADT A195 | Automotive Practicum I (1-6) | 3 |
| ADT A225 | Auto Heating and A/C | 3 |
| ADT A227 | Auto Electrical III | 3 |
| ADT A266 | Heavy Duty Power Systems Lab | 4 |
| ADT A267 | Heavy Duty Fuel Systems | 4 |
| ADT A268 | Hydraulics and Pneumatics | 4 |
| ADT A269 | Heavy Duty Drive Trains | 4 |
- A total of 51 credits is required for the Undergraduate Certificate.

Associate of Applied Science, Heavy Duty Transportation and Equipment

Degree Description and Outcomes

The Heavy Duty Transportation and Equipment (HDTE) AAS degree is designed to teach students the skills needed to be successful as technicians in the medium and heavy duty truck and equipment service industry. The AAS degree may be completed in five semesters which includes one summer semester of practicum. Laboratory experiences are performed on equipment and components currently used in the heavy duty transportation, construction and power generation industries.

Career opportunities for HDTE graduates include manufacturer and independent repair and maintenance shops, fleets, construction, mining, aviation ground support, and the seafood processing industry. Employers require technicians to be drug free and physically fit, and to have a current vehicle operator's license with a good driving record. Equal opportunities are available for men and women.

This Associate of Applied Science degree program prepares students to understand the theory of, diagnose, and repair diesel engines, as well as, medium and heavy-duty drive trains, pneumatic and hydraulic brake systems, suspension steering, electrical/electronic systems, and heating and air conditioning systems on medium and heavy duty vehicle applications. At the completion of this undergraduate certificate program, students are able to:

- Demonstrate technical knowledge and skills necessary for success in the heavy-duty diesel maintenance and repair industry.
- Demonstrate academic proficiency necessary to pass national examinations.
- Demonstrate proficiency in performing occupationally related tasks in a professional setting.
- Integrate knowledge from diverse areas to develop effective diagnostic and repair strategies involving complex systems.
- Demonstrate effective oral and written communication skills necessary for success in the workplace.

Admission Requirements

Satisfy the requirements for Admission to Associate's Degree Programs found in Chapter 7, Academic Standards and Regulations. Students must complete the following admission requirements:

- Submit UAA Undergraduate Application for Admission for the Heavy-Duty Transportation and Equipment Associate of Applied Science.
- Document placement at the MATH A055 entry level or higher. For testing schedule, contact Advising and Testing at (907) 786-4500.
- Document placement at the ENGL A111 entry level or higher. For testing schedule, contact Advising and Testing at (907) 786-4500.

- Demonstrate welding competency using one of the following methods:
 - A course in welding (see faculty advisor for approved courses).
 - Documented work experience verifying welding competency as approved by the faculty advisor.
 - Demonstrated competency in welding as approved by the faculty advisor.
 - Demonstrate computer competency using one of the following methods:
 - A course in computers (see faculty advisor for approved courses).
 - Documented work experience verifying computer competency as approved by the faculty advisor.
 - Demonstrated competency in computers as approved by the faculty advisor.

Advising

Students should consult the ADT faculty for assistance in curriculum planning toward the Associate of Applied Science degree.

Degree Requirements

- Complete the General University Requirements for Associate Degrees listed at the beginning of this chapter.
- Complete the General Course Requirements for Associate of Applied Science Degrees listed at the beginning of this chapter.
- Complete the Major Requirements listed below.

Major Requirements

- Complete these required courses:

| | | |
|----------|------------------------------------|---|
| ADT A121 | Basic Electrical Systems | 3 |
| ADT A131 | Auto Electrical II | 3 |
| ADT A151 | Medium/Heavy-Duty Engine Repair | 3 |
| ADT A152 | Heavy-Duty Suspension and Steering | 4 |
| ADT A153 | Medium/Heavy Engine Lab | 3 |
| ADT A155 | Heavy Duty Brake Systems | 4 |
| ADT A156 | Heavy Duty Maintenance Inspection | 6 |
| ADT A195 | Automotive Practicum I (1-6) | 3 |
| ADT A225 | Auto Heating and A/C | 3 |
| ADT A227 | Auto Electrical III | 3 |
| ADT A266 | Heavy Duty Power Systems Lab | 4 |
| ADT A267 | Heavy Duty Fuel Systems | 4 |
| ADT A268 | Hydraulics and Pneumatics | 4 |
| ADT A269 | Heavy Duty Drive Trains | 4 |
- A total of 66 credits is required for the AAS degree.

FACULTY

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Dennis Massingham, Assistant Professor, AFDMM1@uaa.alaska.edu
Kelly Smith, Director, AFKJS@uaa.alaska.edu

AVIATION TECHNOLOGY

Aviation Complex (AVNC), 2811 Merrill Field Drive, (907) 786-7200
www.uaa.alaska.edu/aviation

The Aviation Technology Division (ATD) is a component of the University of Alaska Anchorage Community & Technical College and is located at the Aviation Technology Complex on Merrill Field Airport, approximately two miles north of the UAA main campus. The mission of the ATD is to enhance, promote, and provide quality aviation education, research, and service worldwide. Individuals employed in the aviation industry desiring to update skills and knowledge may take selected courses; these individuals must contact the ATD office about prerequisites and other lab or course requirements. The ATD supplies graduates for skilled and professional aviation-related positions through five academic programs of study:

The **Air Traffic Control (ATC)** program provides enhanced career opportunities for graduates, preparing students for careers in air traffic in both the private and public sectors. It is one of 36 ATC programs in colleges and universities nationwide approved by the Federal Aviation Administration as a participant in the Collegiate Training Initiative (CTI) where qualified graduates of the program are eligible for direct hire by the Federal Aviation Administration. The AAS degree provides students with basic entry-level requirements, while the Bachelor of Science in Aviation Technology (BSAT) degree with an Air Traffic Control emphasis is available for students wishing to prepare for management positions in the air traffic career field.

The **Aviation Administration/Management** program prepares students for various administration and management positions within the aviation industry. The AAS degree in Aviation Administration provides an introduction to administrative duties and requirements as well as the skills necessary to provide entry-level administrative support, while the BSAT with the Aviation Management emphasis is designed to prepare graduates for management positions in all aspects of the aviation industry. Students acquire a comprehensive understanding of the interrelatedness of all elements of the air transportation system, as well as skill sets and competencies to enter and succeed in managing the unique operational and management requirements of airlines, airports, and general aviation support operations.

The **Aviation Maintenance Technology (AMT)** program is Federal Aviation Administration (FAA) approved under Federal Aviation Regulation Part 147 and is a nationally recognized course of study designed to prepare graduates for entry into positions as maintenance technicians in general aviation, corporate aviation, airlines, or aerospace manufacturers. In addition to traditional aircraft maintenance courses, the curriculum emphasizes modern aircraft systems including electronics, composite structures, automatic controls and turbine engines.

The ATD offers two Aviation Maintenance Undergraduate Certificates, one with an Airframe and the other with a Powerplant emphasis. The FAA approved AMT undergraduate certificate programs provide all of the required content to prepare students to achieve FAA certification as Aircraft Mechanics with Airframe and/or Powerplant ratings. Upon completion of the UAA undergraduate certificate programs, students may take written, oral and practical tests that are administered by FAA designees. Those who achieve passing scores on these tests are awarded the Aircraft Mechanic Certificate with appropriate rating(s) by the FAA.

After earning either undergraduate certificate, additional study allows a student to earn an Associate of Applied Science (AAS) degree in Aviation Maintenance Technology.

The **Professional Piloting** program prepares graduates for piloting careers in professional aviation. The Aviation Technology Division offers both associate's (AAS Professional Piloting) and bachelor's (BSAT, with Professional Piloting emphasis) degrees. The associated knowledge and airborne flight training required for pilots comprise the majority of the Professional Piloting degree core courses. The UAA professional pilot training program is certificated by the FAA under Part 141 of the Federal Aviation Regulations. Both ground and airborne flight training are provided utilizing FAA approved curricula. UAA has fully-equipped flight training airplanes, advanced aircrew training devices (AATD) and a level B flight simulator to enhance the educational experience of the students.

The **Aviation Minor** allows those students pursuing degrees other than aviation the opportunity to minor in Aviation Technology.

Associate of Applied Science, Air Traffic Control

Program Description and Outcomes

ATC professionals utilize knowledge of aircraft operating limitations and performance, weather and atmospheric processes, radar theory and radar systems, federal regulations, the US air traffic control system, as well as navigation methods within the National Airspace System. The AAS degree prepares students for the technical requirements of the air traffic control profession, and for entry into the FAA Academy. At the completion of this program, students will be able to:

1. Demonstrate knowledge of aircraft operating limitations and performance, including methods of air and ground navigation within the National Airspace System.
2. Demonstrate knowledge of weather and atmospheric processes and how weather phenomenon affects aviation operations.
3. Demonstrate knowledge of the relationship between federal regulations, FAA publications, and the U.S. air traffic control system.
4. Demonstrate knowledge of fundamentals of aircraft separation in radar, nonradar, and terminal environments, as well as operating techniques of ATC facilities in visual and instrument conditions.

Admission Requirements

Satisfy Associate Degree Admission Requirements in Chapter 7, Academic Standards and Regulations.

Special Considerations

UAA has no restrictions on age or physical condition of students. However, students desiring employment with the FAA should be aware of employment requirements:

1. Medical Certificate is required as depicted in FAR 65.49 and 67 Subpart C.
2. Thirty-year-old maximum age restriction for students anticipating employment in terminal or en route options.
3. For employment considerations with the FAA, students must receive a PASS score on the Air Traffic-Selection and Training (ATSAT) examination administered by the FAA. The examination provides a systematic process for continued enhancement of air traffic selection and training by testing candidates for recognition and cognitive skills required in the air traffic specialty and to identify the "composite controller."

Advising

All students must meet with an academic advisor in the ATD prior to beginning any program of study and are encouraged to meet each semester for the purpose of reviewing their academic progress and planning future courses. It is particularly important for students to meet with their advisor whenever academic difficulties arise. Degree check sheets are available in the Aviation Technology Division office.

Federal Aviation Administration (FAA) Recommendation for Employment

1. To be eligible for FAA employment, student must achieve a C or better in all Air Traffic Control-specific courses: ATC A143, ATC A144, ATC A147, ATC A241/L, ATC A242/L, ATC A243/L.
2. In order to advance to 200 level ATC classes (ATC 241/L, ATC A242/L, ATC A243/L) students must have a C or better in ATC A143, ATC A144, ATC A147.
3. Students may repeat ATC A143, ATC A144, and ATC A147 only once due to performance.

General University Requirements

Complete the General University Requirements for Associate of Applied Science Degrees located at the beginning of this chapter.

General Course Requirements

Complete the Associate of Applied Science General Course Requirements located at the beginning of this chapter. ENGL A212 is recommended. Any English course used to satisfy the humanities General Education Requirement must be different from the written communications requirement and have a course number higher than ENGL A111.

Major Requirements

1. Complete the following required courses:

| | | |
|----------|-------------------------------------|---|
| ATA A102 | Introduction to Aviation Technology | 3 |
| ATA A132 | History of Aviation | 3 |
| ATC A143 | ATC Regulations | 3 |
| ATC A144 | ATC Flight Procedures | 3 |
| ATC A147 | Pilot/Controller Techniques | 3 |

| | | |
|-----------|--|---|
| ATC A241 | Control Tower Operations | 3 |
| ATC A241L | Control Tower Operations Lab | 1 |
| ATC A242 | ATC Terminal Radar Procedures | 3 |
| ATC A242L | ATC Terminal Radar Procedures Lab | 1 |
| ATC A243 | ATC Enroute Procedures | 3 |
| ATC A243L | ATC Enroute Procedures Lab | 1 |
| ATC A250 | Comprehensive Air Traffic Control Overview | 2 |
| ATC A325 | Tools for Weather Briefing | 3 |
| ATP A100 | Private Pilot Ground School | 3 |
| ATP A235 | Elements of Weather | 3 |

One of the following: 3

| | | |
|----------|---|--|
| ATA A133 | Aviation Law and Regulations (3) | |
| ATA A134 | Principles of Aviation Administration (3) | |

One of the following 3

| | | |
|----------|----------------------------------|--|
| ATA A233 | Aviation Safety (3) | |
| ATP A231 | Search, Survival, and Rescue (3) | |
| ATP A232 | Advanced Aviation Navigation (3) | |

*One of the following 3-4

| | | |
|-----------|---|--|
| MATH A105 | Intermediate Algebra (3) (Note: prerequisite) | |
| MATH A107 | College Algebra (4) (Note: prerequisite) | |
| MATH A108 | Trigonometry (3) (Note: prerequisite) | |
| MATH A172 | Applied Finite Mathematics (3) (Note: prerequisite) | |
| MATH A200 | Calculus I (4) (Note: prerequisite) | |
| MATH A272 | Applied Calculus (3) (Note: prerequisite) | |

One of the following not already taken: 3

| | | |
|--|--|--|
| ATA A133, ATA A134, ATA A233, ATA A331, ATA A335, ATA A336, ATA A337, ATA A425, ATA A431, ATA A490, ATC A440, ATP A116, ATP A200, ATP A231, ATP A232 | | |
|--|--|--|

*Courses may be used to fulfill the Associate of Applied Science General Degree Requirements.

- A total of 62-63 credits are required for the degree.
- See the Aviation Technology Division advisor for appropriate sequence of courses.

Minor, Air Traffic Control

Students majoring in another discipline or pursuing an Aviation degree, who wish to minor in Air Traffic Control (ATC), must complete the following requirements. A total of 22 credits is required for the minor, 6 credits must be upper division. Students completing the ATC minor will be eligible for recommendation for hire as air traffic controllers under the Federal Aviation Administration (FAA) College Training Initiative (CTI) program. Completion of the ATC minor does not guarantee hire by the FAA.

Special considerations:

UAA has no restrictions on age or physical condition of students. However, students desiring employment with the FAA should be aware of employment requirements:

- Medical Certificate is required as depicted in FAR 65.49 and 67 Subpart C.
- Thirty-year-old maximum age restriction for students anticipating employment in terminal or en route options.
- For employment considerations with the FAA, students must receive a PASS score on the Air Traffic-Selection and Training (ATSAT) examination administered by the FAA. The examination provides a systematic process for continued enhancement of air traffic selection and training by testing candidates for recognition and cognitive skills required in the air traffic specialty and to identify the "composite controller."

Advising

All students must meet with an academic advisor in the ATD prior to beginning any program of study and are encouraged to meet each semester for the purpose of reviewing their academic progress and

planning future courses. It is particularly important for students to meet with their advisor whenever academic difficulties arise. Degree check sheets are available in the ATD office.

Federal Aviation Administration (FAA) Recommendation for Employment

- To be eligible for FAA employment, student must achieve a C or better in the following Air Traffic Control-specific courses: ATC A143, ATC A144, ATC A147, ATC A241/L, ATC A242/L, ATC A243/L.

Program Requirements for Academic Progression

- In order to advance to 200 level ATC classes (ATC 241/L, ATC A242/L, ATC A243/L) students must have a C or better in ATC A143, ATC A144, ATC A147.
- Students may repeat ATC A143, ATC A144, and ATC A147 only once due to performance.
- Students must complete the following courses.

Complete the following courses (18 credits):

| | | |
|----------|--|---|
| ATC A143 | ATC Regulations | 3 |
| ATC A144 | ATC Flight Procedures (3) or Instrument Ground School (3) | 3 |
| ATP A116 | Pilot/Controller Techniques | 3 |
| ATC A147 | Tools for Weather Briefing | 3 |
| ATC A325 | Elements of Weather | 3 |
| ATP A235 | Facility Operation and Administration (3) or Air Transportation System Seminar (3) | 3 |
| ATC A440 | One of the following course pairs (4 credits): | 3 |
| ATA A492 | ATC A241 Control Tower Operations (3) or ATC A241L Control Tower Operations Lab (1) | 1 |
| | ATC A242 ATC Terminal Radar Procedures (3) or ATC A 242L ATC Terminal Radar Procedures Lab (1) | |
| | ATC A243 ATC Enroute Procedures (3) or ATC A243L ATC Enroute Procedures Lab (1) | |

Associate of Applied Science, Aviation Administration

Program Description and Outcomes

Aviation administrators require knowledge of aircraft operating limitations and performance, weather and atmospheric processes, federal regulations, and airport operations. The AAS degree in Aviation Administration provides an introduction to administrative duties and requirements as well as the skills necessary to provide administrative support. At the completion of this program, students will be able to:

- Demonstrate technical knowledge of aircraft operating limitations and performance.
- Demonstrate knowledge of aviation law and regulations, and of the legal issues affecting the aviation industry.
- Demonstrate knowledge of the issues affecting aviation safety and safety management.
- Demonstrate knowledge of basic business management skills and supervisory techniques.

Admission Requirements

Satisfy the Undergraduate Certificate and Associate's Degree Program Admission Requirements in Chapter 7, Academic Standards and Regulations.

Advising

All students must meet with an academic advisor in the ATD prior to beginning any program of study and are encouraged to meet each semester for the purpose of reviewing their academic progress and

planning future courses. It is particularly important for students to meet with their advisor whenever academic difficulties arise. Degree check sheets are available in the Aviation Technology Division Office.

General University Requirements

Complete the General University Requirements for Associate of Applied Science Degrees located at the beginning of this chapter.

General Course Requirements

Complete the Associate of Applied Science, General Course Requirements located at the beginning of this chapter.

Major Requirements

1. Complete the following required courses:

| | | |
|------------|---------------------------------------|---|
| ACCT A201 | Principles of Financial Accounting | 3 |
| ATA A102 | Introduction to Aviation Technology | 3 |
| ATA A132 | History of Aviation | 3 |
| ATA A133 | Aviation Law and Regulations | 3 |
| ATA A134 | Principles of Aviation Administration | 3 |
| ATA A233 | Aviation Safety | 3 |
| ATP A100 | Private Pilot Ground School | 3 |
| ATP A235 | Elements of Weather | 3 |
| *BA A151 | Introduction to Business | 3 |
| BA A231 | Fundamentals of Supervision | 3 |
| *ECON A201 | Principles of Macroeconomics | 3 |
| *PHIL A301 | Ethics | 3 |

One of the following: 3

| | | |
|----------|---|--|
| CIS A105 | Introduction to Personal Computers and Application Software (3) | |
| CIS A110 | Computer Concepts in Business (3) | |

*One of the following: 3-4

| | | |
|---------------------|---|---|
| MATH A105 | Intermediate Algebra (3) (Note: prerequisite) | |
| MATH A107 | College Algebra (4) (Note: prerequisite) | |
| MATH A108 | Trigonometry (3) (Note: prerequisite) | |
| MATH A172 | Applied Finite Mathematics (3) (Note: prerequisite) | |
| MATH A200 | Calculus I (4) (Note: prerequisite) | |
| MATH A272 | Applied Calculus (3) (Note: prerequisite) | |
| One Elective Course | | 3 |

*Courses may be used to fulfill the Associate of Applied Science General Degree Requirements.

- A total of 60-61 credits is required for the degree.
- See the Aviation Technology Division advisor for appropriate sequence of courses.

Undergraduate Certificate, Aviation Maintenance Technology (AMT), Airframe

Airframe Certificate Description and Outcomes

Aviation Maintenance Airframe Undergraduate Certificate is designed to prepare graduates for employment as maintenance technicians in general aviation, corporate aviation, airlines, or aerospace manufacturers. In addition to traditional aircraft maintenance courses, the curriculum emphasizes modern aircraft systems. At the completion of this program, students will be able to:

- Demonstrate proficient, entry-level aviation maintenance skills.
- Demonstrate proficiency in airframe maintenance skills
- Demonstrate knowledge of aircraft structures and systems, and appropriate FAA regulations.
- Demonstrate knowledge of industry information: current status, segments and opportunities.

Admission Requirements

- Satisfy the Certificate Admission Requirements in Chapter 7, Academic Standards and Regulations.
- Apply for admission to UAA and to the AMT program by contacting the UAA Aviation Technology Division, Aviation Maintenance Technology program at 2811 Merrill Field Drive, Anchorage, Alaska 99501. Telephone: (907) 786-7200, Fax: (907) 786-7202 or at <http://uaa.alaska.edu/aviation>.
- Present evidence of a proficiency in mathematics at or exceeding the MATH A055 Elementary Algebra level. An appropriate score on a math placement test may be used.
- Demonstrate English language proficiency through placement into PRPE A108 Introduction to College Writing (or higher), ACT English scores, SAT Critical Reading scores, or an appropriate score on the UAA-approved English placement exam. Generally, applicants eligible for entry into PRPE A108 or ENGL A109 have sufficient proficiency for entry into the AMT program.

Advising

All students must meet with an academic advisor in the Aviation Technology Division prior to beginning any program of study and are encouraged to meet each semester for the purpose of reviewing their academic progress and planning future courses. It is particularly important for students to meet with their advisor whenever academic difficulties arise. Degree check sheets are available in the Aviation Technology Division office. See the Aviation Technology Division advisor for appropriate sequence of courses.

Successful progress through the AMT program requires that all students have algebra proficiency at the MATH A055 level (MATH A105 is highly recommended) and English proficiency at the PRPE A108 or ENGL A109 level. Preparatory mathematics and English courses should be taken prior to entry into the AMT program. Under certain circumstances mathematics and English courses may be taken during the first semester with some AMT courses; see an advisor before registering. The AMT program courses are sequential and the student is cautioned that taking courses out of sequence will extend the program beyond its normal length. Typically, AMT courses have prerequisites, and advisor approval is required prior to registration for all AMT courses.

General University Requirements

Complete the General University Requirements for Undergraduate Certificates located at the beginning of this chapter.

Major Requirements

- Complete the following required courses:

| | | |
|-----------|--|---|
| AMT A170 | Aircraft Ground Operations and Safety | 1 |
| AMT A171 | Basic Aerodynamics | 3 |
| AMT A172 | Aircraft Publications, Regulations and Records | 3 |
| AMT A174 | Fundamentals of Aircraft Electronics | 3 |
| AMT A174L | Fundamentals of Aircraft Electronics Lab | 2 |
| AMT A175 | Drawing and Precision Measurement | 2 |
| AMT A176 | Aircraft Materials and Processes I | 2 |
| AMT A186 | Aircraft Non-Destructive Inspection Methods | 3 |
| AMT A181 | Aircraft Fuel Systems | 3 |
| AMT A181L | Aircraft Fuel Systems Lab | 1 |
| AMT A185 | Aircraft Sheetmetal Structures | 3 |
| AMT A185L | Aircraft Sheetmetal Structures Lab | 2 |
| AMT A186 | Aircraft Non-Destructive Inspection Methods | 3 |
| AMT A272 | Aircraft Electrical Hardware and Systems | 3 |
| AMT A273 | Aircraft Fluid Power Systems | 2 |
| AMT A273L | Aircraft Fluid Power Systems Lab | 2 |
| AMT A274 | Aircraft Electronic Systems | 5 |
| AMT A274L | Aircraft Electronic Systems Lab | 1 |
| AMT A283 | Aircraft Auxiliary Systems | 3 |
| AMT A283L | Aircraft Auxiliary Systems Lab | 1 |
| AMT A285 | Aircraft Bonded Structures | 4 |

| | | |
|-----------|---------------------------------------|---|
| AMT A285L | Aircraft Bonded Structures Lab | 1 |
| AMT A286 | Aircraft Materials and Processes II | 2 |
| AMT A364 | Aircraft Avionics Systems | 3 |
| AMT A369 | Airframe Assembly and Inspections | 3 |
| AMT A369L | Airframe Assembly and Inspections Lab | 2 |

- A total of 60 credits is required for the AMT Airframe Undergraduate Certificate.

Undergraduate Certificate Aviation Maintenance Technology (AMT), Powerplant

Powerplant Certificate Description and Outcomes

The Aviation Maintenance Powerplant Undergraduate Certificate is designed to prepare graduates for employment as maintenance technicians in general aviation, corporate aviation, airlines, or aerospace manufacturers. In addition to traditional aircraft maintenance courses, the curriculum emphasizes modern aircraft systems.

At the completion of this program, graduates will be able to:

- Demonstrate proficiency in entry-level aviation maintenance skills.
- Demonstrate proficiency in the required powerplant maintenance skills.
- Demonstrate knowledge of aircraft powerplants, systems, and appropriate FAA regulations.
- Demonstrate knowledge of industry information: current status, trends, segments and opportunities.

Admission Requirements

- Satisfy the Certificate Admission Requirements in Chapter 7, Academic Standards and Regulations.
- Apply for admission to UAA and to the AMT Powerplant program by contacting the UAA Aviation Technology Division, Aviation Maintenance Technology program at 2811 Merrill Field Drive, Anchorage, Alaska 99501. Telephone: (907) 786-7200, Fax: (907) 786-7202 or at <http://uaa.alaska.edu/aviation>.
- Present evidence of proficiency in mathematics at or exceeding the MATH A055 Elementary Algebra level. An appropriate score on a math placement test may be used.
- Demonstrate English language proficiency through placement into PRPE A108 Introduction to College Writing or a higher level with an appropriate level on ACT English scores, SAT Verbal scores, or an English placement exam. Generally, applicants eligible for entry into PRPE A108 or ENGL A109 level have sufficient proficiency for entry into the AMT programs.

Advising

All students must meet with an academic advisor in the Aviation Technology Division prior to beginning any program of study and are encouraged to meet each semester for the purpose of reviewing their academic progress and planning future courses and schedules. It is particularly important for students to meet with their advisor whenever academic difficulties arise. Degree check sheets are available in the ATD office. See the ATD advisor for appropriate sequence of courses.

Successful progress through the AMT program requires that all students have algebra proficiency and English proficiency. Preparatory mathematics and English courses should be taken prior to entry into the AMT program. Under certain circumstances preparatory courses may be taken during the first semester with some AMT courses. The AMT program courses are sequential and the student is cautioned that taking courses out of sequence will extend the program beyond its normal length. Typically, AMT courses have prerequisites, and advisor approval is required prior to registration for all AMT courses.

General University Requirements

Complete the General University Requirements for Undergraduate Certificates at the beginning of this chapter.

Major Requirements

- Complete the following required courses:

| | | |
|-----------|--|---|
| AMT A170 | Aircraft Ground Operations and Safety | 1 |
| AMT A171 | Basic Aerodynamics | 3 |
| AMT A172 | Aircraft Publications, Regulations, and Records | 3 |
| AMT A174 | Fundamentals of Aircraft Electronics | 3 |
| AMT A174L | Fundamentals of Aircraft Electronics Lab | 2 |
| AMT A175 | Drawing and Precision Measurement | 2 |
| AMT A176 | Aircraft Materials and Processes I | 2 |
| AMT A177 | Reciprocating Engine Theory | 2 |
| AMT A178 | Turbine Engine Theory | 2 |
| AMT A181 | Aircraft Fuel Systems | 3 |
| AMT A181L | Aircraft Fuel Systems Lab | 1 |
| AMT A186 | Aircraft Non-Destructive Inspection Methods | 3 |
| AMT A187 | Aircraft Reciprocating Engine Overhaul | 3 |
| AMT A187L | Aircraft Reciprocating Engine Overhaul Lab | 2 |
| AMT A272 | Aircraft Electrical Hardware and Systems | 3 |
| AMT A274 | Aircraft Electronic Systems | 5 |
| AMT A274L | Aircraft Electronic Systems Lab | 1 |
| AMT A279 | Aircraft Turbine Engine Repair and Overhaul | 3 |
| AMT A279L | Aircraft Turbine Engine Repair and Overhaul Lab | 1 |
| AMT A282 | Aircraft Propeller Systems | 1 |
| AMT A284 | Aircraft Electrical Machinery | 2 |
| AMT A284L | Aircraft Electrical Machinery Lab | 2 |
| AMT A287 | Reciprocating Engine Installation and Operations | 3 |
| AMT A287L | Reciprocating Engine Installation and Ops Lab | 2 |
| AMT A289 | Turbine Engine Installation and Operations | 3 |
| AMT A289L | Turbine Engine Installation and Operations Lab | 2 |

Note: The courses listed above are scheduled in established blocks to meet course prerequisites. Mixing courses from a different semester series may result in significantly extending the completion of the Certificate, as most courses are offered once a year.

- A total of 60 credits is required for the AMT Powerplant Undergraduate Certificate.

Associate of Applied Science, Aviation Maintenance Technology Program Description and Outcomes

Aviation Maintenance Associate of Applied Science degree is designed to prepare graduates for employment as maintenance technicians in general aviation, corporate aviation, airlines, or aerospace manufacturers. In addition to traditional aircraft maintenance courses, the curriculum emphasizes modern aircraft systems. At the completion of this program, graduates will be able to:

- Demonstrate proficient, entry-level aviation maintenance skills.
- Demonstrate proficiency in emphasis area skills: airframe or powerplant.
- Demonstrate knowledge of aircraft engines, structures, and systems, as well as appropriate FAA regulations.
- Demonstrate knowledge of industry information: current status, segments and opportunities.
- Demonstrate critical thinking, problem solving, and communication skills.

Admission Requirements

1. Satisfy Undergraduate Certificate and Associate Degree Admission Requirements in Chapter 7, Academic Standards and Regulations.
2. Apply for admission to UAA and to the AMT program by contacting the UAA Aviation Technology Division, Aviation Maintenance Technology program at 2811 Merrill Field Drive, Anchorage, Alaska 99501. Telephone: (907) 786-7200, Fax: (907) 786-7202 or at: <http://uaa.alaska.edu/aviation>.

Advising

All students must meet with an ATD academic advisor prior to beginning any program of study and are encouraged to meet each semester for the purpose of reviewing their academic progress and planning future courses. It is particularly important for students to meet with their advisor whenever academic difficulties arise. Degree check sheets are available in the Aviation Technology Division office. See the Aviation Technology Division advisor for appropriate sequence of courses.

The AAS degree normally requires one semester of study beyond a certificate program. AMT students may elect to continue their studies while pursuing a Bachelor of Science in Aviation Technology or Bachelor of Science in Technology at UAA. Those intending to pursue a four-year degree must discuss their plans with an AMT faculty advisor for proper course sequence.

AAS degree candidates who have completed an FAA approved program in aviation maintenance at a nationally or regionally accredited institution, passed all courses in the major with a grade of C or better, and currently hold a valid FAA Mechanic's Certificate may, with the approval of the department, use the certificate for a portion of the AAS major degree requirements. Individuals considering this option must discuss their plans with an AMT faculty advisor.

Academic Progress Requirements

Computer Literacy

This degree requires computer competency, which may be demonstrated by any one of the following:

1. A 3-credit course in computer language or an introductory course in data processing or microcomputers.
2. Work-related experience verifying computer literacy as approved by the faculty advisor.
3. Self-initiated computer literacy as approved by the faculty advisor.

Mathematics Proficiency

Demonstrate a proficiency in mathematics at or exceeding intermediate algebra (MATH A105) level, verified through transcripts or ACCUPLACER score.

General University Requirements

Complete the General University Requirements for Associate of Applied Science Degrees located at the beginning of this chapter.

General Course Requirements

Complete the General Course Requirements for AAS degrees located at the beginning of this chapter.

Major Requirements

1. Complete the following core requirements:

| | | |
|-----------|--|---|
| AMT A170 | Aircraft Ground Operations and Safety | 1 |
| AMT A171 | Basic Aerodynamics | 3 |
| AMT A172 | Aircraft Publications, Regulations and Records | 3 |
| AMT A174 | Fundamentals of Aircraft Electronics | 3 |
| AMT A174L | Fundamentals of Aircraft Electronics Lab | 2 |
| AMT A175 | Drawing and Precision Measurement | 2 |
| AMT A176 | Aircraft Materials and Processes I | 2 |
| AMT A181 | Aircraft Fuel Systems | 3 |
| AMT A181L | Aircraft Fuel Systems Lab | 1 |

| | | |
|-----------|---|---|
| AMT A186 | Aircraft Non-Destructive Inspection Methods | 3 |
| AMT A272 | Aircraft Electrical Hardware & Systems | 3 |
| AMT A274 | Aircraft Electronic Systems | 5 |
| AMT A274L | Aircraft Electronic Systems Lab | 1 |

2. Complete either, A. Powerplant courses or B. Airframe courses:

A. Powerplant courses (28 credits)

| | | |
|-----------|--|---|
| AMT A177 | Reciprocating Engine Theory | 2 |
| AMT A178 | Turbine Engine Theory | 2 |
| AMT A187 | Aircraft Reciprocating Engine Overhaul | 3 |
| AMT A187L | Aircraft Reciprocating Engine Overhaul Lab | 2 |
| AMT A279 | Aircraft Turbine Engine Repair and Overhaul | 3 |
| AMT A279L | Aircraft Turbine Engine Repair and Overhaul Lab | 1 |
| AMT A282 | Aircraft Propeller Systems | 1 |
| AMT A284 | Aircraft Electrical Machinery | 2 |
| AMT A284L | Aircraft Electrical Machinery Lab | 2 |
| AMT A287 | Reciprocating Engine Installation and Operations | 3 |
| AMT A287L | Reciprocating Engine Installation and Operations Lab | 2 |
| AMT A289 | Turbine Engine Installation and Operations | 3 |
| AMT A289L | Turbine Engine Installation and Operations Lab | 2 |

B. Airframe courses (28 credits)

| | | |
|-----------|---------------------------------------|---|
| AMT A185 | Aircraft Sheetmetal Structures | 3 |
| AMT A185L | Aircraft Sheetmetal Structures Lab | 2 |
| AMT A273 | Aircraft Fluid Power Systems | 2 |
| AMT A273L | Aircraft Fluid Power Systems Lab | 2 |
| AMT A283 | Aircraft Auxiliary Systems | 3 |
| AMT A283L | Aircraft Auxiliary Systems Lab | 1 |
| AMT A285 | Aircraft Bonded Structures | 4 |
| AMT A285L | Aircraft Bonded Structures Lab | 1 |
| AMT A286 | Aircraft Materials and Processes II | 2 |
| AMT A364 | Aircraft Avionics Systems | 3 |
| AMT A369 | Airframe Assembly and Inspections | 3 |
| AMT A369L | Airframe Assembly and Inspections Lab | 2 |

3. A total of 75 credits is required for the degree.

Associate of Applied Science, Professional Piloting

Program Description and Outcomes

Professional pilots need knowledge of aerodynamics, aircraft engine and system operation, aircraft operating limitations and performance, weather and atmospheric processes, as well as navigation and communication methods. This degree program prepares graduates for careers in professional flying. At the completion of this program, students will be able to:

1. Demonstrate proficiency in instrument pilot and commercial pilot knowledge and flight skills.
2. Demonstrate knowledge of aviation law and regulations, and of the legal issues affecting the aviation industry.
3. Demonstrate knowledge of the issues affecting aviation safety and safety management.
4. Demonstrate knowledge of aviation weather and of aviation weather services.

Admission Requirements

Satisfy Undergraduate Certificate and Associate's Degree Admission Requirements found in Chapter 7, Academic Standards and Regulations.

Special Considerations

The following applies for those students desiring to pursue a professional piloting degree:

1. Students must meet with the aviation academic advisor to obtain departmental approval to register for all flight courses. Flight training costs are based on hourly rates established for each aircraft type flown. Students will be provided with current hourly flight costs and program cost estimates when they meet with the department's academic advisor.
2. Students must pass an FAA Class II medical examination before beginning any flight training.
3. Students must present verification of U.S. citizenship before beginning any flight or airplane simulator training. The following three methods are acceptable: an unexpired U.S. passport, an original or raised seal official copy of birth certificate, or an original or raised seal official copy of Certificate of Naturalization. Non-U.S. citizens must register and receive approval from the Transportation Security Agency before beginning any flight or simulator training; please contact the Aviation Technology office for information.
4. Once formally registered for aviation classes at UAA, all subsequent flight training must be completed in residence at UAA. Flight training through other programs while enrolled at UAA is not permitted. Enrolled students who receive flight training outside UAA that is required under specific curricula will not receive credit for the corresponding UAA courses.
5. Under certain circumstances, academic credit may be granted for pilot certificates/ratings earned prior to enrolling at UAA. Contact a faculty advisor for determination.
6. Military pilots currently, or within the preceding 12 months, on active flight status may petition to have appropriate curriculum requirements awarded based on FAA pilot certificates without a proficiency check.

Advising

All students must meet with an ATD academic advisor prior to beginning any program of study and are encouraged to meet each semester for the purpose of reviewing their academic progress and planning future courses. It is particularly important for students to meet with their advisor whenever academic difficulties arise. Degree check sheets are available in the Aviation Technology Division Office.

See the Aviation Technology Division advisor for appropriate sequence of courses.

Academic Progress Requirements

Once enrolled in any flight training course, students are expected to complete the course requirements within the equivalent of two semesters. Failure to do so will be considered unsatisfactory progress and will result in a failing (F) grade.

General University Requirements

Complete the General University Requirements for Associate of Applied Science Degrees located at the beginning of this chapter.

General Course Requirements

Complete the General Course Requirements for AAS degrees located at the beginning of this chapter.

Major Requirements

1. Complete the following required courses:

| | | |
|----------|-------------------------------------|---|
| ATA A102 | Introduction to Aviation Technology | 3 |
| ATA A132 | History of Aviation | 3 |
| ATA A133 | Aviation Law and Regulations | 3 |
| ATA A233 | Aviation Safety | 3 |
| ATA A337 | Airline Operations | 3 |
| ATP A100 | Private Pilot Ground School | 3 |
| ATP A101 | Pre-Professional Flying | 2 |
| ATP A116 | Instrument Ground School | 3 |
| ATP A126 | Instrument Flying | 2 |

| | | |
|-------------------------------|--|-----|
| ATP A200 | Commercial Ground School | 3 |
| ATP A218 | Commercial Flying I | 1.5 |
| ATP A219 | Commercial Flying II | 1.5 |
| ATP A220 | Commercial Flying III | 2 |
| ATP A231 | Search, Survival, and Rescue | 3 |
| ATP A235 | Elements of Weather | 3 |
| CIS A110 | Computer Concepts in Business | 3 |
| *ENGL A212 | Technical Writing (<i>Note: prerequisite</i>) | 3 |
| *PHIL A101 | Introduction to Logic | 3 |
| *PHYS A123 | Basic Physics I (<i>Note: prerequisite</i>) | 3 |
| *PHYS A123L | Basic Physics I Laboratory (<i>Note: prerequisite</i>) | 1 |
| <i>*One of the following:</i> | | 3-4 |
| MATH A105 | Intermediate Algebra (3) (<i>Note: prerequisite</i>) | |
| MATH A107 | College Algebra (4) (<i>Note: prerequisite</i>) | |
| MATH A172 | Applied Finite Mathematics (3) | |
| <i>(Note: prerequisite)</i> | | |
| MATH A272 | Applied Calculus (3) (<i>Note: prerequisite</i>) | |

**Courses may be used to fulfill the Associate of Applied Science, General Degree Requirements.*

2. A total of 63 -65 credits is required for the degree.
3. Students are required to complete a minimum of one pilot certification or rating course in residence.

Bachelor of Science, Aviation Technology Program Description

The Bachelor of Science in Aviation Technology prepares individuals for professional positions within the aviation industry. Related career opportunities are found with airlines, airports, general aviation, government organizations, education, and the aerospace industry.

Within the degree there are three emphasis areas: Aviation Management, Air Traffic Control, and Professional Piloting, each having a discrete program description and outcomes. The specific interests and career goals of each student determine the emphasis area to pursue. The degree includes university General Education Requirements, a common set of core courses, and courses relative to each individual emphasis.

Admission Requirements

1. Satisfy Baccalaureate Degree Admission Requirements in Chapter 7, Academic Standards and Regulations.
2. Satisfy additional admission requirements or considerations.
3. Satisfy any certification requirements established by applicable government agencies.

Advising

All students must meet with an Aviation Technology Division (ATD) academic advisor prior to beginning any program of study and are encouraged to meet each semester for the purpose of reviewing their academic progress and planning future courses. It is particularly important for students to meet with their advisor whenever academic difficulties arise. Degree check sheets are available in the ATD office.

See the Aviation Technology Division (ATD) advisor for appropriate sequence of courses. A strong background in science, math, and reading skills is highly recommended.

Academic Progress

A minimum grade of C in each Aviation Technology course is required to graduate with this degree.

Degree Requirements

1. Complete the General University Requirements for Baccalaureate Degrees listed at the beginning of this chapter.
2. Complete the General Education Requirements (GER) for Baccalaureate Degrees at the beginning of this chapter.

3. Complete required Emphasis Courses and Major Degree Requirements.

Major Requirements

1. Complete the following required core courses (54-55 credits):

| | | |
|------------|-------------------------------------|-----|
| ATA A102 | Introduction to Aviation Technology | 3 |
| ATA A133 | Aviation Law and Regulations | 3 |
| ATA A233 | Aviation Safety | 3 |
| ATA A331 | Human Factors in Aviation | 3 |
| ATA A415 | Company Resource Management | 3 |
| ATA A425 | Civil Aviation Security | 3 |
| ATA A492 | Air Transportation System Seminar | 3 |
| ATP A100 | Private Pilot Ground School | 3 |
| ATP A235 | Elements of Weather | 3 |
| BA A300 | Organizational Theory and Behavior | 3 |
| BA A361 | Human Resource Management | 3 |
| BA A461 | Negotiation and Conflict Management | 3 |
| BA A488 | Environment of Business | 3 |
| CIS A110 | Computer Concepts in Business | 3 |
| *ECON A201 | Principles of Macroeconomics | 3 |
| *ENGL A212 | Technical Writing | 3 |
| *MATH A272 | Applied Calculus | 3-4 |
| | or | |
| *MATH A200 | Calculus (4) | |
| *PHIL A101 | Introduction to Logic | 3 |
| | or | |
| *PHIL A201 | Introduction to Philosophy (3) | |
| | or | |
| *PHIL A301 | Ethics (3) | |

*Courses may be used to fulfill the Bachelor of Science, General Education Requirements.

2. Select one of the three following BSAT emphasis areas and complete the listed required courses.

Aviation Management Emphasis

Emphasis Description and Outcomes

The BSAT with the Aviation Management emphasis is designed to prepare graduates for management positions in all aspects of the aviation industry. The BSAT provides students not only with the organizational, human relations, and managerial skills required in aviation management, but also with the appropriate technical background. At the completion of this program, students will be able to:

1. Demonstrate technical knowledge of aircraft operating limitations and performance.
2. Demonstrate knowledge of aviation law and regulations, and of the legal issues affecting the aviation industry.
3. Demonstrate knowledge of the issues affecting aviation safety and safety management.
4. Demonstrate knowledge of basic business management skills and supervisory techniques.
5. Demonstrate a broad knowledge of the aviation industry.
6. Demonstrate a broad knowledge of aviation management functions and techniques.

Required Emphasis Courses

1. Complete the following required emphasis courses (33 credits):

| | | |
|------------|---------------------------------------|---|
| ACCT A201 | Principles of Financial Accounting | 3 |
| ACCT A202 | Principles of Managerial Accounting | 3 |
| ATA A132 | History of Aviation | 3 |
| ATA A134 | Principles of Aviation Administration | 3 |
| ATA A335 | Airport Operations | 3 |
| ATA A336 | Air Service Operations | 3 |
| ATA A337 | Airline Operations | 3 |
| ATA A431 | Aircraft Accident Investigation | 3 |
| *BA A151 | Introduction to Business | 3 |
| BA A343 | Principles of Marketing | 3 |
| *ECON A202 | Principles of Microeconomics | 3 |

*Courses may be used to fulfill the Bachelor of Applied Science, General Education Requirements.

2. Choose a minimum of 12 credits of advisor-approved electives, 3 of which must be upper division. The following are Recommended Elective Support Courses (refer to the current UAA Catalog for prerequisites):
- | | | |
|--------------|--|----|
| ATA A490 | Advanced Topics in Aviation Technology (3) | 12 |
| ATC A325 | Tools for Weather Briefing (3) | |
| ATC A440 | Facility Operation and Administration (3) | |
| BA A381 | Consumer Behavior (3) | |
| BA A447 | International Marketing (3) | |
| BA A460 | Marketing Management (3) | |
| CIS A280 | Managerial Communications (3) | |
| CIS A326 | Information Age Literacy (3) | |
| CIS A376 | Management Information Systems (3) | |
| ENGL A312 | Advanced Technical Writing (3) | |
| ENGL A313 | Professional Writing (3) | |
| PER A100 | Fitness for Life (2) | |
| PER Elective | See Catalog for Listing (1-2) (Maximum of two PER elective credits allowed) | |
| PSY A380 | Psychology of Stress and Coping (3) | |
3. A minimum of 121-122 credits is required for the Aviation Management emphasis, of which a minimum of 42 credits must be upper division.

Air Traffic Control (ATC) Emphasis

Emphasis Description and Outcomes

ATC professionals utilize knowledge of aircraft operating limitations and performance, weather and atmospheric processes, radar theory and radar systems, federal regulations, the US air traffic control system, as well as navigation methods within the National Airspace System. The BSAT prepares students not only for the technical requirements of air traffic control, but also for the organizational, human relations, and managerial demands. The Federal Aviation Administration Recommendation for Employment and Special Considerations contained in the Associate of Applied Science, Air Traffic Control apply to this emphasis. At the completion of this program, students will be able to:

1. Demonstrate knowledge of the theory of aircraft operating limitations and performance, including methods of air and ground navigation within the National Airspace System.
2. Demonstrate knowledge of weather and atmospheric processes, and how each affect the air traffic control system.
3. Demonstrate knowledge of Federal Regulations and the U.S. air traffic control system interactions, including FAA publications.
4. Demonstrate knowledge of fundamentals of aircraft separation in radar, nonradar, and terminal environments, as well as operating techniques of ATC facilities in visual and instrument conditions.
5. Demonstrate awareness of ATC industry trends, future developments, global implications, and current management practices and techniques.
6. Demonstrate broad knowledge of the aviation industry.

Required Emphasis Courses

1. Complete the following required emphasis courses (36 credits):

| | | |
|-----------|--|---|
| ATA A132 | History of Aviation | 3 |
| ATC A143 | ATC Regulations | 3 |
| ATC A144 | ATC Flight Procedures | 3 |
| ATC A147 | Pilot/Controller Techniques | 3 |
| ATC A241 | Control Tower Operations | 3 |
| ATC A241L | Control Tower Operations Lab | 1 |
| ATC A242 | ATC Terminal Radar Procedures | 3 |
| ATC A242L | ATC Terminal Radar Procedures Lab | 1 |
| ATC A243 | ATC Enroute Procedures | 3 |
| ATC A243L | ATC Enroute Procedures Lab | 1 |
| ATC A250 | Comprehensive Air Traffic Control Overview | 2 |
| ATC A325 | Tools for Weather Briefing | 3 |
| ATC A355 | Integrated Radar Techniques | 3 |

- ATC A440 Facility Operation and Administration 3
2. Choose a minimum of 12 credits of advisor-approved electives, 9 of which must be upper division. The following are Recommended Elective Support Courses (refer to the current UAA Catalog for prerequisites): 12
- ATA A490 Advanced Topics in Aviation Technology (3)
 ATC A325 Tools for Weather Briefing (3)
 BA A381 Consumer Behavior (3)
 BA A447 International Marketing (3)
 BA A460 Marketing Management (3)
 CIS A280 Managerial Communications (3)
 CIS A326 Information Age Literacy (3)
 CIS A376 Management Information Systems (3)
 ENGL A312 Advanced Technical Writing (3)
 ENGL A313 Professional Writing (3)
 PER A100 Fitness for Life (2)
 PER Elective See Catalog for Listing (1-2)
 (*Maximum of two PER elective credits allowed*)
 PSY A380 Psychology of Stress and Coping (3)
3. A minimum of 121-122 credits is required for the Air Traffic Control emphasis, of which a minimum of 42 credits must be upper division.

Professional Piloting Emphasis

Emphasis Description and Outcomes

Professional pilots need knowledge of aerodynamics, aircraft engine and system operation, aircraft operating limitations and performance, weather and atmospheric processes, as well as navigation and communication methods. This degree program prepares graduates for careers in professional flying and management. The Special Considerations and Academic Progress Requirements contained in the Associate of Applied Science, Professional Piloting also apply to this emphasis area. At the completion of this program, students will be able to:

1. Demonstrate proficiency in instrument pilot and commercial pilot knowledge and flight skills.
2. Demonstrate knowledge of aviation law and regulations, and of the legal issues affecting the aviation industry.
3. Demonstrate knowledge of the issues affecting aviation safety and safety management.
4. Demonstrate knowledge of aviation weather and of aviation weather services.
5. Demonstrate a broad knowledge of the aviation industry.
6. Demonstrate a broad knowledge of flight instructing techniques and procedures.

Special Considerations

The following applies for those students desiring to pursue a Professional Piloting emphasis:

1. Students must meet with the aviation academic advisor to obtain departmental approval to register for all flight courses. Flight training costs are based on hourly rates established for each aircraft type flown. Students will be provided with current hourly flight costs and program cost estimates when they meet with the department's academic advisor.
2. Students must pass an FAA Class II medical examination before beginning any flight training.
3. Students must present verification of U.S. citizenship before beginning any flight or airplane simulator training. The following three methods are acceptable: an unexpired U.S. passport, an original or raised seal official copy of birth certificate, or an original or raised seal official copy of Certificate of Naturalization. Non-U.S. citizens must register and receive approval from the Transportation Security Agency before beginning any flight or simulator training; please contact the Aviation Technology office for information.
4. Once formally registered for Aviation classes at UAA, all subsequent flight training must be completed in residence at UAA. Flight training through other programs while enrolled at UAA is

not permitted. Enrolled students who receive flight training outside UAA that is required under specific curricula will not receive credit for the corresponding UAA courses.

5. Under certain circumstances, academic credit may be granted for pilot certificates/ ratings earned prior to enrolling at UAA. Contact a faculty advisor for determination.
6. Military pilots currently, or within the preceding 12 months, on active flight status may petition to have appropriate curriculum requirements awarded based on FAA pilot certificates without a proficiency check.

Required Emphasis Courses

1. Complete the following required emphasis courses:

| | | |
|-----------|--|-----|
| ACCT A201 | Principles of Financial Accounting | 3 |
| ATA A337 | Airline Operations | 3 |
| ATA A431 | Aircraft Accident Investigation | 3 |
| ATC A325 | Tools for Weather Briefing | 3 |
| ATP A101 | Pre-Professional Flying | 2 |
| ATP A116 | Instrument Ground School | 3 |
| ATP A126 | Instrument Flying | 2 |
| ATP A200 | Commercial Ground School | 3 |
| ATP A218 | Commercial Flying I | 1.5 |
| ATP A219 | Commercial Flying II | 1.5 |
| ATP A220 | Commercial Flying III | 2 |
| ATP A232 | Advanced Aviation Navigation | 3 |
| ATP A300 | CFI Ground School | 3 |
| ATP A301 | CFI Flying | 2 |
| ATP A305 | Additional Aircraft Rating | 2 |
| ATP A332 | Transport Aircraft Systems | 3 |
| | Advisor approved upper division elective | 3 |
2. All students are required to complete a minimum of two advanced flight courses (300-400) in residence to meet graduation requirements.
3. A minimum of 122 credits is required for the professional piloting emphasis, of which a minimum of 42 credits must be upper division.

Minor, Aviation Technology

Students majoring in another discipline who wish to minor in Aviation Technology must complete the following requirements. A total of 18 credits is required for the minor, 6 credits must be upper division. Students are encouraged to select courses from the following list. Students may request prior approval of other Aviation Technology courses.

Complete 18 credits from the following:

- | | |
|-----------|---|
| AMT A171 | Basic Aerodynamics (3) |
| AMT A172 | Aircraft Publications, Regulations, and Records (3) |
| AMT A177 | Reciprocating Engine Theory (2) |
| AMT A178 | Turbine Engine Theory (2) |
| AMT A185 | Aircraft Sheetmetal Structures (3) and |
| AMT A185L | Aircraft Sheetmetal Structures Lab (2) |
| AMT A285 | Aircraft Bonded Structures (4) and |
| AMT A285L | Aircraft Bonded Structures Lab (1) |
| ATA A132 | History of Aviation (3) |
| ATA A133 | Aviation Law and Regulations (3) |
| ATA A233 | Aviation Safety (3) |
| ATA A331 | Human Factors in Aviation (3) |
| ATA A335 | Airport Operations (3) |
| ATA A336 | Air Service Operations (3) |
| ATA A337 | Airline Operations (3) |
| ATA A425 | Civil Aviation Security (3) |
| ATA A431 | Aircraft Accident Investigation (3) |
| ATA A492 | Air Transportation System Seminar (3) |
| ATC A147 | Pilot/Controller Techniques (3) |
| ATP A100 | Private Pilot Ground School (3) |
| ATP A235 | Elements of Weather (3) |

FACULTY

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 Randy Roberts, Associate Professor

COMPUTER ELECTRONICS

Kenai Peninsula College (KPC)

156 College Road, Soldotna, Alaska, 99669, (907) 262-0330, (877) 262-0330

www.kpc.alaska.edu

This two-year degree program trains students in maintenance and repair of digital/computer equipment including computer circuitry, hands-on maintenance, electronic fundamentals, and programming. Students are prepared for employment as computer technicians, field service representatives, and other jobs requiring electronic skills.

**Associate of Applied Science,
Computer Electronics**

The Computer Electronics program is only offered at Kenai Peninsula College (KPC), Kenai River Campus.

Advising for this program is only available from the Computer Science faculty at Kenai Peninsula College. Please call (907) 262-0344 for more information.

The graduates of the UAA Computer Electronics program will have the ability to:

1. Use all tools common to electronic repair, including hand tools, meters, oscilloscopes and logic probes;
2. Analyze and troubleshoot circuits in both analog and digital electronics;
3. Program in assembly and high-level languages;
4. Enter and print data in a spreadsheet program and enter and edit text using a word processor; and
5. Interface microcontrollers used in embedded systems.

Admission Requirements

Complete Associate's Degree Admissions Requirements for associate degrees found in Chapter 7, Academic Standards and Regulations.

A. General University Requirements

Complete the General University and the General Course Requirements for Associate of Applied Science Degrees at the beginning of this chapter.

B. Communication and General Requirements

1. Oral Communication Requirements: 3
 - COMM A111 Fundamentals of Oral Communication (3)
or
 - COMM A235 Small Group Communication (3)
or
 - COMM A241 Public Speaking (3)
2. Written Communication Requirements: 6
 - ENGL A111 Methods of Written Communication (3)
 - ENGL A212 Technical Writing (3)

3. General Requirements:

| | |
|-------------------------------------|---|
| Math Courses: | 7 |
| MATH A105* Intermediate Algebra (3) | |
| MATH A107* College Algebra (4) | |
| Physical Science Courses | 4 |
| PHYS A115/L Physical Science (4) | |
| PHYS A123/L Basic Physics I (4) | |
| Natural Science Courses | 4 |
| PHYS A124/L Basic Physics II (4) | |
| CHEM A103/L Survey of Chemistry (4) | |
| CHEM A105/L General Chemistry I (4) | |

*Or any MATH course for which MATH A105 or MATH A107 is a prerequisite.

C. Major Requirements

1. Complete the following required courses:

| | | |
|----------|---|---|
| CIS A110 | Computer Concepts in Business | 3 |
| CNT A170 | CCNA 1 Network Fundamentals | 4 |
| ET A101 | Basic Electronics: DC Circuits | 4 |
| ET A102 | Basic Electronics: AC Circuits | 4 |
| ET A126 | Digital Electronics | 4 |
| ET A175 | Technical Introduction to Computing Systems | 3 |
| ET A240 | Computer Systems Interfacing | 3 |
| ET A241 | Digital Control Systems | 3 |
2. Complete 3 credits from the following: 3

| | | |
|---------|--|--|
| CS A109 | Computer Programming: (Languages Vary) (3) | |
| CS A110 | Java Programming (3) | |
| CS A111 | Visual Basic.NET Programming (3) | |
| CS A201 | Programming Concepts I (3) | |
3. Applied Technology Electives 3-5

Computer Science, Computer Network Tech, or Electronics
4. Electives 1-4
5. **A total of 60 credits is required for the degree.**

FACULTY

Rich Kochis, Assistant Professor, IFRLK@uaa.alaska.edu
 Allen Houtz, Professor, IFADH@uaa.alaska.edu

**COMPUTER INFORMATION
AND OFFICE SYSTEMS**

Anchorage - University Center (UC), Room 130, (907) 786-6426
www.uaa.alaska.edu/ctc/computers/cios

Kenai - Ward Building, Room 204, (907) 262-0355, (877) 262-0330
www.kpc.alaska.edu

Kodiak - Campus Center, Room 123D, (907) 486-1212
www.koc.alaska.edu

Matanuska-Susitna - FSM 108, (907) 745-9763
www.matsu.alaska.edu/office/cios-skill-center

Administrative professionals are at the information center of every office and their titles reflect the shifting role they play and the increased responsibilities they have assumed. A few of these titles include administrative assistant, executive assistant, technical assistant, receptionist or information clerk, payroll assistant, information/database specialist, help-desk technician, and desktop or website publishing specialist.

The Computer Information and Office Systems (CIOS) program provides career education leading to an Associate of Applied Science (AAS) degree or Occupational Endorsement Certificates (OECs) that prepare

students for career entry or advancement while developing and refining lifelong learning skills, fostering flexible career path options and building confidence to adapt to new technological demands in the workplace.

The CIOS program prepares entry-level, experienced, or workforce re-entry level office workers to successfully engage in business office environments where communication, technical, organizational, interpersonal, and teamwork skills are essential to business success. CIOS courses also cover topics that help prepare students for the Microsoft Office certification examinations and the Certified Administrative Professional (CAP) and Certified Professional Secretary (CPS) certification examinations.

The following programs are available:

Occupational Endorsement Certificates

OECs are designed to give students skills in a specific occupational field and indicate competence in a technical and professional area. Some OECs are embedded in the AAS in Computer Information and Office Systems. Students must receive a satisfactory grade (C or higher, or P) in all required CIOS courses to be awarded an OEC. The CIOS Department offers the following OECs:

- Office Foundations
- Bookkeeping Support
- Medical Office Support
- Corporate Specified Skills
- Office Digital Media
- Office Support
- Technical Support

Admission Requirements

See Occupational Endorsement Certificate Admission Requirements in Chapter 7, Academic Standards and Regulations.

Advising

Students should contact the CIOS faculty for assistance with course planning toward occupational endorsement certificates.

Academic Progress

Students must earn a satisfactory grade (C or higher, or P) in all CIOS courses required for each certificate.

General University Requirements

See General University Requirements for Occupational Endorsement Certificates at the beginning of this chapter.

Occupational Endorsement Certificate, Office Foundations

Provides foundational skills required for entry into the administrative office professional field.

Outcomes

Upon completion of this OEC, students will demonstrate:

- Keystroke skills of 28 net words per minute minimum.
- Entry-level skills in word processing and spreadsheets.
- Entry-level skills using the Internet to obtain information.
- Customer service skills.
- Knowledge of proper grammar and mechanics used in business documents.
- The ability to create and maintain an electronic file system.

Requirements

1. All students must take the following basic computer skills courses or possess equivalent knowledge. Students may take challenge examinations to prove proficiency in these areas. Beginning computer users are encouraged to take CIOS A113 Operating Systems: MS Windows as the first course.

| | | |
|------------|----------------------------------|---|
| CIOS A101A | Keyboarding A: Basic Keyboarding | 1 |
|------------|----------------------------------|---|

| | | |
|------------|------------------------------------|---|
| CIOS A113 | Operating Systems: MS Windows | 1 |
| CIOS A130A | Word Processing I: MS Word | 1 |
| CIOS A135A | Spreadsheets I: MS Excel | 1 |
| CIOS A146 | Internet Concepts and Applications | 2 |
| CIOS A161A | Proofreading | 2 |
| CNT A165 | Customer Service Fundamentals | 1 |

2. A total of 9 credits is required for this OEC.

Occupational Endorsement Certificate, Bookkeeping Support

Provides essential skills to handle financial transactions and recordkeeping.

Outcomes

Upon completion of this OEC, students will demonstrate:

- Basic skills in financial transactions, payroll, and bookkeeping procedures.

Requirements

1. Must complete the 9-credit Office Foundations OEC before admission to this program.
2. Complete 1 credit from the following:

| | | |
|------------|--|---|
| CIOS A101B | Keyboarding B: Business Documents I (1) | 1 |
| CIOS A101C | Keyboarding C: Business Documents II (1) | 1 |
3. Complete 3 credits from the following:

| | | |
|-----------|--|---|
| ACCT A101 | Principles of Financial Accounting I (3) | 3 |
| ACCT A120 | Bookkeeping for Business I (3) | 3 |
4. Complete the following 10 credits:

| | | |
|------------|--|---|
| CIOS A115 | 10-Key for Business Calculations | 2 |
| CIOS A118 | Payroll Procedures | 2 |
| CIOS A120A | Bookkeeping Software Applications I: QuickBooks | 1 |
| CIOS A165 | Office Procedures | 3 |
| CIOS A220A | Bookkeeping Software Applications II: QuickBooks | 2 |
5. A total of 14 credits is required for this OEC.

Occupational Endorsement Certificate, Corporate Specified Skills

Enables employers to target skill sets needed for positions within a specific business or industry. Consulting with a faculty advisor, students will complete a study plan, which will formally establish the specific program requirements. The study plan becomes official once it is approved by the department chair and is filed with Enrollment Management. Upon completing the specific requirements established in the study plan, students will be entitled to the certificate. Businesses can contact the department to develop specific criteria to meet individual job specifications. Note: this is not an individually customized OEC. Skill sets must be developed based on specific job descriptions approved by the department and industry. This OEC may be repeated with a different study plan.

Outcomes

Upon completion of this OEC, students will demonstrate the ability to:

- Produce business communication using typical office software.
- Communicate effectively orally and in writing.
- Deal effectively with business constituents and/or customers.

Requirements

Complete 9 to 29 credits of coursework from the following skill sets:

1. Choose 3 to 9 credits from the following technical skills set: 3-9

- | | | |
|------------|--|--|
| CIOS A101 | Keyboarding (3) | |
| CIOS A101A | Keyboarding A: Basic Keyboarding (1) | |
| CIOS A101B | Keyboarding B: Business Documents I (1) | |
| CIOS A101C | Keyboarding C: Business Documents II (1) | |
| CIOS A102 | Keyboarding Skill Building (1) | |
| CIOS A108 | Digital Design Fundamentals (1) | |
| CIOS A113 | Operating Systems: MS Windows (1) | |
| CIOS A115 | 10-Key for Business Calculations (2) | |
| CIOS A125A | Electronic Communications I: MS Outlook (1) | |
| CIOS A130A | Word Processing I: MS Word (1) | |
| CIOS A135A | Spreadsheets I: MS Excel (1) | |
| CIOS A140A | Databases I: MS Access (1) | |
| CIOS A146 | Internet Concepts and Applications (2) | |
| CIOS A150A | Presentations: MS PowerPoint (2) | |
| CIOS A152 | Digital Imaging Concepts and Applications: Photoshop (3) | |
| CIOS A153B | Website Design: Dreamweaver (3) | |
| CIOS A164 | Filing (1) | |
| CIOS A190 | Selected topics in Office Technology (1-3) | |
| CIOS A230A | Word Processing II: MS Word (2) | |
| CIOS A235A | Spreadsheets II: MS Excel (2) | |
| CIOS A240A | Databases II: MS Access (2) | |
| CIOS A251 | Desktop Publishing Concepts and Applications: InDesign (3) | |
| CIOS A259 | Preparing Electronic Documents: Adobe Acrobat (1) | |
| CIOS A264A | Records Management (2) | |
| | Other courses approved by the advisor | |
2. Choose 3 to 9 credits from the following communication skills set: 3-9
- | | | |
|------------|--|--|
| CIOS A161 | Proofreading (2) | |
| CIOS A190 | Selected topics in Office Technology (1-3) | |
| CIOS A260A | Business Communications (3) | |
| | Other courses approved by the advisor | |
3. Choose 3 to 11 credits from the following soft skills set: 3-11
- | | | |
|------------|--|--|
| CIOS A165 | Office Procedures (3) | |
| CIOS A190 | Selected topics in Office Technology (1-3) | |
| CIOS A261A | Interpersonal Skills in Organizations (3) | |
| CIOS A262A | Professional Development (3) | |
| CIOS A265 | Office Management (3) | |
| CIOS A276A | Independent Project (1-3) | |
| CIOS A295 | Office Internship (1-3) | |
| CNT A165 | Customer Service Fundamentals (1) | |
| | Other courses approved by the advisor | |
4. A total of 9 to 29 credits is required for this OEC.

Occupational Endorsement Certificate, Medical Office Support

Provides a solid foundation for individuals seeking a support position in a medical office.

Outcomes

Upon completion of this OEC, students will demonstrate:

- Keystroke skills of 35 net words per minute minimum.
- Effective communication using appropriate medical terminology.
- The ability to create and maintain a file system.

Requirements

1. Must complete the 9-credit Office Foundations OEC before admission to this program.
2. Complete 1 credit from the following: 1

| | | |
|------------|--|--|
| CIOS A101B | Keyboarding B: Business Documents I (1) | |
| CIOS A101C | Keyboarding C: Business Documents II (1) | |
3. Complete the following 11 credits: 1

| | | |
|------------|------------------------|--|
| CIOS A140A | Databases I: MS Access | |
|------------|------------------------|--|

- | | | |
|------------|---------------------------|---|
| CIOS A164 | Filing | 1 |
| CIOS A264A | Records Management | 2 |
| MA A101 | Medical Terminology | 3 |
| MA A120 | Medical Office Procedures | 4 |
4. Complete 3 elective credits approved by the CIOS Department: 3
- Recommended Courses:
- | | | |
|-----------|-----------------------------------|--|
| BIOL A100 | Human Biology (3) | |
| CIOS A208 | Medical Transcription (3) | |
| MA A104 | Essentials of Human Disease (3) | |
| MA A140 | Medical Transcription I (2-3) | |
| MA A220 | Coding for the Medical Office (3) | |
5. A total of 15 credits is required for this OEC.

Occupational Endorsement Certificate, Office Digital Media

Builds on the Office Foundations OEC with basic skills in website maintenance and desktop publishing sometimes required of administrative assistants in an office setting.

Outcomes

Upon completion of this OEC, students will demonstrate:

- The ability to design and create business-quality electronic and print documents using a variety of media (digital imaging, website design, and desktop publishing programs).

Requirements

1. Must complete the 9-credit Office Foundations OEC prior to admission to this program.
2. Complete 1 credit from the following: 1

| | | |
|------------|--|--|
| CIOS A101B | Keyboarding B: Business Documents I (1) | |
| CIOS A101C | Keyboarding C: Business Documents II (1) | |
3. Complete the following 11 credits:

| | | |
|------------|--|---|
| CIOS A108 | Digital Design Fundamentals | 1 |
| CIOS A152A | Digital Imaging Concepts and Applications: Photoshop | 3 |
| CIOS A153B | Website Design: Dreamweaver | 3 |
| CIOS A251A | Desktop Publishing Concepts and Applications: InDesign | 3 |
| CIOS A259 | Preparing Electronic Documents: Adobe Acrobat | 1 |
4. Complete 3 elective credits approved by the CIOS Department Suggested Courses: 3

| | | |
|------------|--|--|
| CIOS A153A | Website Design: HTML (1) | |
| CIOS A156 | Web Graphics: Fireworks (1) | |
| | Programming or other related courses (1-3) | |
5. A total of 15 credits is required for this OEC.

Occupational Endorsement Certificate, Office Support

Builds on the Office Foundations OEC with additional skills an administrative assistant would typically use in an office setting.

Outcomes

Upon completion of this OEC, students will demonstrate:

- Keystroke skills of 35 net words per minute minimum.
- Entry level skills in managing data using a variety of media.
- The ability to develop digital presentations and documents using a variety of media.

Requirements

1. Must complete the 9-credit Office Foundations OEC prior to admission to this program.

2. Complete the following required courses:
- | | | |
|------------|--|---|
| CIOS A101B | Keyboarding B: Business Documents I | 1 |
| CIOS A101C | Keyboarding C: Business Documents II | 1 |
| CIOS A115 | 10-Key for Business Calculations | 2 |
| CIOS A125A | Electronic Communications: MS Outlook | 1 |
| CIOS A140A | Databases I: MS Access | 1 |
| CIOS A150A | Presentations: MS PowerPoint | 2 |
| CIOS A164 | Filing | 1 |
| CIOS A165 | Office Procedures | 3 |
| CIOS A259 | Preparing Electronic Documents: Adobe Acrobat | 1 |
3. A total of 13 credits is required for this OEC.

Occupational Endorsement Certificate, Technical Support

This OEC blends the skills of a network technician with those of the administrative support professional by providing basic skills for setting up and troubleshooting computer hardware and

Upon completion of this OEC, students will demonstrate:

- Entry-level skills in word processing, spreadsheets, and databases.
- Basic skills in computer hardware, networking, and operating systems.

Requirements

1. Must complete the 9-credit Office Foundations OEC prior to admission to this program.
2. Complete the following 1 credit:

| | | |
|------------|------------------------|---|
| CIOS A140A | Databases I: MS Access | 1 |
|------------|------------------------|---|
3. Complete 12 credits from the following: 12

| | | |
|----------|--|--|
| CNT A160 | PC Operating Systems (3) | |
| CNT A162 | PC Architecture and Building (3) | |
| CNT A183 | Local Area Networks (3) | |
| CNT A210 | PC Technician Fundamentals (3) (offered only at Mat-Su College) | |
| CNT A290 | Selected Topics in Information Technology (1-4) | |
4. A total of 13 credits is required for this OEC.

Associate of Applied Science, Computer Information and Office Systems

This Associate of Applied Science Degree program prepares students for career entry or career advancement in a variety of office settings and also offers skill building for personal use. It provides students with the technical, administrative, and human relations skills required of office professionals. Both the Office Foundations and the Office Support Occupational Endorsement Certificates articulate directly into this degree.

Outcomes

Upon completion of this program, students will demonstrate:

- Keyboarding skills of 40 net words per minute minimum.
- Intermediate skills that utilize advanced features of word processing, spreadsheet, and database software.
- Oral and written communications skills that meet business standards.
- Application of critical thinking skills to make effective decisions and solve problems.
- Professional behavior and interpersonal skills.

Admission Requirements

See Associate of Applied Science admissions in Chapter 7 of this catalog.

Advising

Students should contact the CIOS faculty for assistance with course planning toward the Associate of Applied Science Degree.

Academic Progress

Students must earn a satisfactory grade (C or higher, or P) in all CIOS courses required for the degree.

Degree Requirements

A. General University Requirements

1. Complete the General University Requirements for Associate Degrees located at the beginning of this chapter.
2. Complete the Associate of Applied Science General Degree Requirements located at the beginning of this chapter.
CIOS A260A, ENGL A212, and PSY A153 recommended.

B. Major Requirements

1. Complete the 9-credit Office Foundations OEC.
2. Complete the 13-credit Office Support OEC.
3. Complete the following 15 credits:

| | | |
|------------|-----------------------------|---|
| CIOS A102 | Keyboarding Skill Building | 1 |
| CIOS A230A | Word Processing II: MS Word | 2 |
| CIOS A235A | Spreadsheets II: MS Excel | 2 |
| CIOS A240A | Databases II: MS Access | 2 |
| CIOS A262A | Professional Development | 3 |
| CIOS A264A | Records Management | 2 |
| CIOS A265 | Office Management | 3 |
4. Complete 3 credits of the following: 3

| | | |
|-----------|--|--|
| ACCT A101 | Principles of Financial Accounting I (3) | |
| ACCT A120 | Bookkeeping for Business I (3) | |
| ACCT A201 | Principles of Financial Accounting (3) | |
5. Complete 3 credits from the following: 3

| | | |
|-------------------|---|--|
| CIOS A261A | Interpersonal Skills in Organizations (3) or | |
| HUMS/ PSY A153 | Human Relations (3) | |
6. Complete 1-3 credits from the following: 1-3

| | | |
|------------|---------------------------------|--|
| CIOS A276A | Independent Project (1-3) or | |
| CIOS A295 | Office Internship (1-3) | |
7. Complete a minimum of 1 elective credit 1
8. A total of 60 credits is required for this degree.

FACULTY

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COMPUTER SYSTEMS TECHNOLOGY

The Computer Systems Technology program is offered through the Matanuska-Susitna College and Kodiak College.

An Associate of Applied Science in Computer Systems Technology provides skills and education for qualified workers in the field of network and systems administration. The degree is designed to teach

students both the business and IT-related concepts needed to enter the workforce as a systems administrator and technician. Four, full-time semesters are required to complete the degree program. An AAS in CST can be earned by completing a series of specific technical, business, and general education courses. Graduates with an AAS in Computer Systems Technology can be employed as systems administrators and in a wide variety of other positions in the information technology field. Graduates of this program will have a firm understanding of a wide variety of technical concepts, from the latest version of the Windows Operating System to routing and switching technology using Cisco equipment. Graduates will also have a wide body of knowledge in vendor neutral and theoretical concepts and practices.

Both the Matanuska-Susitna and the Kodiak campuses offer the degree program.

The program objective is the development of a well-trained workforce for the state of Alaska. Since many jobs in the computer technology sector are predicted to grow at high rates in the coming decade, this degree program was designed to train essential employees for that sector.

The educational objectives of the Computer Systems Technology program are to produce graduates who:

1. Have sufficient technical competence to obtain employment as an entry-level technician and to be able to progress professionally within the discipline and are prepared for advanced study.
2. Are able to communicate their ideas.
3. Are able to work within a team environment.
4. Are able to apply their knowledge and skills to create and operate networked computer systems that provide solutions and add to the capabilities of business organizations.
5. Demonstrate their understanding of professional and ethical behavior in the workplace.

Students graduating from this program will demonstrate:

1. Proficiency in operating system, utility software and network installation and configuration.
2. Proficiency in computer hardware, software and network operation, troubleshooting and upgrades. Demonstrate familiarity with hardware, software and network security features.
3. Management of user accounts and group accounts in a MS Windows workgroup and/or domain.
4. Ability to identify, design, and implement a network services management strategy.
5. Setup, configuration, and management of a router to include: router interfacing, command line editing, startup, setup, and configuration.
6. Proficiency in the management of local area networks (LANs).
7. Application of customer service principles, including relationships, perceptions, telephone techniques, quality, ethics, record keeping, interpersonal relationships, and teamwork.
8. Application of business principles and the fundamentals of investment, finance, organization, operation and management within a business entity.
9. Application of project management principles and practices, and use of appropriate project management software in the workplace.

Associate of Applied Science, Computer Systems Technology

Admission Requirements

Satisfy the Admission to Certificate and Associate Degree Programs Requirements in Chapter 7, Academic Standards and Regulations. Additionally, all students are required to take CIS A105 or possess equivalent knowledge prior to entering this degree program.

Academic Progress

In order to receive an Associate of Applied Science degree in Computer Systems Technology, students must achieve a grade of C or higher in all courses undertaken and applied to the degree.

General University Requirements

Complete the General University and General Course Requirements for Associate of Applied Science Degrees listed at the beginning of this chapter.

Major Requirements

1. Complete the following required courses:

| | | |
|------------|--|-----|
| BA A151 | Introduction to Business | 3 |
| BA A231 | Fundamentals of Supervision | 3 |
| CNT A160 | PC Operating Systems | 3 |
| CNT A165 | Customer Service Fundamentals | 1 |
| CNT A170 | CCNA 1 Network Fundamentals | 4 |
| CNT A210 | PC Technician Fundamentals | 3 |
| CNT A212 | Network Technician Fundamentals | 3 |
| CNT A240 | Windows System Essentials | 2 |
| CNT A241 | Administering and Supporting Windows Workstations and Server | 3 |
| CNT A242 | Windows Network Infrastructure Administration | 3 |
| CNT A243 | Windows Directory Services Administration | 3 |
| CNT A244 | Designing Secure Windows Networks | 3 |
| CNT A245 | Windows Directory Services Design | 2 |
| CNT A246 | Windows Network Infrastructure Design | 2 |
| CNT A261 | CCNA 2 Router Fundamentals and Protocols | 4 |
| CNT A270 | CCNA 3 Switching and Wireless | 4 |
| CNT A271 | CCNA 4 WAN Access | 4 |
| CNT A276 | Individual Technical Project (1-3) | 3 |
| | or | |
| CNT A282 | Industry Workplace Experience (1-3) | |
| ENGL A212 | Technical Writing | 3 |
| MATH A105* | Intermediate Algebra (3) | 3-4 |
| | or | |
| MATH A107* | College Algebra (4) | |
| | or | |
| MATH A172* | Applied Finite Mathematics (3) | |

**Or any MATH course for which MATH A105, MATH A107, or MATH A172 is a prerequisite*
2. Students are required to meet a 2-credit Project Management requirement. CIOS A270 is recommended. See advisor for more information.
3. A total of 67-68 credits is required for the degree.

FACULTY

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CONSTRUCTION MANAGEMENT

University Center (UC), Room 130, (907) 786-6465
www.uaa.alaska.edu/ctc/construction/cm

The Construction Management (CM) program provides comprehensive preparation and education to meet the growing need for highly trained and educated construction management professionals. Construction managers plan, direct, and are responsible for managerial oversight of construction projects. They are responsible for coordinating and managing people, materials, and equipment; budgets, schedules, and contracts; and for the safety of employees and the general public. Construction managers work closely with architects, engineers, owners, and the other contractors on a construction project. Construction managers determine construction means and methods and the most cost-effective plans and schedules. They control construction costs, administer project changes and monitor work progress while ensuring compliance with the project design. Construction managers work in all

sectors of the construction industry, for both public and private owners, on projects that range from small multifamily projects to skyscrapers and from rural roads to major highways and bridges. The construction manager's duties are varied, challenging, and rewarding.

The Construction Management program at UAA was developed with input from Alaska contractors and professional industry organizations to provide students with a broad knowledge of construction processes and techniques. The curriculum has been designed in accordance with the requirements of the American Council for Construction Education (ACCE). CM graduates understand basic business principles and possess broad knowledge of the technical and operational aspects of the construction industry. Graduates are able to function both in the construction office and on the job site.

The wide diversity in the construction management profession creates a similar diversity of employment opportunities for graduates. Associate degree graduates are prepared for entry-level positions in varying construction management roles for contractors in both home office and project office/field situations. Bachelor's degree graduates are prepared for a wide variety of professional-level employment opportunities in construction companies, construction management consulting firms, and in the offices of government and project owner agencies. The Associate of Applied Science in Construction Management degree requires four to five semesters to complete. The Bachelor of Science in Construction Management degree requires eight to nine semesters to complete.

Advising

Students are encouraged to consult the faculty in the Construction Management program for assistance in designing their course of study to ensure all preparation requirements and prerequisites have been met and that university and major degree requirements are understood and followed.

All students are strongly encouraged to meet with their academic advisor each semester for the purpose of reviewing their academic progress and planning future courses. It is particularly important for students to meet with their advisor whenever academic difficulties arise. Please call (907) 786-6465 to arrange an appointment with an academic advisor.

Preparation

Students seeking a degree in Construction Management should prepare for entrance into the program by completing the following high school courses:

- Mathematics** Algebra II (skill level as demonstrated by ACT, SAT, or UAA-approved placement test to qualify for enrollment in MATH A105 Intermediate Algebra).
- English** Composition (skill level as demonstrated by ACT, SAT, or UAA placement test to qualify for enrollment in ENGL A111 Fundamentals of Written Communication).

The university offers courses to help students without this preparation to meet the math and English skill levels required in the Construction Management program. Insufficient preparation will increase the number of semesters required to complete the degree.

Associate of Applied Science, Construction Management

Program Outcomes

Graduates will be able to:

- Explain the fundamental processes used to create project designs and construction documents.
- Define the roles, relationships and responsibilities of the participants in the design and construction process.
- Demonstrate basic knowledge of contract administration procedures and the communication methods used in their implementation.
- Define the methods, materials, and techniques used in the design and construction of buildings and civil works.

- Interpret construction documents to predict project costs, plan construction operations, develop project schedules and assign resources.
- Interpret and apply building codes in construction processes.
- Demonstrate a working knowledge of safety, health, and environmental issues related to construction activities.

Admission Requirements

1. Satisfy the requirements under Admission to Certificate and Associate Degree Programs in Chapter 7, Academic Standards and Regulations.
2. Certain courses require prerequisites or faculty permission. See an academic advisor for further information.

Graduation Requirements

In order to receive the Associate of Applied Science in Construction Management, students must achieve a grade of C or better in all courses required for the degree.

Course Requirements

1. Complete the General University Requirements for Associate of Applied Science Degrees located at the beginning of this chapter.
2. Complete the General Course Requirements for Associate of Applied Science degrees located at the beginning of this chapter (15 credits).

Required Support Courses

Complete the following required support courses (20-21 credits):

| | | |
|--------------|------------------------------------|-----|
| ACCT A201 | Principles of Financial Accounting | 3 |
| BA/JUST A241 | Business Law I | 3 |
| *ENGL A212 | Technical Writing | 3 |
| GEO A181 | Construction Surveying | 1 |
| *MATH A107 | College Algebra (4) and | 6/7 |
| *MATH A108 | Trigonometry (3) or | |
| *MATH A109 | Precalculus (6) | |
| *PHYS A123 | Basic Physics I and | 3 |
| *PHYS A123/L | Basic Physics I Laboratory | 1 |

*Note: Required support courses may also be used to satisfy General Course Requirements.

Major Requirements

1. Complete the following required courses (40 credits):

| | | |
|-------------|--|---|
| AET/CM A101 | Fundamentals of CADD for Building Construction | 4 |
| AET/CM A102 | Methods of Building Construction | 3 |
| AET/CM A123 | Codes and Standards | 3 |
| AET/CM A142 | Mechanical and Electrical Technology | 4 |
| AET/CM A231 | Structural Technology | 4 |
| CM A163 | Building Construction Cost Estimating | 3 |
| CM A201 | Construction Project Management I | 3 |
| CM A202 | Project Planning and Scheduling | 3 |
| CM A205 | Construction Safety | 3 |
| CM A213 | Construction Civil Technology | 4 |
| CM A263 | Civil Construction Cost Estimating | 3 |
| CM A295 | Construction Management Internship or | 3 |
| CM A495 | Advanced Construction Management Internship | 3 |
2. A total of 66/67 credits is required for the degree.

Bachelor of Science, Construction Management

Program Outcomes

Graduates will be able to:

- Manage the principal resources of a construction industry organization including its workers, equipment, time, and budgets.
- Represent the role of the constructor in the multi-discipline team responsible for managing construction projects.
- Assess project risk and evaluate alternate project delivery systems for project procurement and construction.
- Communicate effectively with project design professionals during the planning phases of design-build projects and throughout the construction phase of all projects.
- Utilize knowledge of materials, methods, and equipment operations to plan, control, and analyze the results of construction processes.
- Manage construction operations in unique and changing conditions to produce measured results that meet stated quality criteria and overall project goals.

Admissions Requirements

1. Satisfy the requirements under Admission to Baccalaureate Programs in Chapter 7, Academic Standards and Regulations.
2. Certain courses require prerequisites or faculty permission. See an academic advisor for further information.

Graduation Requirements

In order to receive the Bachelor of Science in Construction Management, students must achieve a grade of C or better in all courses required for the degree.

General University Requirements

1. Complete the General University Requirements for All Baccalaureate Degrees located at the beginning of this chapter.
2. Complete the General Education Requirements for Baccalaureate Degrees at the beginning of this chapter.

Required Support Courses

1. Complete the following support courses (32 credits):

| | | |
|--------------|-------------------------------------|---|
| ACCT A201 | Principles of Financial Accounting | 3 |
| ACCT A202 | Principles of Managerial Accounting | 3 |
| BA A300 | Organizational Theory and Behavior | 3 |
| BA/JUST A241 | Business Law I | 3 |
| *ECON A201 | Principles of Macroeconomics | 3 |
| *ECON A202 | Principles of Microeconomics | 3 |
| *ENGL A212 | Technical Writing | 3 |
| ES A411 | Northern Design (3) | 3 |
| | or | |
| CE A403 | Arctic Engineering(3) | |
| GEO A181 | Construction Surveying | 1 |
| *PHIL A301 | Ethics | 3 |
| *PHYS A123 | Basic Physics I | 3 |
| PHYS A123L | Basic Physics I Laboratory | 1 |
2. Complete one of the following science courses:

| | | |
|------------|------------------------------------|---|
| *CHEM A105 | General Chemistry I (3) | 4 |
| | and | |
| CHEM A105L | General Chemistry I Laboratory (1) | 4 |
| | or | |
| *GEOL A111 | Physical Geology (4) | |
3. Complete one additional science course at or above the *100-level in CHEM, ENVI, GEOL, or PHYS that includes a laboratory class. 4
4. Complete one of the following: 3-4

| | |
|------------|----------------------|
| *MATH A200 | Calculus (4) |
| *MATH A272 | Applied Calculus (3) |

*STAT A253 Applied Statistics for the Sciences (4)

*Note: Required Support Courses may also be used to satisfy General Education Requirements.

Major Requirements

1. Complete the following required courses (64 credits):

| | | |
|-------------|--|---|
| AET/CM A101 | Fundamentals of CADD for Building Construction | 4 |
| AET/CM A102 | Methods of Building Construction | 3 |
| AET/CM A123 | Codes and Standards | 3 |
| AET/CM A142 | Mechanical and Electrical Technology | 4 |
| AET/CM A231 | Structural Technology | 4 |
| CM A163 | Building Construction Cost Estimating | 3 |
| CM A201 | Construction Project Management I | 3 |
| CM A202 | Project Planning and Scheduling | 3 |
| CM A205 | Construction Safety | 3 |
| CM A213 | Construction Civil Technology | 4 |
| CM A263 | Civil Construction Cost Estimating | 3 |
| CM A301 | Construction Project Management II | 3 |
| CM A313 | Soils in Construction | 3 |
| CM A331 | Statics and Strengths of Materials | 3 |
| CM A401 | Construction Law | 3 |
| CM A422 | Sustainability in the Built Environment* | 3 |
| CM A440 | Financial Management for Construction | 3 |
| CM A450 | Construction Management Professional Practice* | 3 |
| CM A460 | Construction Equipment Management and Methods | 3 |
| CM A495 | Advanced Construction Management Internship | 3 |

*Tier 3 General Education Requirement, integrative capstone.

2. A total of 122/123 credits is required for the degree of which 42 credits must be upper division.

Accreditation

All necessary steps will be taken for successful accreditation by the American Council for Construction Education (ACCE).

FACULTY

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CORRECTIONS

Kenai Peninsula College

Kenai River Campus, 156 College Road, Soldotna, AK 99669, (907) 262-0344, (877) 262-0330 (toll free)

www.kpc.alaska.edu

Kachemak Bay Campus, (907) 235-7743, (877) 262-0330 (toll free to Kenai River Campus and ask to be transferred to Kachemak Bay Campus)

The Corrections program is offered through the Kenai Peninsula College.

Corrections professionals play important roles in public safety and criminal justice. Correctional officers provide security and confinement for the nation's criminal offenders. Probation/parole officers conduct case management and assist in the movement of prisoners, direct individuals to rehabilitation programs and apprehend violators when public safety is in jeopardy. Criminal justice technicians assist institutional and field officers in a variety of duties within the Department of Corrections (DOC). With experience, criminal justice technicians may transition to officer positions. These positions lead to secure, rewarding positions with excellent benefits and retirement.

The KPC corrections certificate programs provide the academic background required for success in entry-level corrections positions.

Instruction includes criminal and restorative justice systems, courses in oral and written communication, and an introduction to theories of criminal behavior. The programs are appropriate for sworn (those with statutory power of arrest or those who are honorably retired law enforcement officers) and non-sworn personnel (law enforcement personnel without powers to arrest or carry firearms). They prepare new applicants for entry-level positions in corrections and provide occupational training for current DOC employees. Graduates will be competitive with non-Alaskans for corrections jobs within Alaska and in other states. These corrections certificate programs have been developed in active collaboration and partnership with the DOC.

The following programs are available:

**Occupational Endorsement Certificate, Corrections
Undergraduate Certificate, Corrections**

Occupational Endorsement Certificate, Corrections

Kenai Peninsula College

Kenai River Campus, 156 College Road, Soldotna, AK 99669, (907) 262-0344, (877) 262-0330

www.kpc.alaska.edu

Kachemak Bay Campus, (907) 235-7743, (877) 262-0330 (toll free to Kenai River Campus and ask to be transferred to Kachemak Bay Campus)

This 16-credit hour certificate provides vocational training for entry-level positions in the field of corrections. The certificate can be extended to an Undergraduate Certificate, Corrections with the completion of additional courses.

Program Outcomes

The specific education outcomes of this program are to produce graduates who are able to:

1. Describe the criminal justice system as a whole.
2. Demonstrate proficiency in probation, parole and correctional institutional methods.
3. Use English language writing skills to communicate and record information appropriately in the corrections field.
4. Manipulate spreadsheets and compute formulas with basic proficiency.
5. Recognize human services and systems for the helping professions.
6. Recognize the addictive process and methods to assist those in addiction.
7. Possess competitive entry-level skills for employment and promotion in the field of corrections.

Admission Requirements

Admissions will be based on approval through Kenai Peninsula College. Students must submit the Kenai Peninsula College admissions application and the application for the corrections program. See Admission to Occupational Endorsement Certificates in Chapter 7, Academic Standards and Regulations, and visit the KPC website or contact KPC academic and staff advisors for more information and admission forms.

Advising

Students are encouraged to contact KPC academic and staff advisors for assistance in planning and reviewing their academic program. Advisors are available prior to enrollment and during the semesters through e-mail, telephone or face-to-face contact. See contact information above. Students interested in the occupational endorsement certificate should consult a faculty advisor in corrections before enrolling, particularly for information concerning employment restriction.

Preparation

Students must meet all KPC requirements to enroll in courses, as listed in the KPC website or UAOnline. Kenai Peninsula College offers

preparatory courses for students who need to improve their academic and study skills in order to succeed in the college environment.

Course Requirements

Certain courses require prerequisites or faculty permission, as listed in the KPC course catalog. Contact (907) 262-0344 or (877) 262-0330 for further information.

Occupational Endorsement Certificate Requirements

1. Complete the General University Requirements for Occupational Endorsement Certificate located at the beginning of this chapter.
2. Complete the following required courses with a minimum grade of C:

| | | |
|------------|---|---|
| CIOS A135A | Spreadsheets I: MS Excel | 1 |
| ENGL A111 | Methods of Written Communication | 3 |
| HUMS A101 | Introduction to Human Services | 3 |
| HUMS A122 | Substance Abuse as a Contemporary Problem | 3 |
| JUST A110 | Introduction to Justice | 3 |
| JUST A210 | Principles of Corrections | 3 |
3. A total of 16 credits is required for the occupational endorsement certificate.

Undergraduate Certificate, Corrections

Kenai Peninsula College

156 College Road, Soldotna, AK 99669, (907) 262-0344, (877) 262-0330

www.kpc.alaska.edu

Kachemak Bay Campus, (907) 235-7743, (877) 262-0330 (toll free to Kenai River Campus and ask to be transferred to Kachemak Bay Campus)

This 31-credit hour certificate provides training in the field of corrections, instruction in written and oral communication skills and a foundation in restorative justice, criminology and justice organization and management. The certificate may be extended to a more advanced degree with the completion of additional coursework.

Program Outcomes

The specific education outcomes of this program are to produce graduates who are able to:

1. Describe the criminal justice system as a whole and the organization of criminal justice institutions.
2. Demonstrate proficiency in probation, parole and correctional institutional methods.
3. Coordinate with human services and other public service entities.
4. Manipulate spreadsheets and compute formulas with basic proficiency.
5. Communicate effectively in oral and written technical English appropriate for public service.
6. Explain theories of criminology.
7. Describe adult corrections institutions, community-based programs and restorative justice.
8. Explain relevant human services issues (human behavior, substance abuse) and problem-solving methods.
9. Possess competitive entry-level skills for employment and promotion in the field of corrections.

Admission Requirements

Admissions will be based on approval through Kenai Peninsula College. Students must submit the Kenai Peninsula College admissions application and the application for the corrections program. See Admission to Occupational Endorsement Certificates in Chapter 7, Academic Standards and Regulations.

Advising

Students are encouraged to contact KPC academic and staff advisors for assistance in planning and reviewing the academic program. Advisors are available prior to enrollment and during the semesters through e-mail, telephone or face-to-face contact. See contact information above. Students interested in the undergraduate certificate should consult a faculty advisor in corrections before enrolling, particularly for information concerning employment restriction.

Preparation

Students must meet all KPC requirements to enroll in courses, as listed in the KPC website or UAOnline. Kenai Peninsula College offers preparatory courses for students who need to improve their academic and study skills in order to succeed in the college environment.

Course Requirements

Certain courses require prerequisites or faculty permission, as listed in the KPC course catalog. Call (907) 262-0344 or (877) 262-0330 for further information

Undergraduate Certificate Requirements

- Complete the General University Requirements for Undergraduate Certificate located at the beginning of this chapter.
- Complete the following required courses with a minimum grade of C:

| | | |
|------------|---|---|
| CIOS A135A | Spreadsheets I: MS Excel | 1 |
| HUMS A101 | Introduction to Human Services | 3 |
| HUMS A122 | Substance Abuse as a Contemporary Problem | 3 |
| JUST A110 | Introduction to Justice | 3 |
| JUST A210 | Principles of Corrections | 3 |
| JUST A211 | Introduction to Restorative Justice | 3 |
| JUST A221 | Justice Organization and Management | 3 |
| JUST A251 | Criminology | 3 |
- Complete two of the following courses in written communication with a minimum grade of C:

| | | |
|-----------|--|---|
| ENGL A111 | Methods of Written Communication (3) | 6 |
| ENGL A212 | Technical Writing (3) | |
| ENGL A213 | Writing in the Social and Natural Sciences (3) | |
| ENGL A214 | Persuasive Writing (3) | |
- Complete one of the following two courses, with a minimum grade of C:

| | | |
|-----------|---------------------------------|---|
| COMM A237 | Interpersonal Communication (3) | 3 |
| HUMS A153 | Human Relations (3) | |
- A total of 31 credits is required for this certificate.

FACULTY

Ruben Foster, Instructor, PFRAF@uaa.alaska.edu

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CULINARY ARTS

Lucy Cuddy Hall (CUDY), Room 126, (907) 786-4728

www.uaa.alaska.edu/ctc/culinary

The Culinary Arts and Hospitality Division offers two degrees: an Associate of Applied Science (AAS) degree in Culinary Arts, and a Bachelor of Arts degree in Hospitality and Restaurant Management (BA).

Persons employed in the foodservice industry who wish to update skills and knowledge may take culinary courses for professional development. Students are strongly encouraged to contact a faculty advisor about prerequisites and other lab or course requirements.

The Culinary Arts and Hospitality and Restaurant Management programs provide students the opportunity to acquire the culinary skills, management skills, and hospitality finesse needed to develop a career in the expanding hospitality and foodservice industry. An array

of career possibilities is available to graduates in the areas of culinary production and professional management in restaurants, clubs, bakeries, hotels, hospitals, camps, catering facilities, institutions, tourism, and other related operations.

The AAS degree generally takes two years of full-time study to complete. With additional culinary electives, students may focus their studies in culinary/bakery, management, or hospitality. In the third or fourth semester, the capstone experience for the AAS degree is a 225-hour internship designed to provide direct hands-on advanced culinary experience. Arranged by the department, culinary internships are unpaid work experiences at an approved foodservice site. Through a study abroad agreement, students have the option of studying abroad for one semester at the prestigious Italian Culinary Institute of Florence.

The bachelor's degree generally takes four to five years of study to complete. In addition to general education requirements, students will complete a culinary core, a business core, and then have the option to complete an emphasis study core in hospitality, hotel, restaurant management, convention and catering management, or tourism at the University of Nevada Las Vegas (UNLV) or Northern Arizona University (NAU). Or, students may complete a nutrition emphasis study core at UAA. The study cores at either UNLV or NAU require two semesters to complete; students have the option of attending UNLV or NAU or may complete the coursework via distance-delivered courses. Please note that students may have to pay nonresident tuition for out-of-state study if they do not apply for National Student Exchange (NSE).

The capstone experience for the bachelor's degree is a 600-hour Alaska internship offered through UAA and designed to provide direct hands-on hotel and restaurant operations management experience during the fourth or fifth year. Arranged by the department, internships are paid work experiences at an approved site.

To help students move efficiently through the program, the department requires specific admissions and advising procedures outlined below. An approved placement test is required for admission and, while not used for placement, is used to advise students of potential difficulties in selected courses.

With application to the program, students open a personal portfolio used to monitor and track student progress and house transcripts, resumes, letters of reference, certificates of completion, scholarship information, evidence of computer competency, internship and job placement, and any other related career planning or placement materials. Students may use their portfolios to apply for scholarships, jobs, or for other personal or professional development.

Associate of Applied Science, Culinary Arts

The Culinary Arts program produces graduates who are not just prepared for entry-level work positions in the rapidly expanding and varied foodservice, hospitality and tourism industry, but also graduates who can quickly advance in career opportunities because of their formal training and education.

Program Outcomes

At the completion of this program, students are able to:

- Apply theories and concepts of baking and implement techniques to operate or function in a commercial bakery.
- Apply theories and concepts of cooking and implement techniques to operate or function in a commercial kitchen.
- Identify sanitation and safety codes and procedures necessary to maintain a safe foodservice facility.
- Analyze food cost and implement necessary controls to maintain costs and ensure profitability.
- Demonstrate the ability to use human resource management and facility operation management concepts to ensure safety, customer service and profitability.

Admission Requirements

1. Satisfy the Admission to Associate's Degree Programs Requirements in Chapter 7, Academic Standards and Regulations.
2. Request an admission and advising packet. Complete and return the application form to the department. This form opens an individual student portfolio, which is used to advise and counsel students throughout their program of study and to contain important career planning and placement materials.

Advising

1. Call the Culinary Arts department at (907) 786-4728 for an appointment with a faculty advisor to plan a personal program of study.
2. Contact Advising and Testing (786-4500) to take a UAA-approved placement test of mathematics, reading, and writing skills. Place a copy of the results in the department portfolio. SAT, ACT and other postsecondary transcripts may also be submitted to the department. These records will be used for advising only.

Academic Progress Requirements

Core Requirements

Full-time and part-time students must successfully complete the 12-credit core curriculum as a prerequisite to enrolling in culinary and bakery skill development laboratory courses. The core consists of the following courses (note each course must be completed with a grade of C or higher):

| | | |
|---------|---|---|
| CA A101 | The Hospitality Industry: Careers, Trends and Practices | 2 |
| CA A104 | Sanitation | 2 |
| CA A107 | Cost Control | 3 |
| CA A110 | Quantity Food Purchasing | 2 |
| DN A101 | Principles of Nutrition | 3 |

General University Requirements

Complete the General University Requirements for Associate of Applied Science Degrees located at the beginning of this chapter.

General Course Requirements

Complete the Associate of Applied Science General Course Requirements (15 credits) located at the beginning of this chapter.

Major Requirements

1. Complete the following required courses: 24

| | | |
|---------|----------------------------|---|
| CA A103 | Culinary Skill Development | 4 |
| CA A111 | Bakery Skill Development | 4 |
| CA A201 | A la Carte Kitchen | 4 |
| CA A202 | Advanced Bakery | 4 |
| CA A223 | Catering Management | 2 |
| CA A224 | Hospitality Service | 3 |
| CA A230 | Foodservice Management | 3 |
2. Complete a minimum of 9 credits from the following: 9

| | |
|----------|--------------------------------|
| CA A114 | Beverages Management (3) |
| CA A225 | Hospitality Concept Design (3) |
| CA A295C | Foodservice Internship (3) |
| DN A260 | Food Science (3) |

Note: Other nutrition, culinary arts, or business courses may be considered for credit in the elective area by petition. See your program academic advisor.

3. A total of 60 credits is required for the degree.

Bachelor of Arts, Hospitality and Restaurant Management

The Hospitality and Restaurant Management program produces graduates who are not only prepared for entry-level work positions in the rapidly expanding and varied foodservice, hospitality and tourism

industry, but also who can confidently advance to middle- and upper-level management opportunities because of their formal training and education.

Program Outcomes

At the completion of this program, students are able to:

1. Apply theories and concepts of baking and cooking and implement necessary techniques to operate or function in a commercial kitchen and bakery.
2. Demonstrate ability to practice concepts of customer service and operate front desk operations for lodging venues.
3. Analyze the food, beverage and lodging cost-control cycle and accounting practices, and implement controls to maintain costs and ensure profitability.
4. Demonstrate the ability to implement sales, marketing and promotion, and utilize resources to develop and implement marketing plans for foodservice, lodging, and tourism venues.
5. Discuss the importance of the manager's role and ethics associated with executive management and how they lead and inspire staff to achieve mission and goals.
6. Identify health, building, and fire codes and implement requirements to maintain a safe hospitality environment.

Admission Requirements

1. Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.
2. Request an admission and advising packet. Complete and return the application form to the department. This form opens an individual student portfolio which is used to advise students throughout their program of study and to contain important career planning and placement materials.

Advising

Call the Culinary Arts and Hospitality Department at (907) 786-4728 for an appointment with a faculty advisor to plan a personal program of study.

Contact Advising and Testing (786-4500) to take a UAA-approved placement test of mathematics, reading, and writing skills. Place a copy of the results in the department portfolio. SAT, ACT and other postsecondary transcripts may also be submitted to the department. These records will be used for advising only.

Degree Requirements

1. Complete the General University Requirements for Baccalaureate Degrees listed at the beginning of this chapter.
2. Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.
3. Students are highly encouraged to coordinate their course selection with the program academic advisor. Some courses that may fulfill General Education Requirements and baccalaureate requirements are prerequisites to required business core courses. To avoid taking additional courses later, it is highly recommended students complete ECON A201 and ECON A202.
4. A minimum of 3 credits of General Education Requirements must be at the 300- or 400-level to meet the upper division credit requirements for this degree.
5. Complete the Culinary Core, Business Core and one of the three emphasis study core options listed below.

Major Requirements

1. **Culinary Core**

Complete all of the following courses (31 credits):

| | | |
|---------|--|---|
| CA A101 | Hospitality industry: Careers, Trends, and Practices | 2 |
| CA A103 | Culinary Skill Development | 4 |
| CA A104 | Sanitation | 2 |
| CA A107 | Cost Control | 3 |

| | | |
|---------|----------------------------|---|
| CA A110 | Quantity Food Purchasing | 2 |
| CA A111 | Bakery Skill Development | 4 |
| CA A201 | A la Carte Kitchen | 4 |
| CA A202 | Advanced Bakery | 4 |
| CA A224 | Hospitality Service | 3 |
| CA A225 | Hospitality Concept Design | 3 |

2. Business Core

Complete all of the following courses (30 credits):

| | | |
|-----------|-------------------------------------|---|
| ACCT A201 | Principles of Financial Accounting | 3 |
| ACCT A202 | Principles of Managerial Accounting | 3 |
| BA A300 | Organizational Theory and Behavior | 3 |
| BA A343 | Principles of Marketing | 3 |
| BA A361 | Human Resource Management | 3 |
| BA A381 | Consumer Behavior | 3 |
| BA A463 | Promotion Management | 3 |
| BA A488 | Environment of Business | 3 |
| CIS A110 | Computer Concepts in Business | 3 |
| STAT A252 | Elementary Statistics (3) | 3 |

Note: To meet prerequisites, these courses must be taken in a certain sequence. You are encouraged to plan your course schedule with the program advisor.

3. There are three emphasis study core options in this degree program. In addition to General Education Requirements, students will complete a culinary core, a business core and then have the option to complete an emphasis study core in hospitality, hotel, restaurant management, convention and catering management or tourism at the Northern Arizona University (NAU) or University of Nevada Las Vegas (UNLV). Or, students may complete a nutrition emphasis study core at UAA. The emphasis study cores require two semesters to complete.

Students who wish to attend NAU or UNLV are highly encouraged to apply for National Student Exchange as this greatly minimizes the amount of out-of-state tuition paid. Students must have a 2.50 minimum GPA to meet NSE eligibility requirements.

Special note: It is possible to complete NAU or UNLV coursework via distance delivery. This requires special coordination with the UAA program academic advisor.

Also, due to course scheduling at NAU or UNLV, certain courses may not be available while the student is on exchange. Other 300-/400-level hotel, restaurant, tourism management courses may be considered for substitution with prior approval from the UAA program academic advisor.

I. Northern Arizona University (NAU) Hospitality Core (24 credits):

- a. Complete the following:
- | | | |
|---------|--|---|
| HA 335 | Hospitality Law | 3 |
| HA 345 | Human Resource Management | 3 |
| HA 355 | Food and Beverage Cost Control | 3 |
| HA 400 | Hospitality Sales Management | 3 |
| HA 490C | Senior Seminar (last semester at NAU) | 3 |
- b. Additionally, complete three courses from the following: 9
- | | | |
|--------|---|--|
| HA 340 | Beverage and Bar Operations (3) (Must be 21 or older) | |
| HA 390 | International Hospitality Operations (spring/fall) (3) | |
| HA 401 | Resort Management (spring) (3) | |
| HA 435 | Hospitality Litigation (fall) (3) | |
| HA 442 | Advanced Food & Beverage Management (3) | |
| HA 477 | Casino Management (fall) (3) | |

II. University of Nevada Las Vegas (UNLV) Hospitality Core (24 credits):

- a. Complete the following:
- | | | |
|---------|--------------------|---|
| HMD 114 | Lodging Operations | 3 |
|---------|--------------------|---|

| | | |
|---|---|---|
| HMD 202 | Exec. Planning/Housekeeping Operations | 3 |
| HMD 395 | Facilities Management | 3 |
| HMD 401 | Hotel Law | 3 |
| HMD 410 | Hospitality Security/ Preservation of Assets | 3 |
| TCA 379 | Catering Sales and Operations | 3 |
| TCA 385 | Convention Service Management | 3 |
| HMD or TCA Elective (300 level or higher) | | 3 |

III. University of Alaska Anchorage Nutrition Core (24 credits):

- a. Complete the following:

| | | |
|---------|---|---|
| DN A101 | Principles of Nutrition (3) | 3 |
| DN A203 | Nutrition for the Health Sciences (3) | |
| DN A151 | Nutrition Through the Life Cycle | 3 |
| DN A155 | Survey of Alaska Native Nutrition (3) | 3 |
| | or | |
| DN A215 | Sports Nutrition (3) | |
| DN A303 | Preventive and Therapeutic Nutrition | 3 |
| DN A315 | World Food Patterns | 3 |
| DN A350 | Foodservice Systems and Quantity Foods | 3 |
| DN A355 | Weight Management and Eating Disorders | 3 |
| DN A415 | Community Nutrition | 3 |

Note: The Nutrition Core can be completed entirely online through UAA.

4. Internship Requirement
CA A495 Hospitality Internship 6
5. A minimum of 125 credits is required for the degree of which 42 must be upper division. Of those 42 upper division credits a total of 24 must be completed in residence at UAA.

FACULTY

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DENTAL ASSISTING

Allied Health Sciences Building (AHS), Room 160, (907) 786-6929

<http://alliedhealth.uaa.alaska.edu/da>

The Dental Assisting program, as part of the Allied Health Sciences department, prepares students to become skilled members of the dental health care team. Assistants greatly increase the efficiency of the dentist in the delivery of oral health care and are valuable members of the dental care team.

The duties of the dental assistant are among the most comprehensive and varied in the dental office. The dental assistant performs a wide range of tasks requiring both interpersonal and technical skills. Some specific tasks dental assistants may perform include; assisting the dentist during a variety of procedures, providing oral health care, exposing and processing radiographs (X-rays), recording the patient's medical history and vital signs, preparing and sterilizing the proper instruments and equipment for the dentist's use, providing the patient with post-operative instructions, taking impressions for study casts, performing office management tasks, and performing basic dental laboratory tasks.

Many types of practice settings are available to dental assistants. An assistant may choose to work in a private practice or a group practice. In addition, an assistant can work in a general dentistry or

specialty practice, such as oral and maxillofacial surgery, orthodontics, endodontics, periodontics, prosthodontics, or pediatric dentistry. Job opportunities also exist in public health facilities, federal government facilities, hospitals, dental school clinics, insurance companies, and vocational schools or community colleges and universities teaching others to become dental assistants.

The Dental Assisting program offers a 34-credit undergraduate certificate and an Associate of Applied Science Degree.

The Dental Assisting program is accredited by the Commission on Dental Accreditation of the American Dental Association, a specialized accrediting body recognized by the Council on Postsecondary Accreditation and by the United States Department of Education. As a result of this, graduates are eligible to take the Dental Assisting National Board examination and upon successful completion will become certified dental assistants.

Advising

Special admission requirements apply. Interested individuals must contact an advisor in Dental Assisting to review procedures and requirement for admission.

Application Procedure

- Complete a dental assisting application form and mail to:
 UAA Dental Assisting Program
 Allied Health Sciences Building, Room 160
 3211 Providence Drive
 Anchorage, AK 99508-8371
 (907) 786-6929
- Complete UAA-approved English and mathematics placement tests. Contact Advising and Testing at (907) 786-4500 for testing times. If test scores are low, additional coursework will be recommended to help the applicant achieve the goal of completing the Dental Assisting program.
- Two letters of recommendation sent to the Dental Assisting program (on the required forms) are mandatory. Preferably these letters should come from former or current employers or instructors.
- The information listed above must be in the applicant's file before they will be considered for admission in the program in the fall semester of the year applying.

Selection Criteria – Applicants with a complete file are selected for admission based upon their test scores, grades in high school and college, ability to complete the application process, and dental assisting experience. If test results are low, applicants will be advised to take courses to improve reading comprehension levels, proof of successful course completion must be provided prior to acceptance into the program.

Expenses beyond tuition include activity fees, uniforms, lab fees, student organization membership, immunizations, cost of cardiopulmonary resuscitation (CPR) class, Dental Assisting National Board Exam (DANB) fees, and student health insurance.

Immunizations and CPR certification are required prior to clinical participation and must be current throughout the program. Students must be free of tooth decay and active periodontal disease.

Undergraduate Certificate, Dental Assisting

Admission Requirements

See Application Procedure above.

Certificate Requirements

Fall Semester

| | | |
|----------|--------------------------------|---|
| DA A101 | Essentials of Dentistry | 3 |
| DA A102 | Infection Control in Dentistry | 3 |
| DA A110 | Dental Radiography | 3 |
| DA A110L | Dental Radiography Lab | 1 |

| | | |
|---------|------------------------------|---|
| DA A127 | Dental Office Administration | 3 |
| DA A130 | Chairside Techniques I | 4 |

Spring Semester

| | | |
|----------|--|---|
| DA A150 | Biomedical and Dental Sciences for Dental Assistants | 3 |
| DA A160 | Materials in Dentistry | 3 |
| DA A195A | Clinical Practicum I | 1 |
| DA A201 | Chairside Techniques II | 4 |
| DA A202 | Dental Specialties for Dental Auxiliaries | 3 |

Summer Semester

| | | |
|----------|-----------------------|---|
| DA A295A | Clinical Practicum II | 3 |
|----------|-----------------------|---|

Associate of Applied Science, Dental Assisting

Admission Requirements

See Application Procedure above.

General University Requirements

- Complete the General University Requirements for Associate of Applied Science Degrees located at the beginning of this chapter.
- Complete the Associate of Applied Science General Course Requirements (15 credits) located at the beginning of this chapter. (Completion of Biology and Psychology Courses fulfill the requirement of 6 credits of mathematics, humanities, social sciences or natural sciences.)

Major Requirements

- Complete the required courses for the Dental Assisting Undergraduate Certificate as outlined above. 34
- Complete one of the following Biology courses 4

| | | |
|-----------|--|--|
| BIOL A102 | Introductory Biology (3) and Introductory Biology Laboratory (1) | |
| | or | |
| BIOL A111 | Human Anatomy and Physiology I (4) | |
| | or | |
| BIOL A115 | Fundamentals of Biology (4) | |
- Complete one of the following Nutrition Courses 3

| | | |
|---------|-----------------------------------|--|
| DN A101 | Principles of Nutrition (3) | |
| | or | |
| DN A203 | Nutrition for Health Sciences (3) | |
- Complete one of the following courses 3

| | | |
|----------------|--------------------------|--|
| PSY A111 | General Psychology (3) | |
| | or | |
| PSY A150 | Lifespan Development (3) | |
| | or | |
| PSY/ HUMS A153 | Human Relations (3) | |
- Electives 7

Recommended courses include:

| | | |
|--|---|--|
| CIS A105 | Introduction to Personal Computers and Application Software (3) | |
| DA A295B | Clinical Practicum III (2) | |
| MA A101 | Medical Terminology I (3) | |
| | or | |
| General Education Requirements (GER) for Baccalaureate Degrees | | |
- A total of 60 credits is required for the degree.

FACULTY

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DENTAL HYGIENE

Allied Health Sciences Building (AHS), Room 160, (907) 786-6929

www.uaa.alaska.edu/ctc/alliedhealth/dh

The registered dental hygienist is a licensed oral health educator and clinical operator who, as part of the dental team, uses preventive, educational, and therapeutic methods which aid individuals and groups to attain and maintain optimum oral health. Dental hygienists can work as clinicians, educators, researchers, administrators, managers, preventive program developers, consumer advocates, sales and marketing managers, editors, and consultants. Clinical dental hygienists may work in a variety of health care settings such as private dental offices, schools, public health clinics, hospitals, managed care organizations, correctional institutions, or nursing homes.

The Dental Hygiene Associate of Applied Science program is accredited by the Commission on Dental Accreditation of the American Dental Association, a specialized accrediting body recognized by the Council on Postsecondary Accreditation and by the United States Department of Education. The Associate of Applied Science degree is a three-year program comprising one year of science and general education courses and two years of coursework in dental hygiene. The program prepares graduates clinically and academically to take the National and Western Regional Examining Boards (WREB) for licensure. Once enrolled as an AAS dental hygiene student, the student can anticipate a four-semester, 40-hour-per-week endeavor. Some evening classes and clinics are scheduled.

Clinical dental hygiene requires the ability to sit for long periods of time, good to excellent eye-hand coordination, and excellent fine hand motor skills. Dental hygienists are exposed to bacteria and viruses. Use of protective glasses, face masks and surgical type gloves is required. A professional appearance must be maintained during preclinical and clinical sessions.

The Bachelor of Science Dental Hygiene program articulates with the UAA Dental Hygiene AAS degree. It provides hygienists advanced education in restorative dental hygiene and/or educational methodology. Students earning a BSDH degree may be eligible for a commission in the US Public Health Service and for teaching opportunities. The BSDH also prepares students for entry to graduate programs in dental hygiene and public health.

Transfer of credits may be possible for graduates of an American Dental Association (ADA) accredited dental assisting program. Contact the Dental Hygiene program advisor for details.

Some expenses beyond tuition generally include activity fees, instruments, uniforms, lab fees, student organization membership, graduation pin, immunizations, cardiopulmonary resuscitation (CPR) class, board exam fees, licensure fees, student health insurance, and malpractice insurance for the Western Regional Examining Boards and professional liability insurance. Please refer to the dental hygiene program website for expense estimates.

Special Considerations

Due to the nature of the work, dental hygiene students are not permitted to work in the classroom, laboratory, or clinic when under the influence of intoxicants, drugs, or medication affecting psychomotor responses. Guidelines for Infection Control in Dental-Health Care Settings from the Centers for Disease Control and Prevention will be followed for students with, or exposed to, infectious diseases. As a condition of participation in the Dental Hygiene program students must abide by the university's Student Code of Conduct, the Dental Hygiene program's Policies and Procedures, and the American Dental Hygienists' Association Code of Ethics for Dental Hygienists.

Application for obtaining an Alaska dental hygiene license or restorative certification requires disclosure of information concerning illegal activity, crimes, hospitalization history regarding emotional or mental illness, drug addiction, alcoholism, and contagious diseases. If a student has a history with any of the aforementioned, it is highly recommended the applicant contact the Alaska Department of Occupational Licensing or a similar

government agency in any state in which the applicant wants to practice. The UAA Dental program application requires information concerning disciplinary actions taken at any university or college.

Preclinical And Clinical Requirements

Once admitted to the Dental Hygiene program, students are required to provide the following:

1. A signed application form indicating the understanding and acceptance of the Dental Hygiene program requirements regarding health screening, and immunizations.
2. Current Health Care Provider (American Heart Association) or Professional Rescuer (American Red Cross) certification in CPR/AED for infants, children, and adults. First-year students must present proof of certification by the first day of class. Certification must be kept current until graduation.
3. Professional liability insurance that must be maintained throughout the duration of the student's enrollment in Dental Hygiene courses. Specific information regarding acceptable professional liability insurance policies may be obtained directly from the program.

Students enrolled in the Dental Hygiene program must provide their own transportation to all off-campus assignments. The program assumes no responsibility for illnesses and injuries experienced by the student while enrolled in the Dental Hygiene program. Students are responsible for all costs incurred due to illness or injury experienced by the student while enrolled in the Dental Hygiene program. It is required that students maintain personal medical insurance while enrolled in the program.

Students are responsible for providing their own patients to satisfy clinical requirements.

Associate of Applied Science, Dental Hygiene

Description and Outcomes

This degree program prepares students to sit for the ADA National Board Dental Hygiene Examination (written examination) and the WREB Dental Hygiene Examination (clinical examination), and the WREB Anesthesia Examination (written and clinical) so that they are able to work in the dental hygiene field. At the completion of the program, students are able to:

1. Provide dental hygiene care in a legal and ethical manner.
2. Exhibit professional behavior, including time management, risk management, and respect of patients and co-workers.
3. Evaluate scientific literature relevant to dental hygiene.
4. Collect, analyze, and record data on the general and oral health status of patients.
5. Use critical decision making skills to develop a dental hygiene diagnosis, which will provide a basis for interventions that are within the scope of dental hygiene practice and determine the need for referral to appropriate health professions as needed.
6. Formulate dental hygiene care plans, including a planned sequence of educational, preventive, and therapeutic services based on the dental hygiene diagnosis in collaboration with the patient and other health care providers.
7. Deliver preventive and therapeutic care to achieve and maintain oral health utilizing established infection control procedures, pain control measures, and ergonomic practices.
8. Evaluate the effectiveness of the implemented services, and modify as needed.
9. Promote the profession of dental hygiene through service and affiliations with professional organizations.
10. Provide community oral health services.

Admission Requirements

1. Satisfy Requirements for Admission to Associate's Degrees found in Chapter 7 of this catalog.

2. Special admission requirements and application procedures are required. Selection criteria change periodically. Applicants must contact the department for the selection criteria for the year they wish to apply. Completion of the admission requirements does not guarantee selection into the Dental Hygiene program. Applicants transferring credit from another institution should apply to UAA no later than November 1 prior to spring application to Dental Hygiene program to allow sufficient time for application processing and transcript evaluation by application deadline. Spring enrollment in another institution may postpone transcript evaluation and therefore affect program application acceptance.

- a. Applicants must meet with the UAA Dental Hygiene program advisor regarding application and program admission requirements prior to application deadline.
- b. Graduation from high school or equivalent.
- c. Documentation from official transcripts showing successful completion of the following courses with a minimum grade of C:

| | | |
|--|--|-----|
| BIOL A111/L | Human Anatomy and Physiology I with Laboratory | 4 |
| BIOL A112/L | Human Anatomy and Physiology II with Laboratory | 4 |
| BIOL A240 | Introductory Microbiology for Health Sciences (4)* | 3-4 |
| | or | |
| BIOL A241 | Lectures in Introductory Microbiology for Health Sciences (3)* | |
| CHEM A103 | Survey of Chemistry (3)* | 3 |
| | or | |
| CHEM A105 | General Chemistry I (3)* | |
| CHEM A104 | Introduction to Organic Chemistry and Biochemistry* | 3 |
| <i>* Note: Applicants who plan to apply to the Bachelor of Science in Dental Hygiene program will need to take BIOL A240 and lab courses CHEM A103L or CHEM A105L, and CHEM A104L.</i> | | |
| COMM A111 | Fundamentals of Oral Communication (3) | 3 |
| | or | |
| COMM A235 | Small Group Communication (3) | |
| | or | |
| COMM A237 | Interpersonal Communication (3) | |
| | or | |
| COMM A241 | Public Speaking (3) | |
| ENGL A111 | Methods of Written Communication | 3 |
| PSY A111 | General Psychology (3) | 3 |
| | or | |
| PSY A150 | Lifespan Development (3) | |
| | or | |
| HS A220 | Core Concepts in the Health Sciences(3) | |
| HUMS/ | | |
| PSY A153 | Human Relations (3) | |
| SOC A101 | Introduction to Sociology (3) | 3 |
| | or | |
| SOC A201 | Social Problems and Solutions (3) | |
| | or | |
| SOC A222 | Small and Rural Communities (3) | |
| | or | |
| SOC A307 | Demography (3) | |
| | or | |
| SOC A309 | Urban Sociology (3) | |
| | or | |

Courses must be completed by the application deadline.

- d. International students must contact the Office of Admissions regarding equivalency evaluation of transcripts.

Application Procedure

To be considered for fall admission into the Associate of Applied Science program, the application process must be completed by the deadline date posted on the program's website.

1. Complete the AAS Dental Hygiene program application and submit to the address below.
2. Provide proof of admittance into the University of Alaska Anchorage as an AAS premajor dental hygiene student.
3. Submit official transcripts (non-UA) or request transcript credit evaluation (for UAF and UAS transcripts) to UAA Enrollment Management. Transcript credit evaluation of courses listed under Admissions Requirement 2 must be completed by the application deadline.
4. Three letters of recommendation sent to the Dental Hygiene program on the provided forms.
5. Submission of current Health Occupations Basic Entrance Test (HOBET) scores to the UAA Dental Hygiene program no later than the application deadline posted on the program's website. Contact the Advising and Testing Center (786-4500) for information about HOBET administration.

Information and applications can be obtained by contacting:

UAA Dental Hygiene Program
 Allied Health Sciences Building, Room 160
 3211 Providence Drive
 Anchorage, AK 99508-8371
 (907) 786-6929
www.uaa.alaska.edu/ctc/programs/academic/alliedhealth/academics/dental/hygiene/index.cfm

Advising

Students should contact the Dental Hygiene program advisor for details.

Academic Progress

Students must earn at least 75 percent or higher in each dental hygiene course to progress within the program and graduate.

Degree Requirements

1. Complete the General University Requirements for Associate of Applied Science Degrees located at the beginning of this chapter.
2. Complete the Associate of Applied Science General Course Requirements located at the beginning of this chapter (ENGL A212 is recommended).
3. Complete the Major Requirements listed below.

Major Requirements

1. Complete the following required courses with a minimum grade of C:

Fall Semester 1st year

| | | |
|----------|--|---|
| DA A110 | Dental Radiography | 3 |
| DA A110L | Dental Radiography Laboratory | 1 |
| DH A201 | Oral Histology and Embryology | 2 |
| DH A202 | Basic Techniques for Dental Hygienists | 7 |
| DH A204 | Anatomy of the Orofacial Structures | 2 |
| *DN A101 | Principles of Nutrition (3) | 3 |
| | or | |
| *DN A203 | Nutrition for Health Sciences (3) | |

**Due to a heavy credit load, it is recommended that the nutrition course be taken prior to formal admission into the Dental Hygiene program.*

Spring Semester 1st year

| | | |
|----------|---|-----|
| DA A160 | Materials in Dentistry | 3 |
| DH A222 | Adjunctive Techniques for Dental Hygienists | 1.5 |
| DH A292D | Clinical Seminar I | 1 |
| DH A295D | Clinical Practicum I | 4 |
| DH A311 | Periodontics | 2 |
| DH A365 | Pharmacology for Dental Hygienists | 2 |

Fall Semester 2nd year

| | | |
|---------|---|---|
| DH A310 | Oral Pain Control | 3 |
| DH A312 | Advanced Techniques for Dental Hygienists | 3 |

| | | |
|----------|-------------------------------|---|
| DH A314 | Pathology of Oral Tissues | 2 |
| DH A321 | Current Periodontal Therapies | 2 |
| DH A392C | Clinical Seminar II | 1 |
| DH A395C | Clinical Practicum II | 5 |

Spring Semester 2nd year

| | | |
|----------|--------------------------------------|-----|
| DH A316 | Professional Dental Hygiene Practice | 1.5 |
| DH A324 | Community Dental Health I | 2 |
| DH A392D | Clinical Seminar III | 1 |
| DH A395D | Clinical Practicum III | 6 |

- A total of 73 credits is required for the degree.

Bachelor of Science, Dental Hygiene

Description and Outcomes

The BSDH is designed to allow graduates of the UAA AAS, Dental Hygiene program an opportunity to increase their education to the baccalaureate level. The program offers students a broader background in community oral health as well as training in an advanced area of dental hygiene practice. At the completion of the program, students are able to:

- Critically evaluate research relevant to dental hygiene.
- Assess, plan, implement, and evaluate complex community oral health projects to diverse populations.
- Perform advanced dental hygiene skills beyond the associate degree level, e.g. restorative functions and/or clinical instruction.

Admission Requirements

Students who apply to the Bachelor of Science, Dental Hygiene major are admitted in a pre-major status. The process for advancement to major status is:

- Apply to UAA as a Bachelor of Science, Dental Hygiene pre-major.
- Complete an advising session with a dental hygiene advisor regarding application, program admission, and development of a program of study. (See contact information below)
- Complete an AAS, Dental Hygiene degree.
- Complete laboratory classes for chemistry (CHEM A103L or CHEM A105L, and CHEM A104L) with a minimum grade of C.
- Complete BIOL A240 with a minimum grade of C.
- Complete the University Admission Requirements for Baccalaureate Programs in Chapter 7 of this catalog.
- Submit a departmental application for admission to the Bachelor of Science, Dental Hygiene degree program.
- Complete a Change of Major form from pre-major to major status, signed by a DH faculty advisor.

Advising

Students are encouraged to meet with the academic advisor each semester to review their academic progress and plan future courses. It is particularly important for students to meet with their advisor whenever academic difficulties arise.

Degree Requirements

- Complete the General University Requirements for Baccalaureate Degrees located at the beginning of this chapter.
- Complete the General Education Requirements for Baccalaureate Degrees located at the beginning of this chapter. Required support courses may satisfy some General Education Requirements.
- Complete the Major Requirements listed below.

Required Support Courses

| | | |
|---|---|---|
| Complete the following courses with a minimum grade of C: | | |
| BIOL A240 | Introductory Microbiology for Health Sciences | 4 |
| CHEM A103L | Survey of Chemistry Laboratory (1) | 1 |
| | or | |
| CHEM A105L | General Chemistry I Laboratory (1) | |

| | | |
|------------|---|---|
| CHEM A104L | Introduction to Organic Chemistry and Biochemistry Laboratory | 1 |
| ENGL A212 | Technical Writing | 3 |
| STAT A252 | Elementary Statistics (3) | 3 |
| | or | |
| STAT A253 | Applied Statistics for the Sciences (3) | |

Major Requirements

- Complete the requirements for an AAS in Dental Hygiene degree (see previous)
- Complete a minimum of 10 credits (with a minimum grade of C) from the following courses:

NOTE: DH A350, DH A450, and DH A495C must all be completed to take clinical boards and to fulfill the requirements for restorative certification (State of Alaska Statute 12 ACC 28.770).

| | | |
|----------|--|-----|
| DH A350 | Basic Restorative Techniques | 3 |
| DH A450 | Advanced Restorative Techniques | 1 |
| DH A495C | Restorative Clinical Practicum | 1 |
| CTE A411 | Historical and Philosophical Foundations of Career and Technical Education | 3 |
| CTE A490 | Selected Topics in Career and Technical Education | 1-6 |
| DH A460 | Instructional Concepts in Dental Hygiene | 1 |
| DH A495B | Instructional Practicum in Dental Hygiene | 1-4 |
| | Other courses approved by a dental hygiene advisor | 1-6 |
| | 3. Complete with a minimum grade of C: | |
| DH A424 | Community Dental Health II (<i>GER integrative capstone course</i>) | 3 |

- Complete 9 elective credits.
- A total of 120 credits is required for the degree. *NOTE: No more than six credits of DH A390 Selected Topics in Dental Hygiene may be applied toward this degree.*
- AAS degree-seeking students may take BSDH courses, provided prerequisite requirements are fulfilled.

FACULTY

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Sandra Pence, Associate Professor, pence@uaa.alaska.edu
Carri Shamburger, Term Instructor, afcas2@uaa.alaska.edu*

DIETETICS AND NUTRITION

*Lucy Cuddy Hall (CUDY), Room 126, (907) 786-4728
www.uaa.alaska.edu/ctc/culinary/index.cfm*

The Culinary Arts, Hospitality, Dietetics and Nutrition department seeks to meet the growing needs of the dietetics and nutrition industry by training entry-level registered dietitians and community nutrition and nutrition science professionals. Four undergraduate academic areas of study are offered:

Bachelor of Science in Dietetics provides the first step to meeting the eligibility requirements to take the national Registered Dietitian (RD) exam. RDs are health care professionals who provide Medical Nutrition Therapy and consultative service in health care and wellness settings. In order to complete the eligibility requirements for the RD exam, students must complete the coursework for a bachelor degree, in a Commission on Accreditation in Dietetics Education (CADE) accredited program, in addition to completing a 1200 hour CADE accredited dietetic internship.

Bachelor of Science in Nutrition

- Community Nutrition Emphasis** is for students who are interested in non-Registered Dietitian (RD) required jobs in public health, health promotion and wellness settings, including Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). Graduates of this degree track will work cooperatively with

other professionals, and are often supervised by RDs, to improve the health and well-being of individuals and communities.

- **Nutrition Science Emphasis** is for students who are interested in advanced study in nutrition (i.e. graduate school) to prepare for a career in nutrition research or for students interested in applying to medical school who would like a strong foundation in nutrition.

The **Nutrition Minor** allows those students pursuing degrees *other than nutrition* the opportunity to minor in Nutrition.

Dietetics and Nutrition also offers a Graduate Certificate: Dietetic Internship. Please see Chapter 12, Graduate Programs for more information.

Bachelor of Science, Dietetics

The Bachelor of Science in Dietetics prepares individuals to complete the didactic requirements towards becoming a registered dietitian (RD). The Bachelor of Science in Dietetics mission statement is to guide the future of dietetics in Alaska by preparing students for work as entry-level registered dietitians. To be successful in their field, RDs need a strong science foundation along with courses in management, clinical and community nutrition, food science, communications, counseling, therapeutic nutrition and nutrition for the lifespan. This degree has been designed in accordance with the 2008 Eligibility Requirements and Accreditation Standards from the Commission on Accreditation in Dietetics Education (CADE) of the American Dietetic Association.

After the completion of degree requirements, students will graduate with a Bachelor of Science in Dietetics and are eligible to apply for CADE accredited dietetic internships throughout the country, including at UAA. Admission to dietetic internships is a highly competitive process. Upon successful completion of an accredited dietetic internships, graduates are eligible to take the national Registration examination. After passing the exam, graduates become registered dietitians.

At the completion of this program students will be able to:

1. Assess the nutritional needs of individuals, populations and diverse cultures, including infants, children, adolescents, adults, pregnant/lactating females and the elderly.
2. Utilize the nutrition care process to make decisions, identify nutrition-related problems and determine and evaluate nutrition interventions, including medical nutrition therapy, disease prevention and health promotion.
3. Develop communication skills appropriate for entry-level jobs in nutrition and dietetics.
4. Integrate principles of research methodology, interpretation of literature and integration of research principles into evidence-based practice.
5. Develop an educational session or program/educational strategy for a target population.
6. Demonstrate counseling techniques to facilitate behavior change.

Students can complete their GERs and prerequisite courses at the University of Alaska location of their choice. The Dietetics and Nutrition (DN) course requirements are online courses to enable access to the BS in Dietetics degree statewide. Some courses require students to complete practicums with registered dietitians in their communities. If practicums are located in health care settings, fingerprinting and criminal background checks will be required and paid for by the student.

Some expenses beyond tuition generally include activity fees, lab fees, student organization membership, immunizations, fingerprinting and criminal background checks for practicums, cost of Serv Safe certification and food/supplies for some DN courses.

Admission Requirements

1. Satisfy the Admission to Baccalaureate Programs Requirements in Chapter 7 of this catalog.
2. Request an admission and advising packet. Complete and return the application form to the department. This form opens an individual student portfolio, which is used to advise and

counsel students throughout their program of study, and contains important career planning and placement materials.

3. Meet with the Dietetics and Nutrition program advisor regarding application and program admission requirements prior to application. For an advising appointment call 786-4728.
4. Satisfy and meet any requirements established by applicable health care facilities such as fingerprinting and criminal background checks.

Academic Progress

In order to progress within the baccalaureate dietetics program, students must earn a C or higher in all courses required by the major.

Advising

1. Contact the Culinary Arts, Hospitality, Dietetics and Nutrition department by calling (907) 786-4728 for an appointment with a Dietetics and Nutrition program advisor to plan a personal program of study.
2. Contact Advising and Testing (786-4500) to take a UAA-approved placement test of mathematics, reading, and writing skills. Place a copy of the results in the department portfolio. SAT, ACT and other postsecondary transcripts may also be submitted to the department. These records will be used for advising only.
3. All students in the BS in Dietetics degree program are required to participate in the dietetics group advising sessions a minimum of one time per semester.

Degree Requirements

1. Complete the General University Requirements for Baccalaureate Degrees listed at the beginning of this chapter.
1. Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.
1. Complete the Support Courses and the Major Requirements listed below.
1. Meet the following GPA requirements:
 - a. A minimum overall degree GPA of 3.00.
 - b. A grade of C or higher must be earned in all courses that count toward the major.
 - c. A minimum cumulative GPA of 3.00.

Support Courses

Complete the following courses, some of which may be used to satisfy the General Education Requirement (51 credits):

| | | |
|---------------------------------------|---|---|
| BIOL A111/L | Human Anatomy and Physiology I with Laboratory | 4 |
| BIOL A112/L | Human Anatomy and Physiology II with Laboratory | 4 |
| BIOL A115/L | Fundamentals of Biology I with Laboratory | 4 |
| CHEM A105 | General Chemistry I | 3 |
| CHEM A105L | General Chemistry I Laboratory | 1 |
| CHEM A106 | General Chemistry II | 3 |
| CHEM A106L | General Chemistry II Laboratory | 1 |
| COMM course | Speech Communication GER course | 3 |
| ECON A201 | Principles of Macroeconomics | 3 |
| ENGL A111 | Methods of Written Communication | 3 |
| ENGL A212 | Technical Writing | 3 |
| Fine Arts GER | | 3 |
| Humanities GER (language recommended) | | 6 |
| MATH A107 | College Algebra | 4 |
| PSY A111 | General Psychology (3) | 3 |
| | or | |
| SOC A101 | Introduction to Sociology (3) | |
| STAT A252 | Elementary Statistics | 3 |

Major Requirements

1. Complete the following required courses (61 credits):

| | | |
|-----------|------------------------------------|---|
| ACCT A101 | Principles of Financial Accounting | 3 |
|-----------|------------------------------------|---|

| | | |
|-------------|---|---|
| BIOL A240/L | Introductory Microbiology for Health Sciences with Laboratory | 4 |
| CHEM A321 | Organic Chemistry I | 3 |
| *CHEM A441 | Principles of Biochemistry I | 3 |
| DN A100 | Introduction to Nutrition and Dietetics | 1 |
| DN A151 | Nutrition through the Life Cycle | 3 |
| DN A155 | Survey of Alaska Native Nutrition | 3 |
| DN A203 | Nutrition for Health Sciences | 3 |
| DN A255 | Concepts of Healthy Food | 3 |
| DN A260 | Food Science | 3 |
| DN A301 | Nutrition Assessment | 2 |
| DN A310 | Nutrition Communication | 2 |
| DN A311 | Nutrition Counseling | 1 |
| DN A315 | World Food Patterns | 3 |
| DN A350 | Foodservice Systems and Quantity Foods | 3 |
| DN A355 | Weight Management and Eating Disorders | 3 |
| DN A375 | Research Methods in Nutrition and Dietetics | 3 |
| DN A401 | Medical Nutrition Therapy I | 3 |
| DN A402 | Medical Nutrition Therapy II | 3 |
| *DN A415 | Community Nutrition | 3 |
| DN A450 | Dietetic Management | 3 |
| DN A475 | Advanced Nutrition | 3 |

*Integrative Capstone Course

- Electives (8 credits)
- A minimum of 120 credits is required for the Dietetics degree, of which a minimum of 42 credits must be upper division.

Bachelor of Science, Nutrition

The Bachelor of Science in Nutrition prepares individuals for professional positions within the nutrition industry. The mission statement of the Bachelor of Science in Nutrition is to guide the future of nutrition in Alaska by preparing students for work as entry-level community nutrition and nutrition science professionals. Related career opportunities are found within schools, public health programs, and health- and wellness-settings, depending on the selected emphasis area.

Within the degree there are two emphasis areas: Community Nutrition and Nutrition Science, each having a discrete program description and outcomes. The specific interests and career goals of each student determine the emphasis area to pursue. The degree includes university General Education Requirements, a common set of core courses, and courses relative to each emphasis area.

Students can complete their GERs and prerequisite courses at the University of Alaska location of their choice. The Dietetics and Nutrition (DN) course requirements are online courses to enable access to the BS in Nutrition degree statewide. Some courses require students to complete practicums with registered dietitians in their communities. If practicums are located in health care settings, fingerprinting and criminal background checks will be required and paid for by the student.

Admission Requirements

- Satisfy the Admission to Baccalaureate Degree Programs Requirements in Chapter 7, Academic Standards and Regulations.
- Request an admission and advising packet. Complete and return the application form to the department. This form opens an individual student portfolio, which is used to advise and counsel students throughout their program of study, and to contain important career planning and placement materials.
- Meet with the Dietetics and Nutrition program advisor regarding application and program admission requirements prior to application. For an advising appointment call 786-4728.
- Satisfy and meet any requirements established by applicable health care facilities such as fingerprinting and criminal background checks.

Academic Progress

In order to progress within the baccalaureate dietetics program, students must earn a C or higher in all courses required by the major.

Advising

- Call the Culinary Arts, Hospitality, Dietetics and Nutrition Department at (907) 786-4728 for an appointment with a Dietetics and Nutrition program advisor to plan a personal program of study.
- Contact Advising and Testing (786-4500) to take a UAA-approved placement test of mathematics, reading, and writing skills. Place a copy of the results in the department portfolio. SAT, ACT and other postsecondary transcripts may also be submitted to the department. These records will be used for advising only.
- All students in the BS in Nutrition degree program (both emphasis areas) are required to participate in the nutrition group advising sessions a minimum of one time per semester.

Community Nutrition Emphasis

Emphasis Description and Outcomes

The purpose of an emphasis in community nutrition is to provide students with a thorough understanding of nutrition and the ability to communicate principles of nutrition to the public. This emphasis will have a strong focus on communication as this will be a significant job-related responsibility in this field.

Some expenses beyond tuition generally include activity fees, lab fees, fingerprinting and criminal background checks for practicums and food/supplies for some DN courses.

At the completion of this program students will be able to:

- Assess the nutrition needs of individuals, populations and diverse cultures, including infants, children, adolescents, adults, pregnant/lactating females and the elderly.
- Evaluate the therapeutic nutrition needs for various conditions, including, but not limited to overweight and obesity, diabetes, cancer, and cardiovascular, gastrointestinal and renal disease.
- Develop communication skills appropriate for entry-level jobs in nutrition and dietetics.
- Integrate principles of research methodology, interpretation of literature and integration of research principles into evidence-based practice.
- Appraise the role of environment, food, nutrition and lifestyle choices in health promotion and disease prevention.
- Specify the nutrition therapy recommended for a selected disease state.

Degree Requirements

- Complete the General University Requirements for Baccalaureate Degrees listed at the beginning of this chapter.
- Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.
- Complete the Support Courses and the Major Requirements listed below.
- Meet the following GPA requirements:
 - A minimum overall degree GPA of 2.50.
 - A grade of C or higher must be earned in all courses that count toward the major.
 - A minimum cumulative GPA of 2.50.

Support Courses

Complete the following courses, some of which may be used to satisfy the General Education Requirements (43 credits):

| | | |
|-------------|---|---|
| BIOL A102 | Introductory Biology | 3 |
| BIOL A103 | Introductory Biology Laboratory | 1 |
| CHEM A103 | Survey of Chemistry I | 3 |
| CHEM A103L | Survey of Chemistry I Laboratory | 1 |
| CHEM A104 | Introduction to Organic Chemistry and Biochemistry | 3 |
| CHEM A104L | Introduction to Organic Chemistry and Biochemistry Laboratory | 1 |
| COMM course | Speech Communication GER course | 3 |
| ECON A201 | Principles of Macroeconomics | 3 |

| | | |
|---------------------------------------|----------------------------------|---|
| ENGL A111 | Methods of Written Communication | 3 |
| ENGL A212 | Technical Writing | 3 |
| Fine Arts GER | | 3 |
| Humanities GER (language recommended) | | 6 |
| MATH A107 | College Algebra | 4 |
| PSY A111 | General Psychology (3) or | 3 |
| SOC A101 | Introduction to Sociology (3) | |
| STAT A252 | Elementary Statistics | 3 |

Major Requirements

- Complete the following required courses (45 credits):

| | | |
|---|---|---|
| BIOL A100 | Human Biology | 3 |
| BIOL A240/L | Introductory Microbiology for Health Sciences with Laboratory | 4 |
| COMM - two additional oral communications courses | | 6 |
| DN A100 | Introduction to Nutrition and Dietetics | 1 |
| DN A151 | Nutrition Through the Life Cycle | 3 |
| DN A155 | Survey of Alaska Native Nutrition | 3 |
| DN A203 | Nutrition for Health Sciences | 3 |
| DN A255 | Concepts of Healthy Food | 3 |
| DN A301 | Nutrition Assessment | 2 |
| DN A303 | Preventive and Therapeutic Nutrition | 3 |
| DN A310 | Nutrition Communication | 2 |
| DN A315 | World Food Patterns | 3 |
| DN A355 | Weight Management and Eating Disorders | 3 |
| DN A375 | Research Methods in Nutrition and Dietetics | 3 |
| DN A415* | Community Nutrition | 3 |

*Integrative Capstone Course

- Electives (32 credits): 23 credits of electives or other self-select courses must be upper division courses (300 or 400 level).
- A minimum of 120 credits is required for the Community Nutrition emphasis, of which a minimum of 42 credits must be upper division.

The following courses are recommended as higher-level GERs if the student is interested in pursuing the registered dietitian (RD) career pathway at a later time:

| | | |
|-------------|---|---|
| BIOL A111/L | Human Anatomy and Physiology I with Laboratory | 4 |
| BIOL A112/L | Human Anatomy and Physiology II with Laboratory | 4 |
| BIOL A115/L | Fundamentals of Biology I with Laboratory | 4 |
| CHEM A105 | General Chemistry I | 3 |
| CHEM A105L | General Chemistry I Laboratory | 1 |
| CHEM A106 | General Chemistry II | 3 |
| CHEM A106L | General Chemistry II Laboratory | 1 |
| CHEM A321 | Organic Chemistry I | 3 |
| CHEM A441 | Principles of Biochemistry | 3 |

The following electives are recommended if the student is interested in pursuing the RD career pathway at a later time:

| | | |
|---------|--|---|
| DN A260 | Food Science | 3 |
| DN A350 | Foodservice Systems and Quantity Foods | 3 |
| DN A450 | Dietetic Management | 3 |
| DN A475 | Advanced Nutrition | 3 |

Nutrition Science Emphasis

Emphasis Description and Outcomes

The purpose of this emphasis is to provide the training necessary to pursue advanced study in nutrition leading toward a career in nutrition research. This option also can be used for those students seeking admission to medical schools. Those students seeking medical school admission will also likely need one year of physics courses (8 credits). Students interested in applying to medical school should also maintain regular contact with a pre-med advisor.

Some expenses beyond tuition generally include activity fees, lab fees, fingerprinting and criminal background checks for practicums and food/supplies for some DN courses.

At the completion of this program students will be able to:

- Assess the nutrition needs of individuals, populations and diverse cultures, including infants, children, adolescents, adults, pregnant/lactating females and the elderly.
- Evaluate the therapeutic nutrition needs for various conditions, including, but not limited to overweight and obesity, diabetes, cancer, and cardiovascular, gastrointestinal and renal disease.
- Develop communication skills appropriate for entry-level jobs in nutrition and dietetics.
- Integrate principles of research methodology, interpretation of literature and integration of research principles into evidence-based practice.
- Appraise the role of environment, food, nutrition and lifestyle choices in health promotion and disease prevention.
- Evaluate the current literature related to selected topics in advanced nutrition.

Degree Requirements

- Complete the General University Requirements for Baccalaureate Degrees listed at the beginning of this chapter.
- Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.
- Complete the Support Courses and the Major Requirements listed below.
- Meet the following GPA requirements:
 - A minimum overall degree GPA of 2.50.
 - A grade of C or higher must be earned in all courses that count toward the major.
 - A minimum cumulative GPA of 2.50.

Support Courses

- Complete the following courses, some of which may be used to satisfy the General Education Requirements (61-62 credits):

| | | |
|---------------------------------------|---|-----|
| BIOL A111/L | Human Anatomy and Physiology I with Laboratory | 4 |
| BIOL A112/L | Human Anatomy and Physiology II with Laboratory | 4 |
| BIOL A115/L | Fundamentals of Biology I with Laboratory | 4 |
| BIOL A116/L | Fundamentals of Biology II with Laboratory | 4 |
| CHEM A105 | General Chemistry I | 3 |
| CHEM A105L | General Chemistry I Laboratory | 1 |
| CHEM A106 | General Chemistry II | 3 |
| CHEM A106L | General Chemistry II Laboratory | 1 |
| COMM course | Speech Communication GER course | 3 |
| ECON A201 | Principles of Macroeconomics | 3 |
| ENGL A111 | Methods of Written Communication | 3 |
| ENGL A212 | Technical Writing | 3 |
| Fine Arts GER | | 3 |
| Humanities GER (language recommended) | | 6 |
| MATH A107 | College Algebra (4) and | 6-7 |
| MATH A108 | Trigonometry (3) OR | |
| MATH A109 | Precalculus (6) | |
| MATH A200 | Calculus I | 4 |
| PSY A111 | General Psychology (3) or | 3 |
| SOC A101 | Introduction to Sociology (3) | |
| STAT A252 | Elementary Statistics | 3 |

Major Requirements

- Complete the following required courses (48 credits):

| | | |
|-------------|---|---|
| BIOL A240/L | Introductory Microbiology for Health Sciences with Laboratory | 4 |
|-------------|---|---|

| | | |
|-------------|--|---|
| BIOL A242/L | Fundamentals of Cell Biology with Laboratory | 4 |
| CHEM A321 | Organic Chemistry I | 3 |
| CHEM A322 | Organic Chemistry II | 3 |
| CHEM A323L | Organic Chemistry Laboratory | 2 |
| *CHEM A441 | Principles of Biochemistry I | 3 |
| CHEM A442 | Principles of Biochemistry II | 3 |
| CHEM A443 | Biochemistry Laboratory | 2 |
| DN A100 | Introduction to Nutrition and Dietetics | 1 |
| DN A151 | Nutrition Through the Life Cycle | 3 |
| DN A203 | Nutrition for Health Sciences | 3 |
| DN A301 | Nutrition Assessment | 2 |
| DN A303 | Preventive and Therapeutic Nutrition | 3 |
| DN A315 | World Food Patterns | 3 |
| DN A355 | Weight Management and Eating Disorders | 3 |
| DN A375 | Research Methods in Nutrition and Dietetics | 3 |
| DN A475 | Advanced Nutrition | 3 |

**Integrative Capstone Course*

- Electives (10-11 credits): 7-8 credits of electives or other self-select courses must be upper division courses (300 or 400 level).
- A minimum of 120 credits is required for the Nutrition Science emphasis, of which a minimum of 42 credits must be upper division.

Depending on the student's career plans, the following courses are recommended (per an advising session):

| | |
|---------|------------------------------|
| DN A255 | Concepts of Healthy Food (3) |
| DN A260 | Food Science (3) |
| Physics | (see Pre-Med Advisor) (8) |

Minor, Nutrition

Students majoring in another discipline who wish to minor in Nutrition must complete the following requirements. Nutrition is essential to the maintenance of a healthy life. A minor in Nutrition will act as a supplement to other fields of study and the application of knowledge to target populations and systems. A minor requires 18 credits; 6 credits must be upper division.

Required Core (6 credits)

| | | |
|---------|-----------------------------------|---|
| DN A101 | Principles of Nutrition (3) | 3 |
| | or | |
| DN A203 | Nutrition for Health Sciences (3) | |
| | AND | |
| DN A151 | Nutrition Through the Life Cycle | 3 |

Required Upper Division Courses (6 credits)

| | |
|--------------------------------------|--|
| Select 6 credits from the following: | 6 |
| DN A303 | Preventive and Therapeutic Nutrition (3) |
| DN A315 | World Food Patterns (3) |
| DN A355 | Weight Management and Eating Disorders (3) |

Electives *

| | |
|--------------------------------------|---------------------------------------|
| Select 6 credits from the following: | 6 |
| DN A151 | Nutrition Through the Life Cycle (3) |
| DN A155 | Survey of Alaska Native Nutrition (3) |
| DN A215 | Sports Nutrition (3) |
| DN A255 | Concepts of Healthy Food (3) |
| DN A260 | Food Science (3) |

**Note: Other courses may be counted toward the minor with written approval of an advisor in the Culinary Arts, Hospitality, Dietetics and Nutrition Department (i.e. CA A490 Current Topics in Food and Hospitality and DN A490 Current Topics in Dietetics and Nutrition).*

FACULTY

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FIRE AND EMERGENCY SERVICES TECHNOLOGY

Allied Health Science Building (AHS), Room 153, (907) 786-6476

www.uaa.alaska.edu/ctc/programs/academic/alliedhealth/academics/fire.cfm

The Fire and Emergency Services Technology program provides entry-level knowledge and skills for students planning a career in emergency services as well as knowledge and skill for the career firefighter.

Program Outcomes

Graduates of the Fire and Emergency Services Technology program are prepared to:

- Discuss the history, support organizations, resources, incident management, training, and emergency operations and relate how each plays a role within emergency services.
- Define and use basic terms and concepts associated with the chemistry and dynamics of fire.
- Relate how fire prevention and fire inspections are connected.
- Demonstrate the importance of public education in relation to fire prevention.
- Identify the equipment and systems used in control and extinguishment of fire.
- Identify the five types of building construction and their uniqueness under fire conditions.
- Calculate water flow, friction loss, and gallon per minute flow for a given scenario.

The Associate of Applied Science degree has a technical core which follows the National Fire Academy's Fire and Emergency Service Higher Education's model core curriculum for two-year degree programs. The technical core consists of courses in principles of emergency services, building construction, fire prevention, fire hydraulics, protection systems, and fire behavior and combustion. Each student must complete the technical core as well as MATH A105 or higher, a natural science with lab, and remaining UAA AAS general education requirements. The student also has four options from which to choose: Fire Suppression, Fire Administration, Emergency Medical Services, or Wildland Firefighting. It may take more than two years to complete the degree.

For baccalaureate degree options, contact a Fire and Emergency Services Technology advisor.

Advising

All students are encouraged to meet with their academic advisor each semester for the purpose of reviewing their academic progress and planning future courses. It is particularly important for students to meet with their advisor whenever academic difficulties arise.

Associate of Applied Science, Fire and Emergency Services Technology

Admission Requirements

Satisfy the Admission to Certificate and Associate's Degree Program Requirements in Chapter 7, Academic Standards and Regulations. Although it is not required, it is highly recommended that students be members of a paid or volunteer fire department prior to or shortly after being admitted to the program.

Academic Progress

In order to progress within the Associate of Applied Science Fire and Emergency Services Technology program, students must earn a satisfactory grade (C or higher or S) in all Fire and Emergency Service Technology (FIRE) courses required for the degree.

Degree Requirements

- Complete the General University Requirements for Associate of Applied Science Degrees located at the beginning of this chapter.

- Complete the Associate of Applied Science General Degree Requirements located at the beginning of this chapter.
- Complete the Major Requirements listed below.

Major Requirements

- Complete the following required courses (28 credits):

| | | |
|-----------|---|---|
| FIRE A101 | Principles of Emergency Services | 3 |
| FIRE A105 | Fire Prevention | 3 |
| FIRE A121 | Fire Behavior and Combustion | 3 |
| FIRE A202 | Fire Protection Hydraulics and Water Supply | 3 |
| FIRE A206 | Building Construction for Fire Protection | 3 |
| FIRE A214 | Fire Protection Systems | 3 |
| MATH 105 | Intermediate Algebra or Higher | 3 |
| | Natural science with lab (recommend CHEM 103/L) | 4 |
| | Social science (PS, PSY, or SOC) | 3 |

Math, natural science, and social science may also meet AAS General Course Requirements.
- Complete 12 credits in one of the following options:

Fire Suppression- Option 1

| | | |
|-----------|---------------------------------|---|
| FIRE A107 | Strategy and Tactics | 3 |
| FIRE A117 | Rescue Practices (3) | 3 |
| | or | |
| FIRE A151 | Wildland Fire Control I (3) | 3 |
| FIRE A123 | Fire Investigation I | 3 |
| FIRE A203 | Hazardous Materials Chemistry I | 3 |

Fire Administration- Option 2

| | | |
|-----------|--|---|
| FIRE A111 | Fire Administration I | 3 |
| FIRE A170 | Occupational Safety and Health for Fire Service | 3 |
| FIRE A201 | Principles of Emergency Management (3) | 3 |
| | or | |
| FIRE A230 | Fire Department Organizational Theory and Behavior (3) | 3 |
| FIRE A220 | Legal Aspects of Emergency Services | 3 |

Emergency Medical Services- Option 3

| | | |
|-----------|--------------------------------------|---|
| EMT A130 | Emergency Medical Technician I | 6 |
| EMT A230 | Emergency Medical Technician II | 3 |
| EMT A231 | Emergency Medical Technician III (3) | 3 |
| | or | |
| FIRE A117 | Rescue Practices (3) | 3 |

Wildland Firefighting- Option 4

| | | |
|-----------|------------------------------------|---|
| FIRE A151 | Wildland Fire Control I | 3 |
| FIRE A155 | Wildland Fire Behavior | 3 |
| FIRE A157 | Wildland Air Operations and Safety | 3 |
| FIRE A159 | Wildland Fire Operations Functions | 3 |
- Complete an additional 11 credits from any FIRE, FSA, or EMT course or from the general education list that will lead towards a baccalaureate degree. (Advisor approval required for general education courses) 11
- A total of 60 credits is required for the degree.

FACULTY

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HEALTH, PHYSICAL EDUCATION & RECREATION

Eugene Short Hall (ESH), Room 125, (907) 786-4083

www.uaa.alaska.edu/hper

The Department of Health, Physical Education & Recreation is committed to excellence in offering courses within the discipline of physical education and related disciplines. The courses provide the foundation

for an undergraduate major that prepares students for leadership roles in health and fitness or adventure education as well as minors and occupational endorsement certificates within the discipline. In addition, the department offers a variety of courses for students from other fields who wish to learn new physical skills and/or develop personal wellness.

Enrolling in Health, Physical Education & Recreation Courses

Acknowledgement of Risk, Release of Liability and Medical

Questionnaire Form: During the first class session, students will receive information about the course. A verbal description will be provided about the inherent risks associated with specific areas and activities. Students may be asked to complete one or all of the following: acknowledgement of risk forms, release of liability statements and provide personal medical information and numbers. Students may be asked to obtain a physical examination and medical consent from a health professional before participation in classes.

Minors: Sixteen- and 17-year-old students must receive department chair approval before they will be allowed to enroll in courses. Students under 16 cannot enroll in HPER classes. Approved students must also meet the university's Secondary School Student Enrollment Requirements (see Chapter 7).

The university or the department reserves the right to deny or discontinue the enrollment of a student in a course or courses if the university or the department determines that the student lacks the maturity, the legal or intellectual ability, or the academic preparedness to participate on an equal footing with other students, or if it is otherwise not in the best interest of the university or the department for the student to participate.

Behavioral Expectations: Due to the inherent risks involved in activity courses, HPER's safety and risk management policies and procedures are strictly enforced. Students are expected to comply with all policies and procedures. HPER reserves the right to withdraw from a course any student(s) whom a faculty member believes poses a safety risk to themselves or others.

Any financial reimbursements related to such withdrawals are subject to standard university refund policies.

Outdoor/Adventure Courses: The Department of Health, Physical Education & Recreation provides outdoor adventure education through the use of hands-on techniques. Course offerings are diverse and include topics such as backpacking, rock climbing, sea kayaking, winter camping, emergency medicine, and wilderness leadership. Outdoor/adventure classes are held in Alaska's wilderness, an environment that can pose a risk to even the most experienced outdoor leader.

Students may be required to perform activities in extremely inclement weather i.e., rain, sleet, snow, wind or sub-zero temperatures.

Additionally, there is an assumption that a minimum level of physical fitness is needed to succeed in and enjoy many of the activities.

Consequently, before enrolling in these courses, students should review the following information.

I. PHYSICAL FITNESS LEVEL

Many 100-level courses have been designed for the student with an average level of fitness and health; e.g., a student would be expected to comfortably travel five miles over easy terrain. If a higher than average fitness level is required, a special note will identify the necessary level of fitness.

a. **Good fitness** is defined as above average fitness relative to a typical, healthy adult. Courses that require good fitness will involve a moderate degree of physical activity, may involve travel over challenging terrain, may involve carrying a pack weighing 50 pounds or more, or may involve multiple hours of exercise. A student who is physically or mentally unprepared to withstand a moderate amount of exercise should not enroll in the course.

b. **Excellent fitness** is defined as possessing health of outstanding quality or being in remarkably good physical condition. Excellent fitness is required for expedition courses.

II. VENUE AND TERRAIN DIFFICULTY

Students will hike and travel in a variety of environments in outdoor/adventure courses. The following breakdown provides an overview of terrain difficulty.

- Easy terrain** can be negotiated by novices. Traveling is usually done on well-maintained trail systems; can include hiking, skiing or snowshoeing; elevation gains/losses generally under 500 feet per mile; and stream crossings of calf deep or less. Off-trail touring includes traveling on firm ground over gentle terrain.
- Moderate terrain** requires good physical fitness. Traveling is usually done on rugged trails or off trail. The hiking often includes inclines/declines of 500 to 1500 feet per mile. Off-trail travel can include bushwhacking; uneven, wet or marshy ground; scrambling up, over or around small terrain features; and river crossings up to knee deep.
- Difficult terrain** requires excellent physical fitness. Traveling is usually done off trail and can include uneven, challenging ground; lack of firm footing; steep tundra, rock or scree; wet, snowy or icy slopes, and thigh- to waist-deep river crossings. Specialized gear may be required for travel.
- Extremely difficult terrain** requires excellent physical fitness. Traveling is done off trail and participants must be prepared to endure all of the features listed under "difficult terrain" for long hours and potentially multiple days. Specialized gear is usually required for travel.

III. STUDENT HEALTH INSURANCE

Students enrolling in many outdoor/adventure activity courses are provided with basic health insurance coverage during the field sessions only. This policy is intended to supplement personal policies and does not include the cost of emergency evacuation.

Occupational Endorsement Certificate, Fitness Leadership

The Fitness Leadership Occupational Endorsement Certificate provides students the opportunity to acquire the knowledge and skills necessary to develop a career in the ever-changing fitness industry. An array of career possibilities is available to individuals who successfully complete this program in group fitness instruction or personal training.

This comprehensive program provides students with 90 hours of leadership training in exercise theory and practice and 60 hours of training in their chosen fitness specialty or emphasis area: Group Fitness Leader or Personal Trainer. All classes combine current fitness research and training techniques with practical, hands-on teaching experience. This program follows the guidelines established by the American Council on Exercise (ACE) and the American College of Sports Medicine (ACSM).

The Fitness Leadership Occupational Endorsement Certificate is designed to provide quality education and training to individuals interested in working in the fitness industry. Of the required 10 credits, 7 include lecture courses and 3 are laboratory sessions. The labs are enhanced by practicum experiences that reinforce skills, knowledge, and leadership qualities. Students receive training in basic applied kinesiology and exercise physiology, nutrition and healthy weight loss, injury prevention, fitness assessment, legal considerations, special populations, health screening, leadership, and motivation.

Admission Requirements

Satisfy the UAA Admissions Requirements for Occupational Endorsement Certificates found in Chapter 7, Academic Standards and Regulations.

Academic Progress

A minimum grade of B or better in each required course.

Occupational Endorsement Requirements

- Complete the following required courses (7 credits):

| | | |
|---------|-----------------------------|---|
| DN A101 | Principles of Nutrition (3) | 3 |
| | or | |

| | | |
|----------|--|---|
| DN A203 | Nutrition for Health Sciences (3) | |
| PEP A112 | First Aid and CPR for Professionals | 1 |
| PEP A115 | Fitness Leadership/Group Fitness and Personal Training | 3 |

- Complete the required courses within one of the following two emphasis areas (3 credits):

Group Fitness Leader

| | | |
|----------|---|---|
| PEP A116 | Techniques in Group Fitness Instruction | 2 |
| | Choose PER activity course related to specialty | 1 |

Personal Trainer

| | | |
|----------|---------------------------------|---|
| PEP A117 | Techniques in Personal Training | 2 |
| PER A118 | Beginning Weight Training | 1 |

- A total of 10 credits is required for this certificate.

Bachelor of Science, Physical Education

The core of the Bachelor of Science in Physical Education degree emphasizes the broad fundamental principles of physical education, including scientific foundations, psychological and cultural aspects, assessment and testing methods, trends, and leadership development in a variety of physical activities. Students may choose to pursue study in one of two emphasis areas within the degree: Health and Fitness Leadership or Adventure Leadership.

The Health and Fitness Leadership emphasis and the Outdoor Leadership and Administration emphases prepare students for professional positions in rapidly growing fields. Each emphasis focuses on developing leadership expertise as well as the knowledge, physical skills, and technical competencies to prepare graduates for the job market. The Health and Fitness Leadership emphasis readies students for employment in hospital-based health education and fitness programs, community or public health/fitness programs, private health clubs and fitness facilities, corporate fitness/wellness programs, military fitness centers, as personal trainers, or helps them prepare for further education in physical therapy. The Adventure Leadership emphasis readies graduates for employment with youth or recreational programs, adventure tourism, guide services, camps, schools, or a host of experiential education opportunities.

Program Outcomes

Graduates of the Bachelor of Science in Physical Education will have demonstrated:

- Knowledge of physical education concepts as well as concepts related to a specific area of emphasis.
- Competency in many activity forms and proficiency in a few.
- Ability to apply established national standards in the field(s).
- Proficiency in entry-level discipline specific administrative skills.
- Proficiency in general and discipline-specific technologies.
- Effective leadership skills, including the abilities to: 1) evaluate and direct/re-direct skillful movement, 2) lead a variety of activities, 3) use appropriate motivational strategies, 4) employ appropriate safety and prevention techniques, 5) exercise sound judgment and good decision-making skills, and 6) communicate effectively.

Admission Requirements

- Complete the Baccalaureate Degree Programs Admission Requirements in Chapter 7, Academic Standards and Regulations.
- Meet with a Health, Physical Education & Recreation advisor regarding application, program admission, and development of a program of study.
- Submit a departmental application for admission to the Department of Health, Physical Education & Recreation.
- The degree requires computer competency which may be demonstrated by:
 - successful completion of an approved university computer course,

- b. work-related experience requiring computer competency as approved by faculty or major advisor, or
- c. demonstrated computer competency as approved by faculty or major advisor.

Advising

All students are encouraged to meet with their academic advisor each semester for the purpose of reviewing their academic progress and planning future courses. It is particularly important for students to meet with their advisor whenever difficulties arise.

Academic Progress

Maintain a 2.50 GPA or higher for the courses within the emphasis and a B or better in the internship (PEP A495/PEP A496).

Degree Requirements

1. Complete the General University Requirements for Baccalaureate Degrees listed at the beginning of this chapter.
2. Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter.
3. Complete the Support Courses and the Major Requirements listed below.

Required Support Courses

Complete the following support courses, some of which may be used to satisfy the General Education Requirements:

| | | |
|-----------|--------------------------------------|---|
| BIOL A111 | Human Anatomy and Physiology I | 4 |
| BIOL A112 | Human Anatomy and Physiology II | 4 |
| DN A203 | Nutrition for Health Sciences (3) | 3 |
| | or | |
| DN A215 | Sports Nutrition (3) | |
| HS A220 | Core Concepts in the Health Sciences | 3 |
| PSY A111 | General Psychology (3) | 3 |
| | or | |
| PSY A150 | Lifespan Development (3) | |

Major Requirements

1. Complete the following core courses (39 credits):

| | | |
|----------|---|---|
| PEP A181 | Introduction to Health, Physical Education and Recreation | 3 |
| PEP A182 | Technology in Health, Physical Education & Recreation | 1 |
| PEP A183 | Wellness Principles | 1 |
| PEP A184 | Fundamental Motor Skills | 1 |
| PEP A280 | Leadership in Health, Physical Education & Recreation | 3 |
| PEP A281 | Leadership in Activities for Diverse Populations | 2 |
| PEP A282 | Leadership in Initiative Activities | 2 |
| PEP A284 | Leadership in Fitness Activities | 2 |
| PEP A382 | Kinesiology and Biomechanics | 4 |
| PEP A383 | Movement Theory and Motor Development | 3 |
| PEP A384 | Cultural and Psychological Aspects of Health and Physical Activity | 3 |
| PEP A385 | Physiology of Exercise | 4 |
| PEP A486 | Standards and Assessment in Health, Physical Education, and Recreation | 3 |
| PEP A487 | Administration and Supervision in Health, Physical Education and Recreation | 3 |
| | Complete two from: | 4 |
| PEP A283 | Leadership in Aquatic Activities (2) | |
| PEP A285 | Leadership in Team Activities (2) | |
| PEP A286 | Leadership in Individual and Dual Activities (2) | |
| PEP A287 | Leadership in Outdoor Recreation Activities (2) | |
| PEP A288 | Leadership in Rhythmic Activities (2) | |
2. Complete one of the following emphasis areas:

Health & Fitness Leadership (43 credits)

| | | |
|------------|--|---|
| BA A151 | Introduction to Business | 3 |
| BA A231 | Fundamentals of Supervision | 3 |
| BA A260 | Marketing Practices | 3 |
| HS/NS A433 | Health Education: Theory and Practice | 3 |
| PEP A251 | Prevention and Care of Activity-Related Injuries | 3 |
| PEP A453 | Health Promotion | 3 |
| PEP A454 | Exercise Testing and Prescription | 4 |
| PEP A455 | Cardiac Rehabilitation and Special Populations | 4 |
| PEP A456 | Contemporary Personal Health Issues | 3 |
| PEP A495 | Internship in Health and Fitness Leadership | 6 |
| | Electives | 8 |

Outdoor Leadership & Administration (43 credits)

| | | |
|-----------|--|---|
| BA A151 | Introduction to Business | 3 |
| ENVI A303 | Environmental Ethics | 3 |
| PEP A262 | Foundations of Outdoor Recreation | 3 |
| PEP A264 | Recreation Program Planning and Evaluation | 3 |
| PEP A363 | Natural History Interpretation and Environmental Education | 3 |
| PEP A365 | Outdoor Leadership Theory and Practice | 3 |
| PEP A464 | Outdoor Recreation Administration | 3 |
| PEP A467C | Land-Based Outdoor Leadership | 2 |
| PEP A467D | Water-Based Outdoor Leadership | 2 |
| PEP A496 | Internship in Adventure Leadership | 6 |
| PER A169 | Four-Season Backpacking | 3 |
| | Electives | 3 |

Choose a minimum of 6 credits from the following:

| | | |
|-----------|---|---|
| PER A146 | Beginning Rock Climbing (1) | 6 |
| PER A147 | Beginning Ice Climbing (1) | |
| PER A148 | Beginning Indoor Sport Climbing I (1) | |
| PER A150 | Water Safety and Rescue (1) | |
| PER A151 | Beginning Canoeing (1) | |
| PER A152 | Beginning River Rafting (1) | |
| PER A153 | Beginning Sea Kayaking (1) | |
| PER A 164 | Skiing Alaska's Backcountry (2) | |
| PER A165 | Avalanche Hazard Recognition and Evaluation (1) | |
| PER A181 | Crevasse Rescue Techniques (1) | |
| PER A246 | Intermediate Rock Climbing (2) | |
| PER A252 | Intermediate River Rafting (2) | |
| PER A253 | Intermediate Sea Kayaking (2) | |

3. A minimum of 120 credits is required for the degree of which 42 credits must be upper division.

Other requirements: Pass a swim test and possess Current Wilderness First Responder Certification from a recognized institution at time of completion

Recommended Course Sequence

See a Health, Physical Education & Recreation advisor for information on a recommended course sequence.

Minor, Athletic Training

Students who wish to minor in Athletic Training must complete the following requirements. A minimum of 20 credits, including 14 upper division credits, is required for the minor. Prerequisites for these courses must also be satisfied. Requires a grade of C or better in PEP A346 and PEP A347.

1. Complete the following requirements (20 credits):

| | | |
|----------|--|---|
| DN A203 | Nutrition for Health Sciences (3) | 3 |
| | or | |
| DN A215 | Sports Nutrition (3) | |
| PEP A251 | Prevention and Care of Activity-Related Injuries | 3 |

| | | |
|----------|-------------------------------------|---|
| PEP A346 | Lower Body Injury Assessment Skills | 3 |
| PEP A347 | Upper Body Injury Assessment Skills | 3 |
| PEP A382 | Kinesiology and Biomechanics | 4 |
| PEP A385 | Physiology of Exercise | 4 |

Minor, Coaching

Students who wish to minor in Coaching must complete the following requirements. A minimum of 22 credits, including 10 upper division credits, is required for the minor. Prerequisites for these courses must also be satisfied. Requires a grade of C or better in PEP A130 and sport specific coaching course.

- Complete the following core courses (20 credits):

| | | |
|----------|--|---|
| PEP A130 | Introduction to Coaching | 3 |
| PEP A230 | Sport Ethics | 1 |
| PEP A231 | Drugs and Sport | 1 |
| PEP A251 | Prevention and Care of Activity-Related Injuries | 3 |
| PEP A281 | Leadership in Activities for Diverse Populations | 2 |
| PEP A383 | Movement Theory and Motor Development | 3 |
| PEP A384 | Cultural and Psychological Aspects of Health and Physical Activity | 3 |
| PEP A385 | Physiology of Exercise | 4 |
- Choose one of the following: 2

| | | |
|----------|--|--|
| PEP A233 | Coaching Track & Field and Running (2) | |
| PEP A234 | Coaching Wrestling (2) | |
| PEP A235 | Coaching Swimming and Diving (2) | |
| PEP A236 | Coaching Skiing (2) | |
| PEP A237 | Coaching Figure Skating (2) | |
| PEP A238 | Coaching Gymnastics (2) | |
| PEP A239 | Coaching Baseball/Softball (2) | |
| PEP A240 | Coaching Football (2) | |
| PEP A241 | Coaching Basketball (2) | |
| PEP A242 | Coaching Soccer (2) | |
| PEP A243 | Coaching Hockey (2) | |
| PEP A244 | Coaching Volleyball (2) | |

Minor, Health & Fitness Leadership *

Students who wish to minor in Health & Fitness Leadership must complete the following requirements. A minimum of 27 credits, including 6 upper division credits, is required for the minor. Prerequisites for these courses must also be satisfied. A minimum grade of C or better is required in the courses within the option.

- Complete the following core courses (24 credits):

| | | |
|-------------|--|---|
| BIOL A111/L | Human Anatomy and Physiology I with Laboratory | 4 |
| BIOL A112/L | Human Anatomy and Physiology II with Laboratory | 4 |
| DN A203 | Nutrition for Health Sciences (3) | 3 |
| or | | |
| DN A215 | Sports Nutrition (3) | |
| PEP A115 | Fitness Leadership/Group Fitness and Personal Training | 3 |
| PEP A385 | Physiology of Exercise | 4 |
| PEP A442 | Exercise and Aging | 3 |
| PEP A453 | Health Promotion | 3 |
- Choose one of the following options: 3-4

| | | |
|---|---|---|
| Fitness Instruction Option (3 credits) | | |
| PEP A116 | Techniques in Group Fitness Instruction | 2 |
| PER | activity course related to specialty | 1 |
| Personal Training Option (3 credits) | | |
| PEP A117 | Techniques in Personal Training | 2 |
| PER A118 | Beginning Weight Training | 1 |
| Wellness Option (4 credits) | | |
| PEP A116 | Techniques in Group Fitness Instruction | 2 |

| | | |
|----------|---------------------------------|---|
| PEP A117 | Techniques in Personal Training | 2 |
|----------|---------------------------------|---|

- A minimum of 27 credits is required for this minor.

* Not available to Physical Education majors with Health & Fitness Leadership emphasis.

Minor, Outdoor Leadership*

Students who wish to minor in Outdoor Leadership must complete the following requirements. A minimum of 22 credits, including 7 upper division credits are required for the minor. Prerequisites for these courses must also be satisfied. Requires a grade of B or better in PEP A467C or PEP A467D.

- Complete the following core courses (16 credits)

| | | |
|-----------|--|---|
| PEP A262 | Foundations of Outdoor Recreation | 3 |
| PEP A264 | Recreation Program Planning and Evaluation | 3 |
| PEP A365 | Outdoor Leadership Theory and Practice | 3 |
| PEP A467C | Land-Based Outdoor Leadership | 2 |
| PEP A467D | Water-Based Outdoor Leadership | 2 |
| PER A169 | Four-Season Backpacking | 3 |
- Choose a minimum of three (3) credits from the following: 3

| | | |
|----------|--------------------------------|--|
| PER A150 | Water Safety and Rescue (1) | |
| PER A151 | Beginning Canoeing (1) | |
| PER A152 | Beginning River Rafting (1) | |
| PER A153 | Beginning Sea Kayaking (1) | |
| PER A252 | Intermediate River Rafting (2) | |
| PER A253 | Intermediate Sea Kayaking (2) | |
- Choose a minimum of three (3) credits from the following: 3

| | | |
|----------|---------------------------------------|--|
| PER A146 | Beginning Rock Climbing (1) | |
| PER A147 | Beginning Ice Climbing (1) | |
| PER A148 | Beginning Indoor Sport Climbing I (1) | |
| PER A164 | Skiing Alaska's Backcountry (2) | |
| PER A181 | Crevasse Rescue Techniques (1) | |
| PER A246 | Intermediate Rock Climbing (2) | |
- A minimum of 22 credits is required for this minor.

Other requirements: Pass a swimming test and possess current certification in First Aid and CPR

* Not available to Physical Education majors with Outdoor Leadership & Administration emphasis

Minor, Physical Education *

Students who wish to minor in Physical Education must complete the following requirements. A total of 30 credits, including 10 upper division credits, is required for the minor. Prerequisites for these courses must also be satisfied. Requires a grade of C or better in the leadership courses.

- Complete the following core courses (15 credits):

| | | |
|-----------|---|---|
| BIOL A111 | Human Anatomy and Physiology I with Laboratory | 4 |
| BIOL A112 | Human Anatomy and Physiology II with Laboratory | 4 |
| PEP A181 | Introduction to Health, Physical Education and Recreation | 3 |
| PEP A182 | Technology in Health, Physical Education and Recreation | 1 |
| PEP A183 | Wellness Principles | 1 |
| PEP A184 | Fundamental Motor Skills | 1 |
| PEP A280 | Leadership in Health, Physical Education and Recreation | 3 |
| PEP A281 | Leadership in Activities for Diverse Populations | 2 |
| PEP A382 | Kinesiology and Biomechanics | 4 |
| PEP A383 | Movement Theory and Motor Development | 3 |
- Choose two of the following: 4

| | | |
|----------|---|--|
| PEP A282 | Leadership in Initiative Activities (2) | |
| PEP A283 | Leadership in Aquatic Activities (2) | |

| | |
|----------|--|
| PEP A284 | Leadership in Fitness Activities (2) |
| PEP A285 | Leadership in Team Activities (2) |
| PEP A286 | Leadership in Individual and Dual Activities (2) |
| PEP A287 | Leadership in Outdoor Recreation Activities (2) |
| PEP A288 | Leadership in Rhythmic Activities (2) |

*Not available to Physical Education majors.

FACULTY

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INDUSTRIAL PROCESS INSTRUMENTATION

Kenai Peninsula College (KPC)

156 College Road, Soldotna, AK, 99669, (907) 262-0330, (877) 262-0330

www.kpc.alaska.edu

Advising for this program is only available from the Instrumentation faculty at Kenai Peninsula College. Please call (907) 262-0330 or (877) 262-0330 for more information.

Industrial Process Instrumentation is a specialized technical degree. Strong math and science skills are emphasized. Students must work closely with advisors in order to complete this program in two years. A fifth semester of coursework may be necessary.

Students are prepared for employment as instrument technicians. Instrument technicians are responsible for the repair, maintenance, adjustment, and calibration of automatic controls used in refineries, chemical plants, pipelines, oil and gas production facilities, food processing facilities, and other industries where automatic control is used.

Associate of Applied Science, Industrial Process Instrumentation

The Industrial Instrumentation program is offered only at Kenai Peninsula College, Kenai River Campus.

The graduates of the UAA Industrial Process Instrumentation program will have the ability to:

1. Read P & ID drawings and piping isometric drawings;
2. Enter and print data in a spreadsheet program and enter and edit text using a word processor;
3. Predict the output from a pneumatic or electronic transmitter for a given process input condition;
4. Predict the effect of changes in gain or integral time on the dynamic behavior of closed-loop control;
5. Describe the techniques for troubleshooting an orifice meter and flow control loop using either electronic or pneumatic equipment;
6. Correctly interpret RTD or thermocouple output values as process temperatures;
7. Correctly predict the voltage drops in a series connected current loop or a parallel connected voltage loop;
8. Correctly implement a set-reset function using Boolean logic, TTL circuits, or relay logic;
9. Correctly distinguish between data transmitted by analog signals and data transmitted by digital signals;
10. Identify typical pumps, compressors, transmitters, and similar components;
11. Communicate technical issues to peers both in writing and orally; and

12. Demonstrate punctuality and responsibility suitable to work place employment.

Admission Requirements

1. Complete university Admissions Requirements for Associate's degrees found in Chapter 7, Academic Standards and Regulations.
2. All students are required to take CIS A105 (or CIS A110) or possess equivalent knowledge prior to entering this degree program.

General University Requirements

Complete the General University and the General Course Requirements for Associate of Applied Science Degrees located at the beginning of this chapter.

Communication and General Requirements

1. Oral Communication Requirements:

| | | |
|-----------|------------------------------------|---|
| COMM A111 | Fundamentals of Oral Communication | 3 |
| | or | |
| COMM A235 | Small Group Communication (3) | |
| | or | |
| COMM A241 | Public Speaking (3) | |
2. Written Communication Requirements:

| | | |
|-----------|----------------------------------|---|
| ENGL A111 | Methods of Written Communication | 3 |
| ENGL A212 | Technical Writing | 3 |
3. General Requirements:

| | | |
|-----------|--|---|
| MATH A105 | Intermediate Algebra (or higher level) | 3 |
|-----------|--|---|
4. Natural Science Requirements:

| | | |
|-------------|------------------------------------|---|
| PHYS A115/L | Physical Science I for Technicians | 4 |
| | or | |
| PHYS A123/L | Basic Physics I (4) | |
| CHEM A103/L | Survey of Chemistry (4) | 4 |
| | or | |
| CHEM A105/L | General Chemistry I (4) | |

Major Requirements

| | | |
|--|---|-----|
| ET A101 | Basic Electronics: DC Circuits | 4 |
| ET A102 | Basic Electronics: AC Circuits | 4 |
| ET A126 | Digital Electronics | 4 |
| ET A175 | Technical Introduction to Computing Systems | 3 |
| ET A240 | Computer Systems Interfacing | 3 |
| ET A241 | Digital Control Systems | 3 |
| ET A246 | Electronic Industrial Instrumentation | 3 |
| PETR A155 | Blueprint Reading (3) | 3-4 |
| | or | |
| EDD A288 | Computer Aided Drafting (4) | |
| PETR A240 | Industrial Process Instrumentation III | 3 |
| PETR A244 | Industrial Process Instrumentation IV | 3 |
| PRT A130 | Process Technology I: Equipment | 4 |
| PRT A140 | Industrial Process Instrumentation I | 3 |
| PRT A144 | Industrial Process Instrumentation II | 3 |
| Technical Electives – Complete one of the following: | | 3-4 |
| CNT A170 | CCNA 1 Network Fundamentals (4) | |
| CS A109 | Computer Programming (Languages Vary) (3) | |
| ET A243 | Programmable Logic Controllers (3) | |
| PRT A230 | Process Technology II: Systems (4) | |
| PRT A250 | Process Troubleshooting (3) | |

A total of 66-68 credits is required for the degree.

FACULTY

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Rich Kochis, Assistant Professor, IFRLK@uaa.alaska.edu

MASSAGE THERAPY

Allied Health Science Building (AHS), Room 169, (907) 786-4930

www.uaa.alaska.edu/ctc/alliedhealth/massage

Admission to the certificate program is currently suspended. Contact the department for further information.

MECHANICAL TECHNOLOGY

Kenai Peninsula College (KPC), Kenai River Campus

156 College Road, Soldotna, AK 99669, (907) 262-0300, (877) 262-0330

www.kpc.alaska.edu

The one-year certificate in Mechanical Technology provides the student with experience in the repair and maintenance of most major types of rotating equipment and the operation of common machine tools. This program prepares students for employment as entry-level mechanics, repair personnel or millwrights in all types of industrial plants. This certificate may take more than two semesters to complete due to staggered course offerings.

Undergraduate Certificate, Mechanical Technology

The Mechanical Technology program is offered at Kenai Peninsula College, Kenai River Campus.

Advising for this program is only available from the Technology faculty at Kenai Peninsula College. Please call (907) 262-0344 for more information.

The graduates of the UAA Mechanical Technology program will have the ability to:

1. Operate basic machine tools at an entry level: lathe, mill, grinder, saws, drill press, sanders, arbor press, radial drill, ovens, precision measuring tools;
2. Measure, identify, and apply with real world parts and pieces, pipe, pipe schedules, fittings and related steel structural materials, and produce appropriate blue prints;
3. Show proficiency in the use, calibration, repair, maintenance, and care of all precision measuring tools;
4. Complete advanced machine shop projects in a variety of materials using standard machine tools and student-created blue prints;
5. Plan and complete machining jobs on the CNC (Computer Numerical Control) equipment in a variety of materials including steel, aluminum, brass, cast iron, stainless, nylon, plastics, and hardwood (optional focus);
6. Pass entry-level welding certification test (optional focus).

Admission Requirements

Complete university Admissions Requirements for Undergraduate Certificates found in Chapter 7, Academic Standards and Regulations.

General University Requirements

Complete the General University and the General Course Requirements for Certificates located at the beginning of this chapter.

Major Requirements

1. Certificate Requirements (18 Credits):

| | | |
|------------|--|---|
| MATH A105* | Intermediate Algebra (or any course for which MATH A105 is the prerequisite) | 3 |
| MECH A101 | Introduction to Machine Shop | 4 |
| PETR A155 | Blueprint Reading | 3 |
| PRT A130 | Process Technology I: Equipment | 4 |
| WELD A101 | Gas and Arc Welding | 4 |

2. Choose a minimum of 14 credits from the following electives:

| | | |
|-----------|---------------------------------|---|
| EDD A288 | Computer Aided Drafting | 4 |
| ET A101 | Basic Electronics: DC Circuits | 4 |
| MECH A102 | Intermediate Machine Shop | 4 |
| MECH A115 | Gasoline Engine Rebuilding | 3 |
| MECH A201 | Advanced Machine Shop | 4 |
| MECH A220 | Computer Numerical Control Mill | 4 |
| WELD A108 | Wire Welding | 4 |
| WELD A109 | TIG Welding | 4 |

3. A total of 32 credits is required for this certificate.

FACULTY

Drew O'Brien, Assistant Professor, IFDO@uaa.alaska.edu

Fritz Miller, Associate Professor, IFFWM@uaa.alaska.edu

MEDICAL ASSISTING

Allied Health Sciences Building (AHS), Room 161, (907) 786-6928

www.uaa.alaska.edu/ctc/programs/alliedhealth/ma

Medical assistants are multi-skilled allied health professionals specifically trained to work in ambulatory settings, such as physicians' offices, clinics, and outpatient care centers. These multi-skilled personnel can perform administrative and clinical procedures. Clinical duties include assisting with examinations, recording vital signs, preparing patients for various procedures, sterilizing instruments, maintaining examining rooms, drawing blood, recording electrocardiograms, removing sutures and changing dressings. Administrative responsibilities of the medical assistant include answering telephones and greeting patients, maintaining medical records, performing medical coding, completing health insurance forms, scheduling appointments, and preparing medical and financial reports.

The UAA Medical Assisting program offers an Associate of Applied Science degree in Medical Assisting, as well as preparation for the Certified Medical Assistant (CMA) examination and an Occupational Endorsement Certificate in Medical Office Coding. The UAA 40-credit CMA Examination Preparation course of study is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Medical Assisting Education Review Board: Commission on Accreditation of Allied Health Education Programs, 1361 Park Street, Clearwater, FL 33756, (727) 210-2350. Students who complete the UAA CMA Examination Preparation courses, as outlined below, are eligible to sit for the CMA examination. Please note: Individuals who have been found guilty of a felony, or pleaded guilty to a felony, are not eligible to take the CMA examination; however, a waiver may be granted by the American Association Medical Assistants (AAMA) Certifying Board in cases of mitigating circumstances.

In order to perform medical assisting duties, a student should have good manual dexterity, visual ability to locate patient veins and interpret color changes, and good hearing acuity. Most medical assistants should be able to lift in order to assist patients, and be able to bend, reach, and kneel; many medical assistants are required to stand for long periods of time. Please contact the Medical Assisting Department for a list of medical assisting technical standards required for students to successfully complete the clinical portion of the Medical Assisting program.

Other employment opportunities for which the Medical Assisting program provides training include medical transcriptionist, medical receptionist, medical coder, and health insurance specialist. Medical terminology courses are valuable for all health science students and may be taken by anyone entering a health occupation. Formal admission to the Medical Assisting program is not required for all courses.

Occupational Endorsement Certificate, Medical Office Coding

Certificate Description and Outcomes

Medical office coders work in medical office and outpatient settings coding medical records for statistical and reimbursement purposes.

Description of Outcomes

This program prepares students to work as medical coders in outpatient settings. The program is based upon the American Health Information Management Association (AHIMA) recommendations. Upon successful completion of the program, students are prepared to sit for the AHIMA's Certified Coding Specialist – Physician (CCS-P) coding examination. After successful completion of this program the students will be able to demonstrate the following:

1. Proficiency in the performance of Current Procedural Terminology (CPT) coding.
2. Proficiency in the performance of Healthcare Common Procedure Coding System (HCPCS) coding.
3. Proficiency in the performance of International Classification of Diseases, Clinical Modification diagnostic coding.

Admission Requirements

See Occupational Endorsement Certificate Admission Requirements in Chapter 7, Academic Standards and Regulations.

Certificate Requirements

1. Complete the following core courses with a grade of C or higher: (11 credits)

| | | |
|---------|---|---|
| MA A101 | Medical Terminology | 3 |
| MA A104 | Essentials of Human Disease | 3 |
| MA A220 | Coding for the Medical Office | 3 |
| MA A320 | Advanced Case Studies in Medical Coding | 2 |
2. Complete a minimum of 6 credits of the following support courses, as approved by the department advisor, with a minimum grade of C:

| | |
|-----------|--|
| BIOL A100 | Human Biology (3) |
| BIOL A111 | Human Anatomy and Physiology I (4) |
| BIOL A112 | Human Anatomy and Physiology II (4) |
| MA A230 | Billing and Insurance for the Medical Office (3) |
3. A total of 17 credits is required for this occupational endorsement certificate.

Preparation for the Certified Medical Assistant (CMA) examination

1. Demonstrate the following, or complete preparatory courses as recommended by the medical assisting academic advisor.
 - Placement into MATH A055 or above, or completion of MATH A054 with a minimum grade of C.
 - Placement into ENGL A111 or above, or completion, with a minimum grade of C, of PRPE A107 and PRPE A108, or ENGL A109.
 - Recommended keyboarding skill of 45 wpm or completion of keyboarding course(s).
2. Complete the following required courses with a minimum grade of C in each course:

| | | |
|--|---|---|
| BIOL A100 | Human Biology | 3 |
| <i>3 credits from the following:</i> | | |
| CIS A105 | Introduction to Personal Computers and Application Software (3) | 3 |
| or | | |
| CIOS A130A | Word Processing I: MS Word (1) | |
| and | | |
| CIOS A135A | Spreadsheets I: MS Excel (1) | |
| and | | |
| One additional credit of CIOS coursework (1) | | |

| | | |
|----------|--|---|
| MA A101 | Medical Terminology | 3 |
| MA A104 | Essentials of Human Disease | 3 |
| MA A120* | Medical Office Procedures | 4 |
| MA A140 | Medical Transcription I (2-3) | 2 |
| MA A220 | Coding for the Medical Office | 3 |
| MA A230 | Billing and Insurance for the Medical Office | 3 |
| MA A250 | Clinical Procedures I | 4 |
| MA A255 | Clinical Procedures II | 4 |
| PSY A150 | Lifespan Development | 3 |

*Completion of MA A120A and MA A120B satisfies the requirement of MA A120.

3. Complete MA A295 Medical Office Externship. 5
4. Successful completion of the above-listed 40 credits is required to be eligible to sit for the Certified Medical Assistant (CMA) Examination.

Additional Information Regarding Externship

1. A recent physical examination is required prior to the beginning of externship. Each student must submit a physical examination that certifies the student is free from infectious diseases and physically able to participate in the externship portion of the program.
2. Current Healthcare Provider (American Heart Association) or Professional Rescuer (American Red Cross) certificate in CPR/AED for infants, children and adults, and first aid certification are required prior to the start of externship, and must be kept current throughout the externship course.
3. Current immunizations, proof of medical insurance, and criminal background checks are required by some medical offices which serve as medical office externship sites. The cost to meet these requirements is the responsibility of the student. Students who are injured while completing externship assignments are responsible for all associated medical costs. Students are strongly encouraged to maintain personal medical insurance.
4. Transportation to off-campus externship sites is the responsibility of the student.

Associate of Applied Science, Medical Assisting

Degree Description and Outcomes

At the completion of this program, students are able to demonstrate:

1. Basic knowledge in the principles and skills related to administrative, clinical, and general areas of medical assisting.
2. Entry-level medical assistant employment skills.
3. Professionalism as certified medical assistant (CMA).

Admission Requirements

1. See Certificate and Associate of Applied Science Degree Program Admission Requirements at the beginning of this chapter.
2. Submit University of Alaska Anchorage application for admission and required transcripts.
3. Take UAA-approved English and math placement tests. Call (907) 786-4500 for testing information.
4. Call (907) 786-6928 to make an appointment with a Medical Assisting academic advisor prior to registering for classes.

Advising

Medical Assisting courses are offered in fall and spring semesters. A six-week office practice (externship) begins in May. Some courses are offered only once per year. Students should meet with an academic advisor prior to registering for classes in order to determine the best sequencing of courses for their program of study. Part-time students are welcome.

General University Requirements

Complete the General University Requirements for Associate of Applied Science Degrees located at the beginning of this chapter.

General Course Requirements

Complete the Associate of Applied Science General Course Requirements (15 credits) located at the beginning of this chapter. (Completion of BIOL A100 and PSY A150 fulfill the requirement of 6 credits of mathematics, humanities, social sciences or natural sciences.)

Major Requirements

- Complete the required courses for the Preparation for the Certified Medical Assisting (CMA) Examination as outlined above with a minimum grade of C in each course. 40
- Complete 8 to 9 credits in the following courses: 8-9

| | | |
|------------|--|--|
| ACCT A101 | Principles of Accounting I (3) | |
| | or | |
| ACCT A120 | Bookkeeping for Business I (3) | |
| DN A101 | Principles of Nutrition (3) | |
| | or | |
| DN A203 | Nutrition for Health Sciences (3) | |
| MA A240 | Medical Transcription II (3) | |
| MA A320 | Advanced Case Studies in Medical Coding (2) | |
| MEDT A101 | Phlebotomy Procedures (3) | |
| MEDT A110 | Specimen Processing (3) | |
| | or | |
| MEDT A195A | Phlebotomy Practicum (3) | |
| RADT A101 | Radiation Protection and Biology for Limited Radiography Professionals (3) | |
- Elective credits. 0-3
- A minimum of 60 credits is required for this degree.

FACULTY

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MEDICAL LABORATORY TECHNOLOGY

Allied Health Sciences Building (AHS) Room 169, (907) 786-4930,
www.uaa.alaska.edu/ctc/alliedhealth/medlab

The mission of the Medical Laboratory Technology Department is to graduate competent and ethical clinical laboratory professionals with the knowledge and the skills for career entry. It is also the department's mission to prepare graduates for leadership roles in the clinical laboratory and professional organizations and to instill an understanding of the need for maintaining continuing competency in a rapidly changing and dynamic profession.

The Medical Laboratory Technology Department has a strong commitment to the career ladder approach to higher education. With career ladder programs, the students enrolled in the Bachelor of Science have an option to gain phlebotomy certification in one year and medical laboratory technician certification in two years as they pursue a bachelor's degree. The AAS graduates who wish to obtain a bachelor's degree in Medical Technology may "career ladder" without loss of credit.

General admission requirements for all students entering programs offered by the Medical Laboratory Technology Department include:

- Complete the Medical Laboratory Technology program application.
- Read and sign the Essential Requirements for Enrollment.
- High school diploma or GED equivalency.
- Documentation of the following prior to enrollment in either MEDT A101 or MEDT A132:
 - Immunity to rubella, rubeola and chicken pox confirmed by titer.
 - Immunity to hepatitis A and hepatitis B. Students must have started the immunization series prior to enrolling in the courses.

- Tetanus/diphtheria/pertussis (Tdap) vaccination within the past 10 years.
 - Freedom from active tuberculosis, documented annually by negative PPD skin test or by health examination by a nurse practitioner, physician or physician's assistant.
- Documentation of the following prior to enrolling in a practicum (MEDT A195A, MEDT A195B, MEDT A295 or MEDT A495):
 - Computer competency.
 - Background check within six months prior to start of practicum.
 - Personal medical insurance.

Additional admission requirements are listed under program descriptions.

The Medical Laboratory Technology Department assumes no responsibility for illness or injuries experienced by students in conjunction with student labs. It is strongly recommended that students maintain personal medical insurance while enrolled in any of the programs offered by the Medical Laboratory Technology Department. Students enrolled in practicum (MEDT A195A, MEDT A195B, MEDT A295 or MEDT A495) must provide their own transportation to the clinical facility. Personal protective equipment is provided by the training facility. The clinical facilities require proof of medical insurance coverage; therefore, students are required to maintain personal medical insurance while enrolled in practicum courses. Medical insurance is available through the Student Health and Counseling Center. Liability insurance is purchased by the Medical Laboratory Technology Department to cover the student's practicum. The occupational endorsement certificate, AAS, and BS degrees are not contingent upon the students passing any type of external certification or licensure examination.

The AAS in Medical Laboratory Technology and the BS in Medical Technology programs are accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 N. River Road, Suite 720, Rosemont, IL 60018-5119, (773) 714-8880. NAACLS is recognized by the United States Department of Education and by the Council for Higher Education.

Advising

All students are encouraged to meet with their academic advisor each semester for the purpose of reviewing their academic progress and planning future courses. It is particularly important for students to meet with their advisor whenever academic difficulties arise.

Honors in Medical Technology

Students majoring in medical technology are eligible to graduate with departmental honors by satisfying the following requirements:

- Meet the requirements for a BS in Medical Technology.
- Earn a grade point average of 3.5 or higher in courses applicable to the degree requirements. Only UAA and transfer courses taken within the last seven years will be included in the GPA for departmental honors.
- Obtain approval to enroll in the Honors Elective from the Program Director.
- Pass the Honors Elective course, MEDT A402 Medical Technology Honors: Quality Assessment Project.

Occupational Endorsement Certificate, Phlebotomist

Phlebotomists obtain blood and other samples for laboratory testing. They establish professional relationships with their patients, collect and prepare specimens, maintain collection areas and equipment, and perform record keeping duties. Students are eligible to sit for national certification examinations in phlebotomy after completion of MEDT A195A.

Program Outcomes

The specific educational outcomes for the program are to produce graduates who:

- Select the appropriate site and demonstrate the proper technique for collecting, handling, and processing blood and non-blood specimens.
- Demonstrate professional conduct, stress management, interpersonal, and communication skills with patients, peers, other health care personnel, and the public, recognizing possible legal implications.
- Recognize and adhere to infection control and safety policies and procedures.
- Demonstrate an understanding of test requisitioning.
- Identify factors that affect specimen collection procedures and test results, and take appropriate actions within predetermined limits when applicable.
- Recognize and act upon individual needs for continuing education as a function of growth and maintenance of professional competence.
- Perform point-of-care testing according to standard operating procedures.

Certificate Requirements

1. Complete the Occupational Endorsement Admission Requirements in Chapter 7, Academic Standards and Regulations.
2. Complete the General Admissions Requirements for all programs in the Medical Laboratory Technology Department that are listed at the beginning of this section.
3. The Phlebotomist Occupational Endorsement Certificate is offered on campus and by distance delivery. Distance students must contact the Medical Laboratory Technology Department to arrange for a mentor and clinical training facility prior to enrolling in any of the courses.
4. Students must earn a minimum grade of C or higher or P in the following courses:

| | | |
|------------|-----------------------|---|
| MEDT A101 | Phlebotomy Procedures | 3 |
| MEDT A110 | Specimen Processing | 3 |
| MEDT A195A | Phlebotomy Practicum | 3 |
5. A total of 9 credits is required for the OEC.

Occupational Endorsement Certificate, Clinical Assistant

Clinical assistants perform basic laboratory testing in medical laboratories, working under the supervision of a medical laboratory scientist, medical laboratory technician, or pathologist. A clinical assistant collects and processes blood specimens and performs waived testing procedures in chemistry, hematology, microbiology, and urinalysis.

Program Outcomes

The specific educational outcomes for the program are to produce graduates who have met the educational outcomes for the Phlebotomist OEC and who:

- Perform waived testing according to standard operating procedures.
- Monitor quality control within predetermined limits.
- Select both appropriate media for inoculation of clinical specimens and incubations conditions based on the culture requirements for the potential pathogens.

Certificate Requirements

1. Complete the Occupational Endorsement Certificate Admission Requirements at the beginning of Chapter 7, Academic Standards and Regulations.
2. Complete the General Admissions Requirements for all programs in the Medical Laboratory Technology Department that are listed at the beginning of this section.
3. The Clinical Assistant Occupational Endorsement Certificate is offered on campus and by distance delivery. Distance students must contact the Medical Laboratory Technology Department to arrange for a mentor and clinical training facility prior to enrolling in any of the courses.

4. Students must earn a minimum grade of C or higher or P in the following courses:

| | | |
|------------|--------------------------------------|---|
| MEDT A101 | Phlebotomy Procedures | 3 |
| MEDT A105 | Microbiology for Clinical Assistants | 3 |
| MEDT A106 | Waived Testing | 4 |
| MEDT A110 | Specimen Processing | 3 |
| MEDT A195A | Phlebotomy Practicum | 3 |
| MEDT A195B | Clinical Assistant Practicum | 4 |
5. A total of 20 credits is required for the OEC.

Associate of Applied Science, Medical Laboratory Technology

NAACLS provides the following description: At career entry, the medical laboratory technician will be able to perform routine clinical laboratory tests (such as hematology, clinical chemistry, immunohematology, microbiology, serology/immunology, coagulation, molecular, and other emerging diagnostics) as the primary analyst making specimen-oriented decisions on predetermined criteria, including a working knowledge of critical values. Communication skills will extend to frequent interactions with members of the health care team, external relations, customer service and patient education. The level of analysis ranges from waived and point-of-care testing to complex testing encompassing all major areas of the clinical laboratory. The medical laboratory technician will have diverse functions in areas of pre-analytical, analytical, and post-analytical processes. The medical laboratory technician will have responsibilities for information processing, training, and quality control monitoring wherever clinical laboratory testing is performed.

Upon graduation and initial employment, the medical laboratory technician should be able to demonstrate entry-level competencies in the above areas of professional practice. Graduates are eligible to sit for national certification examinations in medical laboratory technology after completing the program.

Program Outcomes

The specific educational outcomes for the program are to produce graduates who:

- Demonstrate entry-level competencies for medical laboratory technicians in the following disciplines: hematology, chemistry, immunology, blood bank, urine and body fluid analysis, microbiology, and laboratory operations.
- Demonstrate professional behavior including sound work ethics, cultural responsiveness, and appearance while interacting with patients and healthcare professionals.
- Find gainful employment as laboratory professionals.
- Demonstrate continuing competency through participation in continuing education and providing continuing education.
- Demonstrate professional advancement by involvement in administrative and/or supervisory roles in the employment setting or through completion of specialty or certification examinations.
- Demonstrate a commitment to the laboratory profession through sustained membership and active involvement in professional organizations.

Admission Requirements

1. Complete the Associate's Degree Programs Admission Requirements at the beginning of Chapter 7, Academic Standards and Regulations.
2. Complete the General Admissions Requirements for all programs in the Medical Laboratory Technology Department that are listed at the beginning of this section.
3. Meet with the Medical Laboratory Technology program advisor regarding application, program admission, and development of a program of study.

Academic Progress

In order to progress within the Associate of Applied Science in Medical Laboratory Technology program, students must earn a minimum grade

of C or higher or P in all Medical Laboratory Technology (MEDT) courses required for the degree and demonstrate professional behavior as defined by the "Medical Laboratory Technology Department Core Abilities" and associated behavior criteria. Satisfactory progress is demonstrated by exhibiting Developing Level Criteria by the end of the second year (assessed by core faculty), and Entry Level Criteria by the end of the clinical practicum (assessed by clinical instructors). Students must receive a score of 3 or higher on the Developing Level Criteria in order to progress in the program and an average score of 3 or higher in the Entry Level Criteria for each of the attributes in order to graduate from the program. Students who are unable to earn an acceptable grade in the MEDT courses during their initial enrollment may attempt to earn a satisfactory grade one additional time on a space available basis.

When the number of students admitted to the program exceeds the number that can be accommodated in the clinical practicum, students are placed on an alternate list and informed they can complete their practicum should space become available, or they are given preference for a subsequent semester. Students receive a letter stating they are an alternate; they sign and return the letter acknowledging alternate status.

Degree Requirements

1. Complete the General University Requirements for Associate of Applied Science Degrees found at the beginning of this chapter.
2. Complete the General Course Requirements for Associate of Applied Science degrees found at the beginning of this chapter. In the Medical Laboratory Technology program, the required support courses meet the AAS General Course Requirements.
3. Complete the Required Support Courses and the Major Requirements listed below.

Required Support Courses

Complete all 18 credits of support courses for the Medical Laboratory Technology major with a minimum grade of C or higher.

| | | |
|-------------|---|---|
| BIOL A111 | Human Anatomy and Physiology I | 4 |
| BIOL A112 | Human Anatomy and Physiology II | 4 |
| CHEM A103/L | Survey of Chemistry | 4 |
| CHEM A104 | Introduction to Organic Chemistry and Biochemistry | 3 |
| CIS A105 | Introduction to Personal Computers and Application Software (3) | 3 |
| | or | |
| CIS A110 | Computer Concepts in Business (3) | |

Major Requirements

1. Complete the following major courses with a minimum grade of C or higher (43-44 credits):

| | | |
|-----------|---|-----|
| MEDT A132 | Introduction to Laboratory Medicine (3) | 3-4 |
| | or | |
| MEDT A101 | Phlebotomy Procedures (3) <i>and</i> | |
| MEDT A133 | Basic Techniques in Laboratory Medicine (1) | |
| MEDT A202 | Clinical Chemistry | 6 |
| MEDT A203 | Clinical Microbiology | 6 |
| MEDT A204 | Hematology and Coagulation | 6 |
| MEDT A206 | Immunology and Blood Banking | 6 |
| MEDT A208 | Urine and Body Fluid Analysis | 3 |
| MEDT A250 | Cultural Diversity in Health Care | 1 |
| MEDT A295 | Clinical Practicum | 12 |
2. A total of 70-71 credits is required for the degree.

Bachelor of Science, Medical Technology

Medical Laboratory Scientist

NAACLS provides the following description: At career entry, the medical laboratory scientist will be proficient in performing clinical laboratory tests in areas such as hematology, clinical chemistry, immunohematology, microbiology, serology/immunology, coagulation, and molecular and other emerging diagnostics, and will be able to play a role in the

development and evaluation of test systems and interpretive algorithms. The graduates will have diverse responsibilities in areas of analysis and clinical decision-making, regulatory compliance with applicable regulations, education, and quality assurance/ performance improvement. They will also possess basic knowledge, skills and relevant experience in:

- Communications to enable consultative interactions with members of the health care team, external relations, customer service and patient education;
- Financial operations, marketing and human resource management of the clinical laboratory to enable cost-effective, high quality, value-added laboratory services;
- Information management to enable effective, timely, accurate and cost-effective reporting of laboratory-generated information and;
- Research design/practice sufficient to evaluate published studies as an informed consumer.

Upon graduation and initial employment, the medical laboratory scientist should be able to demonstrate entry-level competencies in the above areas of professional practice. Graduates are eligible to sit for national certification examinations in medical laboratory science after completion of the program.

Program Outcomes

The specific educational outcomes for the program are to produce graduates who:

- Demonstrate entry-level competencies for medical laboratory scientists in the following disciplines: hematology, chemistry, immunology, blood bank, urine and body fluid analysis, microbiology, and laboratory operations.
- Demonstrate professional behavior including sound work ethics, cultural responsiveness and appearance while interacting with patients and health care professionals.
- Find gainful employment as laboratory professionals.
- Demonstrate continuing competency through participation in continuing education and providing continuing education.
- Demonstrate professional advancement by involvement in administrative and/or supervisory roles in the employment setting or through completion of specialty or certification examinations.
- Demonstrate a commitment to the laboratory profession through sustained membership and active involvement in professional organizations.

Admission Requirements

1. Complete the Baccalaureate Degree Programs Admission Requirements in Chapter 7, Academic Standards and Regulations.
2. Complete the General Admission Requirements for all programs in the Medical Laboratory Technology Department that are listed at the beginning of this section.
3. Meet with the Medical Technology program advisor regarding application, program admission, and development of a program of study.

Academic Progress

In order to progress within the Bachelor of Science Medical Technology program, students must earn a minimum grade of C or higher or P in all Medical Technology courses required for the degree and demonstrate professional behavior as defined by the "Medical Laboratory Technology Department Core Abilities" and associated behavior criteria. Satisfactory progress is demonstrated by exhibiting Developing Level Criteria by the end of the second year (assessed by core faculty), and Entry Level Criteria by the end of the Medical Technology Practicum (assessed by clinical instructors). Students must receive a score of 3 or higher on the Developing Level Criteria in order to progress in the program and an average score of 3 or higher in the Entry Level Criteria for each of the attributes in order to graduate from the program. Students who are unable to earn an acceptable grade in the MEDT courses during their initial enrollment may attempt to earn a satisfactory grade one additional time on a space available-basis.

When the number of students admitted to the program exceeds the number that can be accommodated in the clinical practicum, students are placed on an alternate list and informed they can complete their practicum should space become available, or they are given preference for a subsequent semester. Students receive a letter stating they are an alternate; they sign and return the letter acknowledging alternate status.

Degree Requirements

1. Complete the General University Requirements for Baccalaureate Degrees listed at the beginning of this chapter.
2. Complete the General Education Requirements for Baccalaureate Degrees listed at the beginning of this chapter. In the Medical Technology program, the required support courses meet the Quantitative Skills and Natural Science Requirements.
3. Complete the Required Support Courses and Major Requirements listed below.

Required Support Courses

Complete all 31-36 credits of support courses for the Medical Technology major with a minimum grade of C or higher.

| | | |
|------------|---|-----|
| BIOL A111 | Human Anatomy and Physiology I | 4 |
| BIOL A112 | Human Anatomy and Physiology II | 4 |
| CHEM A103 | Survey of Chemistry (3) <i>and</i> | 4 |
| CHEM A103L | Survey of Chemistry Laboratory (1) or | |
| CHEM A105 | General Chemistry I (3) <i>and</i> | |
| CHEM A105L | General Chemistry I Laboratory (1) | |
| CHEM A104 | Introduction to Organic Chemistry and Biochemistry (3) <i>and</i> | 4/7 |
| CHEM A104L | Introduction to Organic Chemistry and Biochemistry Laboratory (1) or | |
| CHEM A106 | General Chemistry II (3) <i>and</i> | |
| CHEM A106L | General Chemistry II Laboratory (1) and | |
| CHEM A321 | Organic Chemistry I (3) | |
| CIS A110 | Computer Concepts in Business | 3 |
| ENGL A212 | Technical Writing | 3 |
| MATH A107 | College Algebra (or any MATH course for which MATH A107 is a prerequisite) | 4/3 |
| PHIL A302 | Biomedical Ethics | 3 |
| STAT A252 | Elementary Statistics (3) or | 3/4 |
| STAT A253 | Applied Statistics for the Sciences (or any STAT course for which STAT A252 or STAT A253 is a prerequisite) (4) | |

Major Requirements

1. Complete the following major courses with a satisfactory grade (C or higher or P). (71-72 credits)

| | | |
|-----------|---|-----|
| MEDT A132 | Introduction to Laboratory Medicine (3) | 3-4 |
| | or | |
| MEDT A101 | Phlebotomy Procedures (3) | 4 |
| | and | |
| MEDT A133 | Basic Techniques in Laboratory Medicine (1) | |
| MEDT A202 | Clinical Chemistry | 6 |
| MEDT A203 | Clinical Microbiology | 6 |
| MEDT A204 | Hematology and Coagulation | 6 |
| MEDT A206 | Immunology and Blood Banking | 6 |
| MEDT A208 | Urine and Body Fluid Analysis | 3 |
| MEDT A250 | Cultural Diversity in Health Care | 1 |
| MEDT A301 | Clinical Molecular Biology | 4 |
| MEDT A302 | Clinical Laboratory Education and Management | 4 |
| MEDT A303 | Advanced Clinical Microbiology | 6 |
| MEDT A401 | Introduction to Research | 2 |
| MEDT A495 | Medical Technology Practicum (12) | 24 |
| | or | |

| | |
|-----------|-----------------------------------|
| MEDT A295 | Clinical Practicum* (12) and |
| MEDT A495 | Medical Technology Practicum (12) |

*Students who choose MEDT A295 must complete an additional 11 upper division credits to satisfy the upper division credit requirement.

2. A total of 123-129 credits is required for the degree, of which 42 credits must be upper division.

FACULTY

Heidi Mannion, Professor, AFHAM@uaa.alaska.edu
David Pierce, Term Assistant Professor, AFDAP@uaa.alaska.edu
Steve Pyle, Term Assistant Professor, AFSP@uaa.alaska.edu
Gloria Tomich, Associate Professor, AFGAK@uaa.alaska.edu

OCCUPATIONAL SAFETY AND HEALTH

Kenai Peninsula College (KPC), Anchorage Extension Site (AES)
University Center (UC), Room 118, 3901 Old Seward Highway, Anchorage,
AK 99503, (907) 786-6421
www.kpc.alaska.edu

Advising for this program is available only from the Anchorage Extension Site of Kenai Peninsula College. Please call the OSH faculty at (907) 786-6421 for more information.

The Occupational Safety and Health program prepares students for employment as safety professionals in a variety of industries including construction, petroleum, mining and tourism. Employment opportunities are growing for safety professionals. This program provides a thorough background in occupational safety and health, preparing graduates for entry-level safety positions in industry and government agencies throughout Alaska.

The Occupational Safety and Health program is a 62-63 credit Associate of Applied Science degree. Coursework includes hazardous materials, safety training methods, ergonomics, industrial hygiene, injury prevention, epidemiology, OSHA standards, and safety program management and record keeping.

Associate of Applied Science, Occupational Safety and Health

The Occupational Safety and Health program is offered only at the Kenai Peninsula College-Anchorage Extension Site (KPC/AES).

University Center Room 118, 3901 Old Seward Highway,
Anchorage, AK 99503, (907) 786-6421

Program Outcomes

The specific education outcomes of this program are to produce graduates who are able to:

1. Define the roles and responsibilities of safety professionals, safety regulations and their applications.
2. Develop safety management system programs, evaluate their effectiveness, and describe methods of implementation.
3. Identify and analyze workplace injuries, incidents and hazards and provide methods of correction.
4. Identify and analyze needs and methods for safety training and develop safety presentations.

Admission Requirements

1. Complete the university Admissions Requirements for Associate's Degrees found in Chapter 7, Academic Standards and Regulations.
2. Submit the KPC undergraduate application.
3. Demonstrate computer competency evidenced by any of the following:

- A 3-credit course in word processing, spreadsheets, databases, data processing or micro-computers.
- Work-related experience verifying computer competency as approved by the faculty advisor.
- Self-initiated computer competency as approved by the faculty advisor.

Advising

- Meet with a faculty advisor to complete advising interview checklist. Students must meet with the OSH advisor prior to registering for Occupational Safety and Health courses.
- Students in Anchorage should contact the OSH faculty at (907) 786-6421 for an appointment with a faculty advisor.
- Students on the Kenai Peninsula should call 262-0344 for an appointment with a faculty advisor.

Graduation Requirements

- Complete the General University and the General Course Requirements for Associate of Applied Science Degrees located at the beginning of this chapter.

- Complete the following required courses:

| | | |
|------------|--|---|
| BIOL A100 | Human Biology | 3 |
| CHEM A103 | Survey of Chemistry | 3 |
| CHEM A103L | Survey of Chemistry Laboratory | 1 |
| ENGL A111 | Methods of Written Communication | 3 |
| ENGL A212 | Technical Writing | 3 |
| OSH A101 | Introduction to Occupational Safety and Health | 3 |
| OSH A108 | Injury Prevention and Risk Management | 4 |
| OSH A111 | Training Needs and Methods | 3 |
| OSH A112 | Introduction to Injury Epidemiology | 3 |
| OSH A120 | Safety Program Management and Recordkeeping | 3 |
| OSH A180 | Introduction to Industrial Hygiene | 4 |
| OSH A201 | Workplace Injury and Incident Evaluation | 4 |
| OSH A211 | Safety Program Assessment, Development, and Implementation | 4 |
| OSH A230 | Principles of Ergonomics | 3 |
| OSH A240 | Workplace Monitoring: Instrumentation and Calibration | 3 |
| OSH A250 | Hazardous Materials Operation | 3 |
| TECH A295* | Technical Internship (1-6) | 3 |

* An advisor approved elective may be substituted for TECH A295 Technical Internship.

- Complete one of the following mathematics courses: 3-4

| | |
|------------|--------------------------|
| MATH A105* | Intermediate Algebra (3) |
| MATH A107* | College Algebra (4) |

*Or any MATH course for which MATH A105 or MATH A107 is a prerequisite

- Complete one of the following physical science courses: 3

| | |
|-----------|--|
| PHYS A123 | Basic Physics (3) |
| TECH A101 | Introduction to technological principles (3) |

- Complete one of the following verbal communication courses: 3

| | |
|-----------|--|
| COMM A111 | Fundamentals of Oral Communication (3) |
| COMM A235 | Small Group Communication (3) |
| COMM A237 | Interpersonal Communication (3) |
| COMM A241 | Public Speaking (3) |

FACULTY

Don G. Weber, Assistant Professor, IFDGW@uaa.alaska.edu

PARAMEDICAL TECHNOLOGY

Kenai Peninsula College (KPC), Kenai River Campus
156 College Road, Soldotna, AK 99669

Contact Paul Perry, (907) 262-0378 or toll free (877) 262-0330
www.kpc.alaska.edu/paramedictchnology.aspx

Matanuska-Susitna College (MSC)
Mile 2 Trunk Road, Palmer, AK 99645

Contact Kathy Griffin (907) 746-9329
www.matsu.alaska.edu/office/student-services/degree-programs/paramedical-technology/

Paramedics provide pre-hospital emergency care to acutely ill or injured patients under medical authority of licensed physicians. Individuals interested in pursuing a career as a paramedic should possess significant strength to lift and carry victims, good use of hands and fingers, good coordination, good judgment and emotional stability, as well as the ability to work confidently under pressure. Students successfully completing the degree requirements and the PMED courses meet the U.S. Department of Transportation National Standards for Paramedics and are eligible to take the National Registry examination required for licensure.

Two primary requirements of the Paramedical Technology program are clinical rotations and the field internship. Clinical rotations provide instruction and supervised practice of emergency medical skills in various units of hospitals within the Anchorage and Mat-Su borough areas. The field internship provides experience in advanced life support vehicles such as ambulances, helicopters, and fixed-wing aircraft. Student interns are the third member of the medical/rescue team and work under the direct supervision of a paramedic preceptor. Internship sites are arranged in various U.S. locations. Efforts are made to place students in geographic locations of their choice; however, intern positions may not be available at all approved sites. Length of internship varies depending on the call volume at the location and successful application of paramedic skills.

Associate of Applied Science, Paramedical Technology

Graduates of the Paramedical Technology program will have the ability to:

- Understand their roles and responsibilities as a program within an EMS system by applying the basic concepts of development, pathophysiology and pharmacology to assess and manage patients with emergency medical needs;
- Maintain a patient's airway, oxygenate, and ventilate a patient and be able to take a proper history and perform a comprehensive physical examination;
- Properly administer medications and communicate effectively with other health care providers including physicians, nurses, and other allied health personnel; and
- Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for trauma and medical patients of all ages.

Admission Requirements

Kenai Peninsula College/Matanuska-Susitna (Mat-Su) College - Admission Requirements

Advising for Kenai Peninsula College (KPC) students for this program is only available from the Paramedical Technology faculty at KPC. Please call (907) 262-0378 for more information.

Advising for Mat-Su College (MSC) students for this program is only available from the Paramedical Technology faculty at MSC. Please call (907) 746-9329 for more information.

Admission to the KPC/MSC Paramedical Technology programs is competitive and based on a ranking process. Program applications

can be requested through the department or downloaded via the Internet. Application requirements must be completed prior to May 15 application deadline.

Admission Requirements for Paramedical Degree - Pre-Major - Kenai Peninsula College and Mat-Su College only

Students should consider applying for admission as a pre-major in Paramedical Technology while enrolled in other Paramedical Technology degree prerequisite courses. While being a pre-major is not required, you may be eligible for financial aid since you will be considered a degree-seeking student. Students enrolled as Paramedical Technology pre-majors are still required to obtain a KPC or MSC campus-specific Certificate of Admission.

Admission as a Paramedical Technology pre-major does not guarantee admission to the Paramedical Technology degree program. Applications for the degree program that starts each fall must still be submitted by the May 15 deadline. Formal admission requirements to the Paramedical Technology AAS degree program are listed below.

1. Certificate of Admission from the Office of Admissions, including transcripts from both high school/GED and college, with transcript evaluations (if any). Documentation from college transcripts must show successful completion of BIOL A111 and BIOL A112 with laboratories and grades of 2.00 (C) or above.
2. Student must attend an advising session with the KPC or MSC Paramedical Technology coordinator. Contact the campus for an appointment.
3. Paramedic Program Application and Confidential Required Information form sent to the Paramedical Technology coordinator:
 - a. Copy of current National Registry EMT-Basic or state of Alaska EMT-1 certificate
 - b. Evidence of current Healthcare Provider or equivalent, CPR Card
 - c. Copies of all current medical certifications or licenses
 - d. Military DD-214 (long form); if applicable
 - e. Complete Anatomy & Physiology I and II (BIOL A111, BIOL A112; 8 credits); with a minimum C grade.
 - f. Take and submit to the program coordinator the scores from the Nurse Entrance Test (NET). It is scheduled through the KPC, MSC, or UAA testing center where you intend to take the examination.
 - g. Resume with three letters of recommendation
 - h. Admissions essay
4. Upon completion of items 1-3, student files are ranked based on a point system. The top 20 (KPC) or 25 (MSC) applicants will be notified and invited for oral interviews by a selection committee. The top 15 (KPC) or 16 (MSC) will be accepted into the program. The remaining standby applicants will be ranked and offered a position should an accepted applicant decline admission. Please contact department for further details. Students will be contacted in June with their results.

Admission Requirements Before Beginning Coursework

Once admitted to the Paramedical Technology program, students are required to provide the following before actually beginning coursework.

1. Provide documentation from personal physician, PA-C, or NP affirming capability of performing the physical tasks as outlined by the DOT 1998 Paramedic Curriculum.
2. Evidence of:
 - a. Immunity to measles, rubella and mumps confirmed by titer;
 - b. Immunity to hepatitis A and hepatitis B, confirmed by titer (first semester clinical students may be in the process of completing the immunization series; for those students, documentation of immunity by titer is required prior to entry into PMED A295 course);

- c. Immunity to chicken pox documented by history, titer or current immunization;
 - d. Diphtheria/tetanus vaccination within the past 10 years (with booster required at the time of expiration);
 - e. Freedom from active tuberculosis, documented annually by negative PPD skin test or by health examination by a nurse practitioner, physician, or physician's assistant;
 - f. Documentation of HIV testing annually (results not required to be submitted to KPC/MSC).
3. Healthcare Provider or equivalent CPR certificate must be kept current.
 4. Professional liability insurance in the amount of \$1 million/\$3 million must be maintained throughout the duration of the student's enrollment in the Paramedical Technology program. The policy will be paid out of student lab fees.
 5. Submit results of a state- and national-level criminal background check. Must be completed prior to the start of courses. This process can take several months to complete.
 6. Document having been found free of illegal drugs. Tests must be taken and results submitted to the Paramedical Technology coordinator after being accepted into the program, and before the first day of class.

Students enrolled in clinical courses must provide their own transportation to clinical assignments and will be required to purchase uniforms and specialized equipment. The college assumes no responsibility for illnesses and injuries experienced by students in conjunction with their clinical experiences; students who are injured while completing clinical assignments are responsible for all associated medical costs. No workers compensation will be awarded if injured on a clinical site, or during the field internship. It is strongly recommended that students maintain personal medical insurance.

Academic Progress

1. Students are required to earn a grade of 3.00 B or higher in each PMED course. Failure to maintain a passing grade of B will result in dismissal from the program.
2. Students MUST complete all General Degree courses (English, communications and math) before they register for or begin their ride-along internship (PMED A295).

General University Requirements

Complete the General University and the General Course Requirements for Associate of Applied Science Degrees located at the beginning of this chapter.

Communication Requirements (9 credits)

Oral communication – COMM A111 is recommended (3)
 Written communication - ENGL A111 is required and ENGL A212 is recommended (6)

Natural Science Requirements (8 credits)

BIOL A111 and BIOL A112 are required prerequisites for admission into the Paramedic program and also fulfill the general requirements for the AAS degree.

Math Requirements (3 credits)

MATH A105 Intermediate Algebra (or higher) 3

Major Requirements (48 credits)

| | | |
|-----------|------------------------|----|
| PMED A241 | Paramedicine I | 8 |
| PMED A242 | Clinical Rotation I | 4 |
| PMED A251 | Paramedicine II | 8 |
| PMED A252 | Clinical Rotation II | 4 |
| PMED A261 | Paramedicine III | 8 |
| PMED A262 | Clinical Rotation III | 4 |
| PMED A295 | Paramedical Internship | 12 |

A total of 68 credits is required for the degree.

FACULTY

Kathy Griffin, Coordinator/Assistant Professor (MSC),
 kgriffin@matsu.alaska.edu
 Paul Perry, Coordinator/Assistant Professor (KPC), IFPEP@uaa.alaska.edu

PETROLEUM TECHNOLOGY

Kenai Peninsula College (KPC), Kenai River Campus
 156 College Road, Soldotna, Alaska, 99669, (907) 262-0300, (877) 262-0330
 www.kpc.alaska.edu

Kenai Peninsula College offers a one-year certificate program in Petroleum Technology. The certificate provides specific training in petro/chemical plant operations.

Undergraduate Certificate, Petroleum Technology

The Petroleum Technology program is offered at Kenai Peninsula College, Kenai River Campus.

Advising for this program is only available from the Petroleum Technology faculty at Kenai Peninsula College. Please call (907) 262-0344 or (877) 262-0330 for more information.

The graduates of the UAA Petroleum Technology program will have the ability to:

1. Maintain a safe work area: To enforce safety regulations, follow safe operating procedures, maintain effective communications with personnel, and identify workplace hazards;
2. Monitor area operations: To monitor equipment for efficiency and integrity, identify process problems, and perform trend analyses;
3. Maintain process parameters: To perform process adjustments, start up process equipment, and shut down process equipment;
4. Maintain emergency response preparedness: To respond to emergencies, effectively participate in emergency response drills, and conduct periodic review of emergency response procedures;
5. Maintain regulatory compliance: To report recordable incidents, record discharge reports, record regulatory data, maintain current licensing, participate in internal/external audits, and comply with HAZCOM requirements;
6. Coordinate maintenance activities: To generate work requests, develop safe out procedures, schedule maintenance activities, prepare equipment for maintenance activity, and issue work permits;
7. Perform administrative activities: To produce required reports, record logbook entries, and perform personal evaluations;
8. Understand the need for continued professional development, participate in job related training, and utilize self-study resources;
9. Demonstrate English skills: To communicate effectively in entry-level technical occupations.

Admission Requirements

Complete University Admissions Requirements for Undergraduate Certificates found in Chapter 7, Academic Standards and Regulations.

Complete the following requirements:

| | | |
|-----------|---|---|
| PRPE A108 | Introduction to College Writing (3) or | 3 |
| ENGL A111 | Methods of Written Communication (3) | |
| MATH A105 | Intermediate Algebra (or any MATH course for which MATH A105 is a prerequisite) | 3 |
| PRT A101 | Introduction to Process Technology | 3 |
| PRT A130 | Process Technology I: Equipment | 4 |
| PRT A140 | Industrial Process Instrumentation I | 3 |
| PRT A144 | Industrial Process Instrumentation II | 3 |
| PRT A160 | Oil & Gas Exploration & Production I | 3 |
| PRT A230 | Process Technology II: Systems | 4 |

| | | |
|----------|--|---|
| PRT A231 | Process Tech. III: Operations (4) or | 4 |
| ET A101 | Basic Electronics: DC Circuits (4) or | |
| ET A126 | Digital Electronics (4) | |
| PRT A250 | Process Troubleshooting | 3 |

A total of 33 credits is required for the certificate.

FACULTY

Henry Haney, Assistant Professor, IFHWH@uaa.alaska.edu
 Allen Houtz, Professor, IFADH@uaa.alaska.edu
 Rich Kochis Assistant Professor, IFRLK@uaa.alaska.edu

PHARMACY TECHNOLOGY

Allied Health Sciences Building (AHS), Room 161, (907) 786-6928
 www.uaa.alaska.edu/ctc/alliedhealth/pharmacy

Pharmacy technicians work in pharmacies under the direct supervision of a pharmacist. Under supervision they help prepare prescriptions, sometimes measuring, mixing, packaging, labeling and delivering medications to patients. They order supplies and help to keep pharmacy equipment clean. Pharmacy technicians also help to maintain confidential drug and patient records. Graduates of this program will assist licensed pharmacists as they provide medications and other drug devices to patients.

Occupational Endorsement Certificate, Pharmacy Technology

The occupational endorsement is not contingent upon the student passing any type of external certification or licensure examination. Students should note that although this program has no age restrictions, the state of Alaska requires that all pharmacy technicians be at least 18 years of age prior to licensure.

Admission Requirements

Complete the Occupational Endorsement Certificate Admission Requirements in Chapter 7, Academic Standards and Regulations.

Program Description and Outcomes

This program of study prepares students to work as pharmacy technicians. The program meets the outcomes of the "Model Curriculum for Pharmacy Technician Training" developed by the Accreditation Council for Pharmacy Education (ACPE). Upon successful completion of the Occupational Endorsement Certificate, Pharmacy Technology, students will be well-prepared to work in various settings as a pharmacy technician and to successfully sit for the national Pharmacy Technician Certification Board examination (PTCB). They will also have a solid background to continue further study in the field of pharmacy, pursuing a pre-pharmacy degree and ultimately a Doctor of Pharmacy degree.

After completion of this program students will be able to:

1. Receive, screen and prepare prescription/medication orders checking for completeness, authenticity and accuracy.
2. Initiate, verify, assist in the adjudication of, and collect payment and/or initiate billing for pharmacy services and goods.
3. Purchase and maintain inventory of medications, equipment and devices according to an established plan.
4. Maintain pharmacy equipment and facilities.
5. Participate in the process for preventing medication misadventures, notifying the pharmacist when a problem or situation requires his/her attention.
6. Communicate clearly when speaking or writing while maintaining confidentiality, compassion, and an image of professionalism.

Occupational Endorsement Certificate Requirements

- Students must earn a satisfactory grade (C or higher) in all courses:

| | | |
|-----------|---------------------------------|---|
| PHAR A101 | Introduction to Pharmacy | 3 |
| PHAR A105 | Pharmacology for Technicians I | 3 |
| PHAR A107 | Pharmacy Calculations | 3 |
| PHAR A111 | Techniques of Pharmacy Practice | 3 |
| PHAR A115 | Pharmacology for Technicians II | 3 |
| PHAR A192 | Topics in Pharmacy | 1 |
- A total of 16 credits is required for this certificate.

FACULTY

Debra Cieplak, Term Assistant Professor, AFDAS@uaa.alaska.edu

PROCESS TECHNOLOGY

Kenai Peninsula College (KPC), KRC (Kenai River Campus)

156 College Road, Soldotna, Alaska 99669, (907) 262-0300, (877) 262-0330

www.kpc.alaska.edu

Anchorage Extension Site (AES)

University Center (UC), Room 118, 3901 Old Seward Highway

Anchorage, AK 99503, (907) 786-6413

Advising for this program is only available from the Process Technology faculty at Kenai Peninsula College. For the Kenai River Campus, please call (907) 262-0344 or (877) 262-0330 for more information. For the KPC Anchorage Extension Site, call 786-6413.

The Associate of Applied Science degree in Process Technology is coordinated by Kenai Peninsula College and is delivered collaboratively through UAA and UAF.

This degree is designed to provide education/training that will enable individuals to obtain employment in the industries that use and control mechanical, physical or chemical processes to produce a final product. In Alaska this includes the process industries of oil and gas production, chemical manufacturing, petroleum refining; power generation and utilities, water and wastewater treatment, and seafood and other food processing.

Associate of Applied Science, Process Technology

The Process Technology program is offered only at Kenai Peninsula College KRC (Kenai River Campus) and AES (Anchorage Extension site)

The graduates of the UAA Process Technology program will have the ability to:

- Maintain a safe work area – to enforce safety regulations, follow safe operating procedures, maintain effective communications with personnel and identify workplace hazards;
- Monitor area operations – to monitor equipment for efficiency and integrity, identify process problems and perform trend analyses;
- Maintain process parameters – to perform process adjustments, start up process equipment and shut down process equipment;
- Maintain emergency response preparedness – to respond to emergencies, effectively participate in emergency response drills and conduct periodic review of emergency response procedures;
- Maintain regulatory compliance – to report recordable incidents, record discharge reports, record regulatory data, maintain current licensing, participate in internal/external audits and comply with HAZCOM requirements;
- Coordinate maintenance activities – to generate work requests, develop safe out procedures, schedule maintenance activities, prepare equipment for maintenance activity and issue work permits;
- Perform administrative activities – to produce required reports, record logbook entries and perform personal evaluations;

- Prepare for and understand the need for continued professional development, participate in job related training and utilize self-study resources.

Admission Requirements

- Complete university Admissions Requirements for Associate's Degrees found in Chapter 7, Academic Standards and Regulations.
- Placement at the MATH A105 level or above, equivalent course, or appropriate ACT/SAT scores.
- Placement for reading at the ENGL A111 level or above.

Advising

Students must see a faculty advisor in the Process Technology program prior to registering for Process Technology courses.

General University Requirements

Complete the General University and the General Course Requirements for Associate of Applied Science Degrees located at the beginning of this chapter.

Communication and General Requirements

- Oral Communications Skills** (One of the following) 3

| | |
|-----------|--|
| COMM A111 | Fundamentals of Oral Communication (3) |
| COMM A235 | Small Group Communication (3) |
| COMM A237 | Interpersonal Communication (3) |
| COMM A241 | Public Speaking (3) |
- Written Communication Skills** 6

| | |
|-----------|--|
| ENGL A111 | Methods of Written Communication (3) and one of the following: |
| ENGL A211 | Academic Writing About Literature (3) |
| ENGL A212 | Technical Writing (3) |
| ENGL A213 | Writing in the Social and Natural Sciences (3) |
| ENGL A214 | Persuasive Writing (3) |
- Support Courses Math** 3-4

| | |
|------------|--------------------------|
| MATH A105* | Intermediate Algebra (3) |
| | or |
| MATH A107* | College Algebra (4) |

*Or any MATH course for which MATH A105 or MATH A107 is a prerequisite.
- Computer Literacy:** 3

| | |
|----------|---|
| CIS A105 | Introduction to Personal Computers and Application Software (3) |
| | or |
| CIS A110 | Computer Concepts in Business (3) |
- Natural Sciences** 8

| | |
|-------------|---|
| CHEM A103/L | Survey of Chemistry (or higher level) (4) and |
| PHYS A115 | Physical Science I for Technicians (4) |
| | or |
| CHEM A103/L | Survey of Chemistry (or higher level) (4) and |
| PHYS A123/L | Basic Physics I (4) |
- Social Science** 3

| | |
|--|--------------|
| | Elective (3) |
|--|--------------|

Major Requirements

- Complete the following courses (28 credits):

| | | |
|----------|--|---|
| PRT A101 | Introduction to Process Technology | 3 |
| PRT A110 | Introduction to Occupational Safety, Health, and Environmental Awareness | 3 |
| PRT A130 | Process Technology I: Equipment | 4 |
| PRT A140 | Industrial Process Instrumentation I | 3 |

- | | | |
|----------|---|---|
| PRT A144 | Industrial Process Instrumentation II | 3 |
| PRT A230 | Process Technology II: Systems | 4 |
| PRT A231 | Process Technology III: Operations | 4 |
| PRT A250 | Process Troubleshooting | 3 |
| PRT A255 | Quality Concepts for the Process Industry | 1 |
2. Approved Applied Technology Electives 9
- All 9 credits must be chosen with advisor approval. For example, they may be chosen from:*
- Electronics
 - Environmental Technology (Wastewater) Mining Technology
 - Industrial Process
 - Instrumentation
 - Occupational Safety & Health
 - Petroleum Technology
 - Process Technology
 - Power Generation
 - Technical Internship
 - Technology
3. A total of 63 credits is required for the degree.

FACULTY

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RADIOLOGIC TECHNOLOGY

Allied Health Science Building (AHS), Room 151B, (907)786-6940

www.uaa.alaska.edu/ctc/alliedhealth/radtech

Occupational Endorsement Certificate, Limited Radiography

Limited radiographers perform X-ray examinations within a limited scope and work under the direct supervision of a registered radiologic technologist, physician, and physician's assistant. The limited radiographer is prepared with the technical skills to perform examinations and provide the physician with diagnostic images of the skeletal system.

The occupational endorsement certificate is not contingent upon the student passing any type of external certification or licensure examination.

This certificate does not lead to the AAS degree in Radiologic Technology.

Admissions Requirements

See Occupational Endorsement Certificate Admission Requirements in Chapter 7, Academic Standards and Regulations.

Student must be at least 18 years or older.

Student Outcomes

This program prepares students to work as limited radiographers with knowledge of the curriculum content identified by the American Society of Radiologic Technologists (ASRT). After completion of this program the students will be able to demonstrate the following:

1. Entry-level knowledge and skills for employment as a limited radiographer.
2. Proficiency in the performance of limited radiographic procedures.
3. Meet statewide staffing needs.

Occupational Endorsement Certificate Requirements

1. Students must be at least 18 years or older.
2. Students must earn a satisfactory grade (C or higher) in all required courses:

| | | |
|-----------|--|---|
| RADT A101 | Radiation Protection and Biology for Limited Radiography Professionals | 3 |
| RADT A102 | Principles of Radiography for Limited Practice I | 3 |
| RADT A103 | Radiographic Procedures for Limited Practice II | 3 |
| RADT A104 | Radiographic Procedures for Limited Practice III | 2 |
3. A total of 11 credits is required for this certificate

Associate of Applied Science, Radiologic Technology

The Radiologic Technology program prepares students for employment as career entry medical radiographers. Students completing the program receive an Associate of Applied Science degree and are eligible to apply for certification with the American Registry of Radiologic Technologists (ARRT).

Graduates are prepared with the technical skills necessary to perform a variety of diagnostic radiographic examinations. The primary role of the radiographer is to provide diagnostic images of the structure and function of anatomy to assist the physician in the treatment of injury and disease. Examples of examinations performed include chest, upper and lower extremities, spine, ribs, skull, gastrointestinal, genitourinary, and reproductive systems.

The program of study incorporates didactic instruction, laboratory demonstration, and clinical application in a manner that provides correlation of theory with practice. The inclusion of General University Requirements fulfills program goals of developing knowledgeable and competent practitioners who will have opportunities for continued professional growth. Additional expenses include clinical attire, vaccinations, identification badge, and other organization fees.

The AAS degree is not contingent upon the students passing any type of external certification or licensure examination.

Student Outcomes

This program prepares students to work as radiologic technologists with knowledge in the general education, the radiologic technology, and the curriculum content areas identified by the American Society of Radiologic Technologists (ASRT). At the completion of this program, students will be able to demonstrate:

1. Entry-level knowledge and skills for employment as a radiologic technologist.
2. Proficiency in the performance of radiographic procedures.
3. Professional attitude and proper ethical behavior in clinical settings.

Admissions Requirements

See Associate's Degree Admissions Requirements in Chapter 7, Academic Standards and Regulations. Students will be admitted to the Radiologic Technology program as a premajor. Prior to being admitted as a full major the student must complete the following additional admission requirements:

1. Submit Medical Imaging Sciences Department, Radiologic Technology application.
2. Earn a grade of C or better in BIOL A111, BIOL A112, and MA A101.
3. Current First Aid/CPR for Professionals or BLS-C certification.
4. Evidence of current immunization to include the following:
 - a. Rubella and rubeola, confirmed by titer;
 - b. Immunity to hepatitis A and hepatitis B, confirmed by titer;

- c. Immunity to chicken pox documented by history, titer, or current immunization;
 - d. Diphtheria/tetanus vaccination within the past 10 years (with booster required at the time of expiration);
 - e. Freedom from active tuberculosis, documented annually by negative PPD skin test or by health examination;
 - f. Documentation of HIV testing annually (results not required).
5. Provide criminal background check upon acceptance.

Advising

Students should the Radiologic Technology faculty for assistance with course planning toward the degree.

General University Requirements

Complete the General University Requirements for Associate's Degrees located at the beginning of this chapter.

General Course Requirements

Complete the Associate of Applied Science General Degree Requirements located at the beginning of this chapter (ENGL A212 recommended).

Major Requirements

1. Complete the following required courses:

| | | |
|------------|--------------------------|-----|
| MATH A105* | Intermediate Algebra (3) | 3-4 |
| | or | |
| MATH A107* | College Algebra (4) | |

*Or any MATH course for which MATH A105 or MATH A107 is a prerequisite.

| | | |
|------------------------------|-------------------------------|---|
| Select one of the following: | | 3 |
| PSY A111 | General Psychology (3) | |
| PSY A150 | Lifespan Development (3) | |
| PSY A153 | Human Relations (3) | |
| SOC A101 | Introduction to Sociology (3) | |
2. Professional course requirements:

| | | |
|------------|--|---|
| RADT A111 | Introduction to Radiologic Technology and Patient Care | 3 |
| RADT A131 | Radiographic Procedures I | 3 |
| RADT A132 | Radiographic Procedures II | 3 |
| RADT A133 | Radiographic Procedures III | 3 |
| RADT A151 | Medical Imaging Physics | 2 |
| RADT A161 | Fundamentals of Medical Imaging | 3 |
| RADT A171 | Fundamentals of Medical Imaging II | 3 |
| RADT A195A | Radiography Practicum I | 2 |
| RADT A195B | Radiography Practicum II | 3 |
| RADT A195C | Radiography Practicum III | 3 |
| RADT A211 | Radiologic Pharmacology and Drug Administration | 1 |
| RADT A251 | Radiobiology and Protection | 2 |
| RADT A272 | Quality Control in Medical Imaging | 2 |
| RADT A280 | Medical Imaging Pathology | 3 |
| RADT A282 | Current Issues in Radiologic Technology | 1 |
| RADT A295A | Radiography Practicum IV | 5 |
| RADT A295B | Radiography Practicum V | 5 |
3. A total of 62 credits is required for the degree.

FACULTY

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 Kathryn Slagle, Assistant Professor, AFKSM@uaa.alaska.edu
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REFRIGERATION AND HEATING TECHNOLOGY

Matanuska-Susitna College

P.O. Box 2889, Palmer, AK 99645, (907) 745-9715

The Refrigeration and Heating Technology program is offered only through Matanuska-Susitna College.

Four occupational endorsement certificates, one undergraduate certificate, and an Associate of Applied Science degree in Refrigeration and Heating are available. Satisfactory completion of the four specialty certificates qualifies a student for the Undergraduate Certificate in Refrigeration and Heating Technology. The AAS degree may be earned by obtaining the Undergraduate Certificate in Refrigeration and Heating Technology and successfully completing the General University and General Course Requirements for an associate's degree. A student satisfactorily completing the requirements for a certificate or the degree will possess a background in heating, air-conditioning, applied physics, mathematics, electricity, and the technical skills required to diagnose and repair modern commercial and residential heating, refrigeration, air-conditioning, and ventilation systems.

All students enrolling in the R&H program must take a standardized placement test in reading, writing, and mathematics. The faculty place heavy emphasis on student preparation for job entry-level skills.

Professional tests related to the industry are administered as part of this program. If possible, additional training may take place on the job to provide a student with work-related experience.

Program Objectives and Expected Outcomes

The curriculum of the Matanuska-Susitna College Refrigeration and Heating Technology program is designed to produce graduates able to:

1. Apply the fundamental laws of physics related to the heating, ventilation, air conditioning, and refrigeration (HVAC/R) industry.
2. Use mathematical skills required to succeed in HVAC/R trades.
3. Understand and describe the function of individual components that make up HVAC/R systems.
4. Work safely with tools, torches, electricity, refrigerants, heating fuels, and other equipment and material associated with HVAC/R work.
5. Follow work practices that are environmentally responsible.
6. Obtain employment as an entry-level HVAC/R technician and be able to advance professionally.
7. Work effectively with customers, employers, and co-workers.
8. Systematically troubleshoot HVAC/R systems.
9. Apply municipal, state, and national mechanical codes to decisions involving the design, installation, operation and maintenance of HVAC/R systems.

Occupational Endorsement Certificates

Admissions

Satisfy the Admissions Requirements for Occupational Endorsement Certificates in Chapter 7, Academic Standards and Regulations.

Students must achieve an acceptable score on placement tests in reading, writing and mathematics.

Advising

Students are urged to meet with a faculty advisor prior to enrollment in RH classes.

Academic Progress

Prerequisites: Certain courses require prerequisites or faculty permission.

Students must pass all courses listed in core requirements before attempting any of the specialty courses.

Certificate Requirements

Students seeking an R&H occupational endorsement certificate must complete the following core requirements.

Occupational Endorsement Certificate Core Requirements – 12 Credits

| | | |
|---------|---|---|
| RH A103 | Technical Mathematics for Industrial Trades | 3 |
| RH A105 | Electrical Circuits for Refrigeration and Heating I | 3 |
| RH A109 | Principles of Thermodynamics | 3 |
| RH A209 | Codes for HVAC/R | 2 |
| RH A211 | Customer Relations and Job Etiquette | 1 |

Occupational Endorsement Certificate, Residential and Light Commercial Heating and Ventilation

1. Complete the Core Requirements. 12
2. Complete the following certificate requirements:

| | | |
|---------|--|---|
| RH A203 | HVAC/R Basic Controls | 3 |
| RH A225 | Heating Fundamentals and Forced Air Heat | 4 |
| RH A228 | Advanced Hydronic Heat Systems | 4 |

3. A total of 23 credits is required for the certificate.

Occupational Endorsement Certificate, Commercial HVAC Systems

1. Complete the Core Requirements. 12
2. Complete the following certificate requirements:

| | | |
|---------|---------------------------|---|
| RH A226 | Commercial HVAC/R Systems | 4 |
| RH A229 | HVAC/R Control Systems | 3 |
| RH A232 | HVAC/R Sheet Metal | 3 |

3. A total of 22 credits is required for the certificate.

Occupational Endorsement Certificate, Residential and Light Commercial Air-Conditioning & Refrigeration

1. Complete the Core Requirements. 12
2. Complete the following certificate requirements:

| | | |
|---------|--|---|
| RH A101 | Refrigeration and Air Conditioning Fundamentals | 4 |
| RH A126 | Electrical Circuits for Refrigeration and Heating II | 3 |
| RH A132 | Troubleshooting for HVAC/R Systems | 3 |

3. A total of 22 credits is required for the certificate.

Occupational Endorsement Certificate, Commercial Refrigeration Systems

1. Complete the core requirements. 12
2. Complete the following certificate requirements:

| | | |
|---------|---|---|
| RH A101 | Refrigeration and Air Conditioning Fundamentals | 4 |
| RH A122 | Refrigeration and Air Conditioning | 4 |
| RH A201 | Commercial and Ammonia Refrigeration | 4 |

3. A total of 24 credits is required for the certificate.

Undergraduate Certificate, Refrigeration and Heating Technology

Admission

Satisfy the Requirements for Admission to Undergraduate Certificate and Associate's Degree Programs in Chapter 7, Academic Standards and Regulations.

Students must achieve an acceptable score on placement tests in reading, writing and mathematics.

Advising

Students are urged to meet with a faculty advisor prior to enrolling in RH courses.

Academic Progress

Prerequisites: Certain courses require prerequisites or faculty permission.

Students must pass all courses listed in core requirements before attempting any of the specialty courses.

Certificate Requirements

1. Satisfy the General University Requirements for Undergraduate Certificates found at the beginning of this chapter.

2. Complete the Core Requirements:

| | | |
|---------|---|---|
| RH A103 | Technical Math for Industrial Trades | 3 |
| RH A105 | Electrical Circuits for Refrigeration and Heating I | 3 |
| RH A109 | Principles of Thermodynamics | 3 |
| RH A209 | Codes for HVAC/R | 2 |
| RH A211 | Customer Relations and Job Etiquette | 1 |

3. Complete the following requirements:

| | | |
|---------|--|---|
| RH A101 | Refrigeration and Air Conditioning Fundamentals | 4 |
| RH A122 | Refrigeration and Air Conditioning | 4 |
| RH A126 | Electrical Circuits for Refrigeration and Heating II | 3 |
| RH A132 | Troubleshooting for HVAC/R Systems | 3 |
| RH A201 | Commercial and Ammonia Refrigeration | 4 |
| RH A203 | HVAC/R Basic Controls | 3 |
| RH A225 | Heating Fundamentals and Forced Air Heat | 4 |
| RH A226 | Commercial HVAC/R Systems | 4 |
| RH A228 | Advanced Hydronic Heat Systems | 4 |
| RH A229 | HVAC/R Control Systems | 3 |
| RH A232 | HVAC/R Sheet Metal | 3 |

4. A total of 51 credits is required for the certificate.

Associate of Applied Science, Refrigeration and Heating Technology

Admission Requirements

Satisfy the Requirements for Admission to Undergraduate Certificate and Associate's Degree Programs in Chapter 7, Academic Standards and Regulations.

Students must achieve an acceptable score on placement tests in reading, writing and mathematics.

Advising

Students are urged to meet with a faculty advisor prior to enrolling in RH courses.

Academic Progress

Earn a cumulative GPA of 2.00 (C) or higher in required R&H courses to receive the AAS.

AAS Degree Requirements

1. Complete the General University Requirements for Associate of Applied Science Degrees located at the beginning of this chapter.
2. Complete the General Course Requirements for Associate of Applied Science Degrees located at the beginning of this chapter.
3. Complete the Major Requirements for the degree listed below.

Major Requirements

Complete the following required courses:

| | | |
|---------|---|---|
| RH A101 | Refrigeration and Air-Conditioning Fundamentals | 4 |
| RH A103 | Technical Mathematics for Industrial Trades | 3 |

| | | |
|---------|--|---|
| RH A105 | Electrical Circuits for Refrigeration and Heating I | 3 |
| RH A109 | Principles of Thermodynamics | 3 |
| RH A122 | Refrigeration and Air Conditioning | 4 |
| RH A126 | Electrical Circuits for Refrigeration and Heating II | 3 |
| RH A132 | Troubleshooting for HVAC/R Systems | 3 |
| RH A201 | Commercial and Ammonia Refrigeration | 4 |
| RH A203 | HVAC/R Basic Controls | 3 |
| RH A209 | Codes for HVAC/R | 2 |
| RH A211 | Customer Relations and Job Etiquette | 1 |
| RH A225 | Heating Fundamentals and Forced Air Heat | 4 |
| RH A226 | Commercial HVAC/R Systems | 4 |
| RH A228 | Advanced Hydronic Heat Systems | 4 |
| RH A229 | HVAC/R Control Systems | 3 |
| RH A232 | HVAC/R Sheet Metal | 3 |

A total of 66 credits is required for the degree.

FACULTY

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RENEWABLE ENERGY

Matanuska-Susitna College, Palmer, AK (907) 745-9774
www.matsu.alaska.edu

The Renewable Energy program is offered through Matanuska-Susitna College.

Occupational Endorsement Certificate, Renewable Energy

In the Renewable Energy Occupational Endorsement Certificate program, students learn the fundamental concepts and skills necessary to pursue employment or gain further training as renewable energy technicians. Students are introduced to the physical principles of various renewable energies including solar, wind, hydro, and geothermal power sources. Terminology, energy conservation, and safety are emphasized throughout the program. Coursework incorporates the appropriate skills and knowledge necessary for students to become effective employees in the energy, utility, and maintenance industries. Career pathways may include operating large- and small-scale renewable power production facilities; designing, installing, and maintaining renewable energy systems; or assisting homeowners and businesses with energy efficiency. A required practicum provides applied experience in a workplace setting.

Student Outcomes

Upon completion of the occupational endorsement certificate, students will demonstrate:

- Knowledge of renewable energy resources and technologies
- Basic technical skills for diesel engine repair
- Introductory understanding of basic physics and power management as applied to renewable energy
- Familiarity with OSHA General Industry standards and safety
- Entry-level skills for renewable energy project development and management.

Admission Requirements

See Occupational Endorsement Certificate Admission Requirements in Chapter 7, Academic Standards and Regulations.

Academic Progress

In order to receive the Renewable Energy Occupational Endorsement Certificate, students must achieve a grade of C or better in all courses required for the occupational endorsement certificate.

Graduation Requirements

Complete the following required courses (23 credits):

| | | |
|---------|--|---|
| RE A100 | Introduction to Renewable Energy | 3 |
| RE A101 | Industrial Safety for Renewable Energy | 2 |
| RE A102 | Applied Physics for Renewable Energy | 3 |
| RE A106 | Introduction to Diesel Engines | 3 |
| RE A200 | Power Generation Systems | 3 |
| RE A201 | Power System Management | 3 |
| RE A203 | Renewable Energy Project Development | 3 |
| RE A295 | Renewable Energy Practicum | 3 |

FACULTY

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TECHNOLOGY

University Center, (UC) 130, (907) 756-6423

www.uaa.alaska.edu/cte/programs/academic/cte/academics/bst/index.cfm

The Bachelor of Science, Technology (BST) is a degree completion program for students who have earned an AAS (or a minimum of 45 related technical credits) from a regionally accredited institution and wish to pursue a baccalaureate degree. The BST offers a career pathway for technicians and professionals preparing for leadership positions. Students complete a common core of advanced technical and management courses, and they work with a faculty advisor to choose technical, quantitative, and natural science courses that prepare them to advance in their fields. Students may opt to focus their program of study through the Business emphasis in order to further develop their business acumen.

Technology, Career Specialty Undergraduate Certificates

Kodiak College Technology Center Building 123, (907) 486-1209

The Technology Career Specialty Certificates are offered through Kodiak College. Advising for this program is only available at Kodiak College. Please call (907) 486-1209 for more information.

The Technology Career Specialty Undergraduate Certificate programs provide entry-level skills in several specialized fields including welding, construction, and occupational safety and health.

Admission Requirements

See Requirements for Admission to Undergraduate Certificate and Associate's Degree Programs in Chapter 7, Academic Standards and Regulations.

General University Requirements

Complete the General University Requirements for Undergraduate Certificates at the beginning of this chapter.

Undergraduate Certificate, Welding

Students develop technical skills in various welding processes including shielded metal arc welding, gas metal arc welding, gas tungsten arc welding and plasma arc cutting. Students will also develop skills in metal fabrication and technical drawing. Upon completion of the certificate, students are prepared for entry-level welding technician positions. (See outcomes for Welding Technology emphasis of the AAS degree.)

1. Complete the Certificate Requirements: 30-31 Credits

| | | |
|-----------|---|-----|
| AET A101 | Fundamentals of CADD for Building Construction (4) | 3-4 |
| | or | |
| CIS A105 | Introduction to Personal Computers and Application Software (3) | |
| HUMS A153 | Human Relations (3) | 3 |
| | or | |
| HUMS A155 | Human Relations in the Workplace (3) | |

| | | |
|------------|--|---|
| MATH A101* | Technical Math (3) | 3 |
| | or | |
| MATH A105* | Intermediate Algebra (3) | |
| OSH A101 | Introduction to Occupational Safety and Health | 3 |
| PRPE A108 | Introduction to College Writing | 3 |
| TECH A295 | Technical Internship | 1 |
| WELD A112 | Shielded Metal Arc Welding | 4 |
| WELD A114 | Welding of High Strength Steels | 4 |
| WELD A157 | Technical Drawing for Welders | 3 |
| WELD A190 | Selected Topics in Welding Technology | 3 |

* Or any MATH course for which MATH A101 or MATH A105 is a prerequisite.

Undergraduate Certificate, Construction Technology

Students develop technical skills in AutoCADD, building methods, codes and standards, structural systems, and construction project management. Upon completion of the certificate in construction, students are prepared for entry-level positions as construction professionals. (See outcomes for Construction emphasis of the AAS degree.)

| | | | |
|----|---|---|---|
| 1. | Complete the Certificate Requirements: 33 Credits | | |
| | CIS A105 | Introduction to Personal Computers and Application Software | 3 |
| | CM A101 | Fundamentals of CADD for Building Construction | 4 |
| | CM A102 | Methods of Building Construction | 3 |
| | CM A123 | Codes and Standards | 3 |
| | CM A201 | Construction Project Management I | 3 |
| | CM A205 | Construction Safety | 3 |
| | CM A231 | Structural Technology | 4 |
| | HUMS A153 | Human Relations (3) | 3 |
| | | or | |
| | HUMS A155 | Human Relations in the Workplace (3) | |
| | MATH A101 | Technical Math (3) | 3 |
| | PRPE A108 | Introduction to College Writing | 3 |
| | TECH A295 | Technical Internship | 1 |

Undergraduate Certificate, Industrial Safety Program Support

Students develop technical skills in program development, assessment, and management, as well as training needs, training methods, injury prevention, risk management, workplace injury and incident evaluations. Upon completion of the certificate in construction, students are prepared for entry-level positions in industrial safety program support. (See outcomes for Occupational Safety and Health emphasis of the AAS degree.)

| | | | |
|----|---|---|---|
| 1. | Complete the Certificate Requirements: 33 Credits | | |
| | CIS A105 | Introduction to Personal Computers and Application Software | 3 |
| | ENGL A111 | Fundamentals of Written Communication | 3 |
| | MATH A105 | Intermediate Algebra | 3 |
| | OSH A101 | Introduction to Occupational Safety and Health | 3 |
| | OSH A108 | Injury Prevention and Risk Management | 4 |
| | OSH A110 | Program Assessment, Development, and Implementation | 4 |
| | OSH A120 | Safety Program Management and Recordkeeping | 3 |
| | OSH A180 | Introduction to Industrial Hygiene | 4 |
| | OSH A201 | Workplace Injury and Incident Evaluation | 4 |
| | TECH A295 | Technical Internship | 2 |

Associate of Applied Science, Technology

The Associate of Applied Science, Technology is offered only through Kodiak College. Advising for this program is only available from Kodiak College. Please call (907) 486-1209 for more information.

The Associate of Applied Science in Technology Degree offers career specialty concentrations in the following emphasis areas:

- Construction
- Occupational Safety and Health
- Welding

The Associate of Applied Science, Technology degree program is designed to provide entry-level skills, continuing education, and advanced technical skills in several specialized fields including welding, construction, and safety. Applicants who qualify for the two-year program at Kodiak College may wish to seek advanced degrees in Technology at UAA.

Students seeking a technical career in welding, construction, or occupational safety will be well prepared as they complete the technology program. The comprehensive technology curriculum with applied math, science and technical writing components ensures student readiness for rewarding careers in a variety of technical fields.

Students successfully completing the core of the Associate of Applied Science, Technology should expect to:

- Understand, describe and analyze the physical components and processes found in technical systems.
- Demonstrate skills in communication, computation and human relations applicable to personal and professional situations.
- Demonstrate and apply knowledge of physics, math and computers to technical fields
- Understand and apply safety practices.

Admission Requirements

See Requirements for Admission to Undergraduate Certificate and Associate's Degree in chapter 7, Academic Standards and Regulations.

General University Requirements

Complete the General University Requirements for Associate's Degrees at the beginning of this chapter. Students are encouraged to meet with their academic advisor to coordinate program completion.

Major Requirements

- Complete the following required courses:

General Requirements (16 Credits)

| | | |
|------------------------------------|---|---|
| <i>Communication, select from:</i> | | 3 |
| COMM A111 | Fundamentals of Oral Communication (3) | |
| | or | |
| COMM A235 | Small Group Communication (3) | |
| | or | |
| COMM A237 | Interpersonal Communication (3) | |
| | or | |
| COMM A241 | Public Speaking (3) | |
| ENGL A111 | Methods of Written Communication | 3 |
| ENGL A212 | Technical Writing | 3 |
| MATH A105 | Intermediate Algebra (or any MATH course for which MATH A105 is a prerequisite) | 3 |
| <i>Science, select from:</i> | | 4 |
| CHEM A103/L | Survey of Chemistry with Laboratory (for Construction or OSH emphases only) (4) | |
| | or | |
| CHEM A105/L | General Chemistry with Laboratory (for Construction or OSH emphases only) (4) | |
| | or | |
| GEOL A111 | Physical Geology (for Construction emphasis only) (4) | |
| | or | |

| | | |
|--|--|---|
| PHYS A123/L | Basic Physics I with Laboratory (4) | |
| Technology Core Requirements (23 Credits) | | |
| AET A101 | Fundamentals of CADD for Building Construction | 4 |
| CIS A105 | Introduction to Personal Computers and Software Applications | 3 |
| ET A151 | Basic Electricity for the Trades | 4 |
| HUMS A153 | Human Relations | 3 |
| | or | |
| HUMS A155 | Human Relations in the Workplace | |
| OSH A101 | Introduction to Occupational Safety and Health | 3 |
| OSH A250 | Hazardous Material Operations | 3 |
| TECH A101 | Introduction to Technological Principles | 3 |

2. Complete one of the following Technology Career Emphasis areas:

Construction (27 Credits)

Outcomes

The purpose of this degree emphasis is to produce capable graduates who can perform safely and efficiently in a construction environment. Graduates will be prepared to learn the specific needs of the industries that they serve and demonstrate abilities in:

- a. **Documentation:** Create, interpret and use construction drawings and other documents, and calculate quantities of material, labor, and equipment needed for a project.
- b. **Human Resources:** Define the roles, relationships, and responsibilities of the participants in the construction process, and understand employee relations and contract law.
- c. **Building Methods:** Define structural theories and physical principles affecting structural behavior in buildings and civil works. Define the elements of civil construction, soil mechanics, foundations, roads, and construction surveying. Define basic building systems, building equipment, materials, techniques and assemblies for construction.
- d. **Codes and Standards:** Interpret standard building codes for application in modern construction processes.
- e. **Construction Project Management:** Familiarity with effective contract administration methods to control, organize, and monitor construction projects.
- f. **Management Tools:** Utilize industry standard software for computer-aided drafting (CADD) and gain familiarity with estimating, scheduling and resource management.
- g. **Safety:** Apply knowledge of safety, health, and environmental issues related to construction activities.

| | | |
|-----------|--------------------------------------|---|
| CM A102 | Methods of Building Construction | 3 |
| CM A123 | Codes and Standards | 3 |
| CM A142 | Mechanical and Electrical Technology | 4 |
| CM A201 | Construction Project Management | 3 |
| CM A205 | Construction Safety | 3 |
| CM A213 | Civil Technology | 4 |
| CM A231 | Structural Technology | 4 |
| TECH A295 | Technical Internship | 3 |

Occupational Safety and Health (24 Credits)

Outcomes

The purpose of this degree emphasis is to produce capable graduates who can plan for safe activities and direct safety programs in a variety of industrial settings. Graduates will be prepared to learn the specific needs of the industries that they serve and demonstrate the abilities to:

- a. Identify risks to life, health and property, and plan and implement strategies that prevent injuries.
- b. Develop, implement and manage safety programs that comply with government regulations, industry standards and best safety practices.
- c. Design and maintain company and personnel records related to safety activities, training and incidents.

- d. Perform hazard recognition and mitigation related to chemical and physical conditions in the workplace.
 - e. Develop and implement a process of incident or injury investigation and properly collect, organize and analyze appropriate information to link root causes with observed effects.
 - f. Prepare and present employee training modules and programs based on training needs assessments and properly prepare objectives and materials, and practice effective presentations.
- | | | |
|-----------|--|---|
| OSH A108 | Injury Prevention and Risk Management | 4 |
| OSH A110 | Program Assessment, Development & Implementation | 4 |
| OSH A120 | Safety Program Management and Recordkeeping | 3 |
| OSH A180 | Introduction to Industrial Hygiene | 4 |
| OSH A201 | Workplace Injury and Incident Evaluation | 4 |
| OSH A210 | Training Needs and Methods | 3 |
| TECH A295 | Technical Internship | 2 |

Sixty-two to 66 credits are required for the Associate in Applied Science, Technology degree.

Welding (25 Credits)

Outcomes

The purpose of this degree emphasis is to produce capable graduates who can perform safely and efficiently in a welding environment. Graduates will be prepared to learn the specific needs of the industries that they serve and demonstrate:

- a. Technical and administrative skills required in today's metal fabrication and welding environments.
- b. Application of specifications and welding procedures to specific job tasks.
- c. Skills in welding and thermal cutting processes and familiarity with basic metallurgy theory.
- d. Competence in all-position welder qualification tests for two welding process and familiarity with other welding processes.
- e. Safe work habits by assessing hazards and using best practices to avoid exposure to risk of injury, and to avoid damaging equipment.
- f. Effective communication with other employees, customers, and management.

| | | |
|-----------|---|---|
| TECH A295 | Technical Internship | 3 |
| WELD A112 | Shielded Metal Arc Welding | 4 |
| WELD A114 | Welding of High Strength Steel | 4 |
| WELD A157 | Technical Drawing for Welders | 3 |
| WELD A161 | Gas Metal Arc Welding | 4 |
| WELD A190 | Selected Topics in Welding (Approved Topics) | 7 |

Bachelor of Science, Technology

The Bachelor of Science, Technology is designed to allow students to design a program of study which complements their technical proficiencies. The general program, as well as the business emphasis, are described below.

Admission Requirements

Satisfy the Requirements for Admission to Baccalaureate Degree Programs found in Chapter 7, Academic Standards and Regulations.

Students who apply to the Bachelor of Science, Technology (BST) major are admitted in a pre-major status. The process for advancement to major status is:

- 1. Completion of an advising session with BST faculty advisor. (See contact information above.)

2. Completion of an Associate of Applied Science degree from a regionally accredited institution or equivalent credits in a technical specialty area as approved by BST faculty advisor (45 credits minimum).
3. Completion of Change of Major Form from pre-major to major status signed by BST faculty advisor.

Degree Requirements

1. Complete the General University Requirements for Baccalaureate Degrees listed at the beginning of this chapter.
2. Complete the General Education Requirements (GER) for Baccalaureate Degrees listed at the beginning of this chapter.
3. Complete Required Support Courses and Major Degree Requirements.

Program Description and Outcomes

This program builds on technical skills and knowledge to achieve professional and management competencies needed over a lifetime in continuously changing technological fields. Upon completion of this program, graduates will be able to:

- Develop, demonstrate, and evaluate policies and processes to ensure a safe workplace.
- Integrate knowledge gained in the program into professional goals and objectives.
- Design, schedule, manage, and assess technical projects.
- Achieve professional and management competencies for work in technical fields.

Advising

All students are encouraged to meet with their academic advisor each semester for the purpose of reviewing their academic progress and planning future courses. It is particularly important for students to meet with their advisor whenever academic difficulties arise.

Required Support Courses (12-14 credits)

| | |
|---|-----|
| Ethics (*PHIL A301 recommended) | 3 |
| *ENGL A312 Advanced Technical Writing | 3 |
| *MATH A107 College Algebra (4) | 3-4 |
| or | |
| *MATH A172 Applied Finite Mathematics (3) | |
| BA A273 Introduction to Statistics for Business and Economics (3) | 3-4 |
| or | |
| *STAT A252 Elementary Statistics (3) | |
| or | |
| *STAT A253 Applied Statistics for the Sciences (4) | |

Note 1: Courses marked with an (*) fulfill UAA GERs.

Major Requirements

1. Complete an Associate of Applied Science degree from a regionally accredited institution or have earned equivalent credits (45 minimum) in a technical specialty.
(Must be approved by BST faculty advisor.) 45-60+
2. Additional natural sciences or quantitative skills** 12
Choose from:
Any GER natural sciences or quantitative skills courses and/or
Any upper division STAT, MATH, and/or natural science courses with prefix BIOL, CHEM, ENVI, GEOG, GEOL, and/or PHYS.
***Choose 12 credits of natural sciences or quantitative skills courses (in addition to the 10 credit minimum natural sciences [7] and quantitative skills [3] GERs and in addition to the quantitative skills courses listed under "Required Support Courses"), with faculty approval, for which prerequisites have been met.*
3. Complete the following required BST core courses (15 credits):
TECH A302 Operational Safety 3

| | |
|---|---|
| TECH A305 Technology Management | 3 |
| TECH A433 Project Design, Implementation, and Control | 3 |
| TECH A443 Quality Leadership | 3 |
| TECH A453 Capstone Project | 3 |

4. Complete a minimum of 6 credits of faculty advisor-approved upper division electives related to program outcomes or professional goals. 6
5. A minimum of 120 credits is required for the Bachelor of Science, Technology degree, of which a minimum of 42 credits must be upper division.

Bachelor of Science, Technology Business Emphasis

Program Description and Outcomes

The BST Business Emphasis offers students a focused program of study drawing required courses from Economics and Accounting and incorporating selected courses from Business Administration, Computer Information Systems, or Logistics. While the emphasis requires a minimum of 9 additional credits, the Business emphasis allows students to pursue more depth in their business skills. Upon completion of this program, graduates will be able to:

- Develop, demonstrate, and evaluate policies and processes to ensure a safe workplace.
- Integrate knowledge gained in the program into professional goals and objectives.
- Design, schedule, manage, and assess technical projects.
- Achieve professional and management competencies for work in technical fields.
- Synthesize and apply economic, accounting, and business knowledge within technical contexts.

Advising

All students are encouraged to meet with their academic advisor each semester for the purpose of reviewing their academic progress and planning future courses. It is particularly important for students to meet with their advisor whenever academic difficulties arise.

Required Support Courses (18-20 credits)

| | |
|---|-----|
| Ethics (*PHIL A301 recommended) | 3 |
| *ECON A201 Principles of Macroeconomics | 3 |
| *ECON A202 Principles of Microeconomics | 3 |
| *ENGL A312 Advanced Technical Writing | 3 |
| *MATH A107 College Algebra (4) | 3-4 |
| or | |
| *MATH A172 Applied Finite Mathematics (3) | |
| BA A273 Introduction to Statistics for Business and Economics (3) | 3-4 |
| or | |
| *STAT A252 Elementary Statistics (3) | |
| or | |
| *STAT A253 Applied Statistics for the Sciences (4) | |

Note 1: Courses marked with an (*) fulfill UAA GERs. No more than 3 credits of ECON A201 and ECON A202 may be used in fulfilling UAA GERs for a baccalaureate degree.

Major Requirements

1. Complete an Associate of Applied Science degree from a regionally accredited institution or have earned equivalent credits (45 minimum) in a technical specialty.
(Must be approved by BST faculty advisor.) 45-60+
2. Complete the following 6 credits: 6
ACCT A201 Principles of Financial Accounting (3)
ACCT A202 Principles of Managerial Accounting (3)
3. Additional natural sciences or quantitative skills** 9

Choose from:

Any GER Natural Sciences or quantitative skills GER courses and/or

Any upper division STAT, MATH, and/or natural science courses with prefix BIOL, CHEM, ENVI, GEOG, GEOL, and/or PHYS.

***Choose 12 credits of natural sciences or quantitative skills courses (in addition to the 10 credit minimum natural sciences [7] and quantitative skills [3] GERs and in addition to the quantitative skills courses listed under "Required Support Courses"), with faculty approval, for which prerequisites have been met.*

4. Complete the following required BST core courses: (15 credits)

| | | |
|-----------|---|---|
| TECH A302 | Operational Safety | 3 |
| TECH A305 | Technology Management | 3 |
| TECH A433 | Project Design, Implementation, and Control | 3 |
| TECH A443 | Quality Leadership | 3 |
| TECH A453 | Capstone Project | 3 |

5. Complete a minimum of 6 credits upper division selectives chosen from BA, CIS, ACCT, ECON or LOG. 6
6. A minimum of 129 credits is required for the Bachelor of Science, Technology degree with the Business emphasis, of which a minimum of 42 credits must be upper division.

FACULTY

Maria Angela Dirks, Assistant Professor, angela.dirks@uaa.alaska.edu

Mel Kalkowski, Term Assistant Professor, ANMLK@uaa.alaska.edu

TELECOMMUNICATIONS, ELECTRONICS AND COMPUTER TECHNOLOGY

University Center (UC), Room 130, (907) 786-6426

www.uaa.alaska.edu/ctc/computers/tele

The Telecommunications, Electronics and Computer Technology Department (TECT) provides entry-level skills and career education to meet the demand for well-trained technicians in the computer electronics, telecommunications and electronics industries. The TECT Department offers an Occupational Endorsement Certificate in Cisco Certified Network Associate (CCNA) and two Undergraduate Certificates in the specialized areas of Telecommunications and Electronics Systems (TES) and Computer and Networking Technology (CNT). Both certificates require three full-time semesters to complete. An Associate of Applied Science degree in Telecommunications, Electronics and Computer Technology can be earned by completing additional required technical and general education courses.

Graduates from the TECT program can be employed as skilled technical support workers in fields including communications, microchip manufacturing, and computer support and repair in private industry as well as municipal, state, and federal agencies.

Both the Anchorage campus and the Matanuska-Susitna campus offer the program and are collaborative sites for the Fairbanks-based, statewide Information Technology Specialist (ITS), which offers a certificate and an associate's degree. Students should consult the TECT faculty for assistance with curriculum planning toward certifications such as A+, Net+, CCNA, ICSA Customer Service, Microsoft Certified Professional, and other industry-recognized standards.

Occupational Endorsement Certificate, Cisco-Certified Network Associate (CCNA)

Description and Outcomes

At the completion of this occupational endorsement certificate program students are able to demonstrate:

1. Proficiency in Cisco router installation and configuration in multi-protocol internetworks using LAN and WAN switches.
2. Proficiency in Cisco switch and VLAN installation and configuration.
3. Entry-level tasks of planning, design, installation, operation and troubleshooting Ethernet and TCP/IP networks.

Admission Requirements

See Admission Requirements for Occupational Endorsement Certificates in Chapter 7, Academic Standards and Regulations.

Advising

Students should consult the CNT faculty for assistance with curriculum planning toward certifications.

Academic Progress

Students must earn a satisfactory grade (C or higher) in all courses required for the certificate.

General University Requirements

See General University Requirements for Occupational Endorsement Certificates at the beginning of this chapter.

Major Requirements

1. Complete the following required courses with a grade of C or better:

| | | |
|----------|--|---|
| CNT A170 | CCNA 1 Network Fundamentals | 4 |
| CNT A261 | CCNA 2 Router Fundamentals and Protocols | 4 |
| CNT A270 | CCNA 3 Switching and Wireless | 4 |
| CNT A271 | CCNA 4 WAN Access | 4 |
2. A total of 16 credits is required for the occupational endorsement certificate.

Undergraduate Certificate, Computer and Networking Technology

Certificate Description and Outcomes

This undergraduate certificate program prepares students to install, configure, operate and repair networks used to connect computing and digital communications systems of various types. At the completion of the program students are able to demonstrate:

1. Proficiency in PC troubleshooting and repair.
2. Competence in entry-level tasks of planning, design, installation, and troubleshooting Ethernet and TCP/IP networks.
3. Computer literacy in PC applications and operating systems.
4. Entry-level employability skills for computer and network technicians.
5. Job upgrade skills for technicians and professionals.
6. Proper customer service skills.
7. Proficiency in Cisco router installation and configuration in multi-protocol inter-networks.
8. Proficiency in Cisco switch and VLAN installation and configuration.

Admission Requirements

See Undergraduate Certificate Admissions Requirements in Chapter 7, Academic Standards and Regulations.

Advising

Students should consult the CNT faculty for assistance with curriculum planning toward certifications.

Academic Progress

Students must earn a satisfactory grade (C or higher) in all courses required for the certificate.

General University Requirements

See General University Requirements for Undergraduate Certificates at the beginning of this chapter.

Major Requirements

- Complete the following required courses with a grade of C or better (27 credits):

| | | |
|----------|--|---|
| CNT A162 | PC Architecture and Building | 3 |
| CNT A165 | Customer Service Fundamentals | 1 |
| CNT A170 | CCNA 1 Network Fundamentals | 4 |
| CNT A180 | PC Peripherals, Storage and A+ Certification | 4 |
| CNT A183 | Local Area Networks | 3 |
| CNT A261 | CCNA 2 Router Fundamentals and Protocols | 4 |
| CNT A270 | CCNA 3 Switching and Wireless | 4 |
| CNT A271 | CCNA 4 WAN Access | 4 |
- Complete a minimum of 5 credits from the following courses with a grade of C or better: 6

| | | |
|----------|--|--|
| CNT A240 | Windows System Essentials (2) | |
| CNT A241 | Administering and Supporting Windows Workstations and Server (3) | |
| CNT A264 | Introduction to Information Security (3) | |
| CNT A280 | Server Operating System (3) | |
| CNT A290 | Selected Topics in Information Technology (1-4) | |
- Complete a minimum of 3 credits from the following courses: 3

| | | |
|------------|--|--|
| CIOS A101A | Keyboarding A: Basic Keyboarding (1) | |
| CIOS A113 | Operating Systems: MS Windows (1) | |
| CIOS A130A | Word Processing I: MS Word (1) | |
| CIOS A135A | Spreadsheets I: MS Excel (1) | |
| CIOS A140A | Databases I: MS Access (1) | |
| CIOS A146 | Internet Concepts and Applications (2) | |
| CIOS A150A | Presentations: MS PowerPoint (2) | |
| CIS A105 | Introduction to Personal Computers and Applications Software (3) | |
| CIS A110 | Computer Concepts in Business (3) | |
| CNT A290 | Selected Topics in Information Technology (1-4) | |
- Complete 3 credits from the following courses: 3

| | | |
|-----------|--|--|
| PRPE A108 | Introduction to College Writing (3) | |
| ENGL A109 | Introduction to Writing in Academic Contexts (3) | |

or

Written Communications General Education Requirement (3)

Note: English A111 is required for the AAS degree.
- A minimum of 38 credits are required for the certificate.

Undergraduate Certificate, Telecommunications and Electronics Systems

Admission to the certificate program is currently suspended. Contact the department for further information.

Associate of Applied Science, Telecommunications, Electronics and Computer Technology

Degree Description and Outcomes

At the completion of the Computer and Networking Technology track of this associate's degree program, students are able to demonstrate:

- Computer literacy in PC applications and operating systems.
- Entry-level employment skills for computer and network technicians.
- Proficiency in Cisco router installation and configuration in multi-protocol inter-networks.
- Proficiency in Cisco switch and VLAN installation and configuration.
- Entry-level tasks of planning, design, installation, operation and troubleshooting Ethernet and TCP/IP networks.
- Proficiency in PC troubleshooting and repair.
- The installation configuration and troubleshooting Microsoft operating systems.
- The configuration and maintenance of network and computer system security.
- Proper customer service skills.

At the completion of the Telecommunications and Electronics Systems track of this associate degree program, students are able to demonstrate:

- Proficiency in electronic theory, equipment maintenance and troubleshooting.
- Proficiency in electronic communications and telecommunications.
- Computer literacy in PC applications and operating systems.
- Good customer service skills.

Admission Requirements

See Admission Requirements to Undergraduate Certificate and Associate's Degree Programs in Chapter 7, Academic Standards and Regulations.

General University Requirements

- Complete the General University Requirements for Associate's Degrees listed at the beginning of this chapter.
- Complete the Associate of Applied Science Requirements (15 credits) listed at the beginning of this chapter.

General Course Requirements

Complete the General Course Requirements for AAS degrees listed at the beginning of this chapter.

Major Requirements

Complete one of the following tracks:

Computer and networking track (52 credits)

- Complete the following requirements (29 credits):

| | | |
|----------|--|---|
| CNT A160 | PC Operating Systems | 3 |
| CNT A162 | PC Architecture and Building | 3 |
| CNT A165 | Customer Service Fundamentals | 1 |
| CNT A170 | CCNA 1 Network Fundamentals | 4 |
| CNT A180 | PC Peripherals, Storage and A+ Certification | 4 |
| CNT A183 | Local Area Networks | 3 |
| CNT A261 | CCNA 2 Router Fundamentals and Protocols | 4 |
| CNT A270 | CCNA 3 Switching and Wireless | 4 |
| CNT A271 | CCNA 4 WAN Access | 4 |
- Complete 9 credits from the following courses: 9

| | | |
|----------|--|--|
| CNT A262 | Computer Technical Support (2) | |
| CNT A264 | Introduction to Information Security (3) | |
| CNT A272 | Cisco Wireless Networking (3) | |
| CNT A276 | Individual Technical Project (1-3) | |

- | | | |
|------------|--|---|
| CNT A282 | Industry Workplace Experience (1-3) | |
| CNT A290 | Selected Topics in Information Technology (1-4) | |
| 3. | Complete 8 credits from the following courses: | 8 |
| CNT A240 | Windows System Essentials (2) | |
| CNT A241 | Administering and Supporting Windows Workstations and Server (3) | |
| CNT A242 | Windows Network Infrastructure Administration (3) | |
| CNT A280 | Server Operating Systems (3) | |
| 4. | Complete 3 credits from the following courses: | 3 |
| CS A101 | Introduction to Computer Science (3) | |
| CS A109 | Computer Programming (Languages Vary) (3) | |
| CS A110 | Java Programming (3) | |
| CS A111 | Visual Basic.NET Programming (3) | |
| 5. | Complete 3 credits from the following courses: | 3 |
| CIOS A113 | Operating Systems: MS Windows (1) | |
| CIOS A120A | Bookkeeping Software Application I: Quickbooks (1) | |
| CIOS A130A | Word Processing I: MS Word (1) | |
| CIOS A135A | Spreadsheets I: MS Excel (1) | |
| CIOS A146 | Internet Concepts and Applications (2) | |
| CIOS A150A | Presentations: MS PowerPoint (2) | |
| CIS A105 | Introduction to Personal Computers and Applications Software (3) | |
| CIS A110 | Computer Concepts in Business (3) | |
| CNT A290 | Selected Topics in Information Technology (1-4) | |

Telecommunications and Electronics Systems Track (45 credits)

Admission to this track is currently suspended. Contact the department for further information.

FACULTY

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VETERINARY ASSISTING

Matanuska-Susitna College
Palmer, AK (907) 745-9774
www.matsu.alaska.edu

The Veterinary Assisting program is offered through Matanuska-Susitna College.

Occupational Endorsement Certificate, Veterinary Assisting

A Veterinary Assistant plays a vital role within the veterinary profession. In the Veterinary Assisting Occupational Endorsement Certificate Program, students learn how to assist and support the veterinarian and the veterinary technician in their daily tasks. Students will learn the fundamentals required for the care, treatment, and management of both the animals as patients and people as clients. Students learn the fundamentals of good customer service, communication skills, and the essentials of clerical responsibilities. They further learn the fundamental skills of proper handling, nutrition, and nursing care for both large and small animals. Students are introduced to clinical patient management and laboratory procedures.

Certificate Outcomes

Upon completion of the occupational endorsement certificate, students will demonstrate:

- Knowledge of veterinary practice administration
- Basic ability to handle and restrain large and small animals
- Understanding of basic medical terminology
- Introductory understanding of animal anatomy and physiology
- Entry level skills for laboratory procedures
- Effective customer service and communication skills.

Admission Requirements

See Admission Requirements to Occupational Endorsement Certificates in Chapter 7, Academic Standards and Regulations.

Certificate Requirements

In order to receive the Veterinary Assisting Occupational Endorsement Certificate, students must achieve a grade of C or better in all courses required for the occupational endorsement certificate.

1. Complete the following required courses:

| | | |
|-----------|--|---|
| VETT A101 | Introduction to the Veterinary Profession | 1 |
| VETT A103 | Veterinary Office Procedures | 3 |
| VETT A122 | Basic Handling and Behavior: Small Animals | 2 |
| VETT A123 | Basic Handling and Behavior: Large Animals | 2 |
| VETT A124 | Introduction to Small Animals | 3 |
| VETT A125 | Introduction to Large Animals | 3 |
| VETT A201 | Veterinary Anatomy and Physiology | 4 |
| VETT A295 | Veterinary Assistant Practicum | 3 |
2. A total of 21 credits are required for this Occupational Endorsement Certificate.

FACULTY

Karen Carpenter, Assistant Professor, kcarpenter@matsu.alaska.edu

WELDING & NONDESTRUCTIVE TESTING TECHNOLOGY

Anchorage

Gordon Hartlieb Hall (GHH), Room 111, (907) 786-6475
www.uaa.alaska.edu/ctc/construction/weld

Kenai Peninsula College

Kenai River Campus, 156 College Road, Soldotna, AK 99669, (907) 262-0344, (877) 262-0330
www.kpc.alaska.edu/academics/cert_welding.html

The Welding and Nondestructive Testing Technology program prepares students for employment in welding and/or nondestructive examination as entry-level technicians. A variety of career opportunities are available to welding technicians and nondestructive examination technicians. Both of these fields are utilized in construction, manufacturing, and transportation industries throughout the world.

The Welding and Nondestructive Testing (NDT) program offers an Associate of Applied Science (AAS) degree in Welding and Nondestructive Testing Technology, and two separate Undergraduate Certificates in either Industrial Welding Technology or Nondestructive Testing Technology. Welding and NDT are combined in the AAS degree. Kenai Peninsula College also offers an Undergraduate Certificate in Welding Technology as described in this catalog section.

Industrial welding technician students develop manual skills in four main welding processes and three thermal cutting processes, as well as gain a wide range of technical knowledge in welding application, procedure/welder qualification, reading plans and specifications, and applied metallurgy. Welder qualification tests are administered as prescribed in AWS D1.1, API Standard 1104, or ASME IX welding codes.

Nondestructive Testing technician students examine metallic components or weldments to locate and evaluate discontinuities by learning to apply liquid penetrant (PT), magnetic particle (MT), eddy current (ET), radiographic (RT) and ultrasonic (UT) test methods. Student qualification in each NDT method is based on general, specific and practical examinations administered as prescribed in the American Society for Nondestructive Testing (ASNT) Recommended Practice No. SNT-TC-1A.

Undergraduate Certificates

Admission Requirements

See Admission Requirements to Undergraduate Certificates and Associate's Degree Programs Chapter 7, Academic Standards and Regulations.

General University Requirements

Complete the General University Requirements for Undergraduate Certificates at the beginning of this chapter.

Advising

Students should consult the Anchorage or Kenai WELD faculty for assistance with course planning towards certifications.

Academic Progress Requirements

Students must complete certificate course requirements with a minimum cumulative GPA of 2.00.

Undergraduate Certificate, Industrial Welding Technology

Admission to the certificate program is currently suspended. Contact the department for further information.

Undergraduate Certificate, Nondestructive Testing Technology

Admission to the certificate program is currently suspended. Contact the department for further information.

Undergraduate Certificate, Welding Technology

Kenai Peninsula College

Kenai River Campus, 156 College Road, Soldotna, AK 99669, (907) 262-0344, (877) 262-0330

This certificate is offered only at Kenai Peninsula College.

Advising for this program is only available from the Welding faculty at Kenai Peninsula College. Please call (907) 262-0344 or (877) 262-0330 for more information.

Certificate Description and Outcomes

The one-year certificate in welding technology provides a student with specific training for structural and pipe welding certification. Students gain comprehensive training in the latest welding technology, blueprint reading, layout, and fabrication. Graduates of this program will be prepared for employment as structural or pipe welders, and will have a solid welding background for many mechanical trades.

NOTE: Experienced welders have the option of bypassing the first semester courses by successfully completing written and practical examinations on first semester work.

General University Requirements

Complete the General University and the General Course Requirements for certificates located at the beginning of this chapter.

Certificate Requirements

1. Complete the following requirements:

| | | |
|-----------|---|---|
| MATH A105 | Intermediate Algebra (or any MATH course for which MATH A105 is a prerequisite) | 3 |
| PRPE A108 | Introduction to College Writing (3) | 3 |
| | or | |
| ENGL A111 | Methods of Written Communication (3) | |
| | or | |
| COMM A111 | Fundamentals of Oral Communication (3) | |
| WELD A102 | Gas Welding | 2 |
| WELD A103 | Arc Welding | 4 |
| WELD A104 | Arc Welding: Low-Hydrogen Electrodes | 4 |
| WELD A105 | Pipe Welding | 4 |
| WELD A106 | Pipe Certification | 4 |
| PETR A155 | Blueprint Reading | 3 |

2. Complete one of the following (4 credits):

| | | |
|-----------|------------------|--|
| WELD A108 | Wire Welding (4) | |
| WELD A109 | TIG Welding (4) | |
3. All students must pass structural and pipe certification tests before receiving a certificate in Welding Technology.
4. A total of 31 credits is required for the undergraduate certificate.

FACULTY

Fritz Miller, Associate Professor, IFFWM@uaa.alaska.edu

Drew O'Brien, Assistant Professor, IFDO@uaa.alaska.edu

Associate of Applied Science, Welding and Nondestructive Testing Technology

Degree Description and Outcomes

This associate's degree prepares students with the technical and administrative skills required in today's metal fabrication and inspection environments. Graduates of this program will be able to apply specifications and codes to complete specific job tasks.

At the completion of the program, students are able to demonstrate:

1. Entry-level technical skills in welding and nondestructive examination.
2. Technical knowledge of the interrelationship between welding and inspection processes.
3. Hazard assessment and best safety practices to avoid exposing themselves or others to risk of injury and avoiding damage to equipment.
4. Effective communication with other employees, customers, and management.

Admission Requirements

See the Associate's Degree Admissions Requirements in Chapter 7, Academic Standards and Regulations.

General University Requirements

Complete the General University Requirements for Associate of Applied Science Degrees at the beginning of this chapter.

General Course Requirements

Complete the General Course Requirements for AAS degrees listed at the beginning of this chapter.

Advising

Students should consult the Anchorage or Kenai WELD faculty for assistance with course planning towards the AAS degree.

Major Requirements

1. Complete the following required courses:

| | | |
|-----------|----------------------------------|---|
| ENGL A111 | Methods of Written Communication | 3 |
| ENGL A212 | Technical Writing | 3 |

| | | |
|----------------|---|-----|
| MATH A105 | Intermediate Algebra (or any MATH course for which MATH A105 is a prerequisite) | 3 |
| Additional AAS | General Education Requirements | 6 |
| PHYS A101 | Physics for Poets (3) | 3-4 |
| | or | |
| PHYS A115 | Physical Science with Laboratory (4) | |
| | or | |
| PHYS A123 | Basic Physics I (3) | |
| WELD A112 | Shielded Metal Arc Welding (SMAW) | 4 |
| WELD A157 | Technical Drawings for Welders | 3 |
| WELD A161 | Gas Metal Arc Welding (GMAW) | 4 |
| WELD A162 | Flux Cored Welding (FCAW) | 4 |
| WELD A174 | Gas Tungsten Arc Welding (GTAW) | 4 |
| WELD A261 | Ultrasonic Testing | 4 |
| WELD A262 | General Nondestructive Testing | 3 |
| WELD A263 | Radiographic Testing Safety | 2 |
| WELD A264 | Radiographic Testing | 3 |
| WELD A281 | Welding Inspection and Code Review | 4 |
| WELD A287 | Welding Metallurgy Applications | 5 |
| 2. | Complete at least one of the following courses: | 3-4 |
| TECH A295 | Technical Internship (advisor approved) (3) | |
| WELD A117 | Basic Pipefitting (4) | |
| WELD A118 | Welding Fabrication and Manufacturing (4) | |
| WELD A190 | Selected Topics in Welding Technology (3) | |
| 3. | Pass three separate all-position welder qualification tests. | |
| 4. | Pass two separate NDT method qualification tests. | |
| 5. | A total of 61-62 credits is required for the degree. | |

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SCHOOL OF ENGINEERING

Engineering embraces the wide range of cultural and technical subjects related to the planning, design and manufacture, or construction of objects necessary for civilization. An engineer is an innovator, a builder and a problem solver. Engineers turn scientific knowledge into useful goods and services and are responsible to society for their engineering design decisions. They are interested in working with people often as team members in positions of leadership. Engineers are concerned about people and ways to provide society with improved living standards.

The School of Engineering offers areas of study at the undergraduate level:

- A four-year program leading to a Bachelor of Science in Civil Engineering;
- A four-year program leading to a Bachelor of Science in Engineering with three speciality tracks:
 - Mechanical Engineering
 - Electrical Engineering
 - Computer Systems Engineering;
- A four-year program leading to a Bachelor of Science in Geomatics;
- A two-year program leading to an Associate of Applied Science in Geomatics; and
- Minors in Civil Engineering, Computers Systems Engineering, Electrical Engineering, General Engineering, Mechanical Engineering, or Geographic Information Systems (GIS).

Accreditation

All Bachelor of Science programs are accredited by ABET (Accreditation Board for Engineering and Technology) and include the following:

1. Civil Engineering
2. Computer Systems Engineering
3. Electrical Engineering
4. Geomatics
5. Mechanical Engineering

Civil Engineering

The UAA School of Engineering offers a Bachelor of Science in Civil Engineering to prepare students for the profession. Knowledge of mathematical and physical sciences gained by study, experience and practice is applied with judgment to develop ways to utilize materials and forces of nature for the progressive well-being of humanity.

Students are prepared for improving and protecting the environment; providing facilities for community living, industry and transportation; and providing structures for the use of humanity.

Engineering

The UAA School of Engineering offers a Bachelor of Science in Engineering (BSE) with specializations in Computer Systems Engineering, Electrical Engineering or Mechanical Engineering. Graduates with a BSE have a broad range of engineering skills that are necessary when serving the infrastructure needs of remote rural areas typical of many Alaskan communities. The program emphasizes fundamental engineering principles as a basis for interdisciplinary design, teamwork, and for lifelong learning. Graduates are in a position to take advantage of a wide variety of professional opportunities and are well prepared for an engineering career in a technologically changing world.

Geomatics

Geomatics embraces the traditional disciplines of land surveying, mapping, geodesy, photogrammetry, and hydrography, together with the newer disciplines of remote sensing, digital photogrammetry, and spatial or geographic information systems (GIS). Geomaticians help design, map and manage the natural and the man-made resources of the earth. Their skills and efforts are important in project development and

environmental protection. They gather, analyze, and manipulate data; map results; and help design new developments. The disciplines used in geomatics are based on advancing technologies and use an integrated approach to the acquisition, analysis, storage, distribution, management, and application of spatially referenced data.

Minors in the School of Engineering

To meet a variety of student needs, the School of Engineering offers several minors. A choice of two types of Engineering minors are offered. The first is a minor in General Engineering which is designed for students who are majoring in a non-engineering baccalaureate degree. The second is an Engineering Specialty minor program which is designed for students majoring in an engineering baccalaureate degree who, therefore, have completed much of the coursework in the Bachelor of Science in Engineering (BSE) or Civil Engineering (CE) programs. Engineering Specialty minors are in Civil Engineering, Computer Systems Engineering, Electrical Engineering, or Mechanical Engineering. Additionally, a minor in Geographic Information Systems (GIS) is offered for students who are majoring in baccalaureate degrees in a variety of disciplines and seeking strong GIS knowledge and skills to enhance their specialty and support a sustainable professional career.

CIVIL ENGINEERING

Engineering Building (ENGR), Room 201, (907) 786-1900
www.uaa.alaska.edu/schoolofengineering

Civil engineering is a professional discipline recognized by licensure in each of the 50 states and many other countries. Civil engineering is a broad branch of engineering dedicated to providing civilization with essential infrastructure and services including bridges, buildings, ports, water resource development, waste disposal, dams, water power, irrigation and drainage works, roads, airports, railways, construction and management services; surveying; and providing city management and developmental planning. Civil Engineering students are introduced to principles of mathematics, chemistry, and physics during their first two years of study. The third year of study is largely devoted to courses in applied extensions of the basic sciences to form the foundation for more advanced engineering analysis and design. Students draw upon previous learning in their senior year to focus their studies on sophisticated analyses and creative designs. Throughout the four-year engineering program students take courses in communication, humanities, social sciences, and fine arts to improve their communication skills and to become more aware of their roles and responsibilities in modern society. The UAA Civil Engineering program emphasizes northern region design considerations and provides specialized training appropriate for an engineering career in Alaska and other cold regions of the world.

Civil Engineering Department Mission

The mission of the Civil Engineering Department, through its undergraduate and graduate education programs, its professional development programs, its research, and its service is to advance the civil engineering profession in Alaska and elsewhere for building a sustainable civilization with utmost respect for the well-being of its peoples and the environment.

Bachelor of Science, Civil Engineering

The Department of Civil Engineering offers an undergraduate curriculum leading to a Bachelor of Science in Civil Engineering. The first two years of the program have application to most other branches of engineering.

Program Objectives and Expected Outcomes

The curriculum of the UAA CE program is designed to produce graduates who, within five years of graduation, will:

1. Practice with "responsible charge" in the civil engineering sub-disciplines of water resources, geotechnical, structural,

transportation, and environmental engineering; with emphasis on cold region issues. "Responsible charge" is as defined by the Alaska Professional Engineering licensing regulations.

2. Make contributions in project planning, preparation, implementation, design, and presentation in a team environment in sub-discipline areas.
3. Demonstrate and update their competency via professional registration, continuing education, graduate study, and professional service to their communities.
4. Exemplify the ethical standards of the profession.

In keeping with the objectives, it is expected that graduates of the UAA Civil Engineering program will have:

1. An ability to apply knowledge of mathematics through differential equations, probability and statistics, calculus-based physics, and general chemistry;
2. An ability to apply knowledge in a minimum of four recognized major civil engineering areas;
3. An ability to design and conduct experiments, as well as to analyze and interpret data, in more than one of the recognized major civil engineering areas;
4. An ability to design a civil engineering system, component, or process to meet desired needs;
5. An ability to function on multidisciplinary teams;
6. An ability to identify, formulate, and solve engineering problems;
7. An understanding of professional and ethical responsibility;
8. An ability to communicate effectively;
9. The broad education necessary to understand the impact of engineering solutions in a global and societal context;
10. A recognition of the need for, and an ability to engage in, lifelong learning;
11. A knowledge of contemporary issues in professional practice; and
12. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Honors in Civil Engineering

Undergraduate Civil Engineering students may be recognized for exceptional performance by earning Departmental Honors in Civil Engineering. In order to receive honors in Civil Engineering, a student must meet each of the following requirements:

1. Complete all requirements for a BS degree in Civil Engineering. A minimum of 30 credits applicable to the Civil Engineering degree must be completed at UAA.
2. Be an active member for at least one year of both a national and an on-campus student chapter of a professional engineering society that addresses issues relevant to the civil engineering profession.
3. Have a GPA of 3.30 or higher in courses applicable to the Bachelor of Science in Civil Engineering degree.
4. Gain approval for a departmental honors design or research project prior to applying for graduation. Present an oral presentation and written report of project results eight weeks prior to scheduled graduation. The project proposal and final written report must be approved by the student's academic advisor and the chair of Civil Engineering Department.
5. Pass the Fundamentals of Engineering Examination in or prior to the fall semester of the senior year.
6. Document a minimum of eight weeks work experience in an engineering or engineering-related position.

Preparation

While in high school, students can prepare for entering and succeeding in the university engineering program. In order to be the best prepared, students should complete the following high school courses with grades of C or better:

| | |
|-----------|---------|
| Algebra | 2 years |
| Chemistry | 1 year |

| | |
|--------------|----------|
| English | 3 years |
| Physics | 1 year |
| Trigonometry | 1/2 year |

Students successfully completing the above courses will be prepared to enroll in the first year of courses that count towards the engineering degree. Students without the above preparatory courses will need to take equivalent university courses before taking some of the first year of courses that count towards the engineering degree. Students are encouraged to work with their faculty advisors for developing a course plan.

Admission Requirements

Complete the Admission to Baccalaureate Degree Program requirements described in Chapter 7 of this catalog.

Admission to the Bachelor of Science in Engineering program is to one of two levels: Pre- Engineering or Engineering. Students admitted to either of the two levels are considered to be degree-seeking civil engineering students.

Pre-Engineering Level

Applicants for admission who have completed only the general Baccalaureate Programs requirements in Chapter 7 of this catalog are admitted to the Civil Engineering program at the Pre-Engineering level.

Civil Engineering Level

Applicants for admission who, in addition to the general Baccalaureate Programs requirements, have completed the high school Preparation courses listed above (or their university equivalents) with grades of C or better will be admitted to the Civil Engineering program at the Civil Engineering level.

Advancement

Pre-Engineering to Civil Engineering

Pre-Engineering students must work with their assigned advisor to develop a course plan to make up the high school course requirements for advancement to the Civil Engineering level. Once the Pre-Engineering coursework outlined in the student's course plan is completed, students must meet with their advisor to apply for advancement to the Civil Engineering level.

Advising

All undergraduate students are strongly encouraged to meet with their faculty advisor each semester for the purpose of reviewing their academic progress and planning future courses. All civil engineering students are required to meet with their faculty advisors to be advanced within the program and to apply for graduation. It is particularly important for students to meet with their faculty advisor whenever academic difficulties arise.

Academic Progress

Any given CE or ES course may only be taken when all prerequisites for the course are met with a grade of C or higher. A student who is unable to earn a grade of C or better in a CE or ES prerequisite course may attempt to earn a satisfactory grade one additional time, on a space-available basis. Failure to earn a grade of C or better on the second attempt may result in removal from the Civil Engineering program.

A student who has a semester GPA in engineering courses below 2.00 will be placed on academic warning by the School of Engineering. A student on academic warning that receives a semester GPA in engineering courses of at least 2.00 will be removed from academic warning status by the school. Otherwise, he or she will be removed from the Civil Engineering program and will not be permitted to enroll in CE and ES courses.

Graduation Requirements

In order to receive the Bachelor of Science degree in Civil Engineering, students must complete the following graduation requirements:

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees (GER) listed at the beginning of this chapter with the additional requirement that one of the following criteria are met within the courses taken to meet the social sciences, humanities, and fine arts GER requirements:

- Six credits are from courses that are at the 200 level or above.
- Three credits are from courses that are at the 200 level or above and 6 credits are from a sequence of courses at the 100 level. For example, HIST A101 and HIST A102 is considered to be a 6-credit course sequence.

C. Civil Engineering Requirements

- Satisfactorily complete these courses with a GPA of 2.00. Courses with an asterisk (*) must be completed with a grade of C or better (108 credits):

| | | |
|-------------|---|---|
| CE A334* | Properties of Materials | 3 |
| CE A344 | Water Resources Engineering | 3 |
| CE A402 | Transportation Engineering | 3 |
| CE A403 | Arctic Engineering | 3 |
| CE A422 | Foundation Engineering | 3 |
| CE A431* | Structural Analysis | 4 |
| CE A432 | Steel Design (3) | 3 |
| | or | |
| CE A433 | Reinforced Concrete Design (3) | |
| CE A435* | Soil Mechanics | 3 |
| CE A438 | Design of Civil Engineering Systems | 3 |
| CE A441 | Introduction to Environmental Engineering | 3 |
| CHEM A105* | General Chemistry I | 3 |
| CHEM A105L* | General Chemistry I Laboratory | 1 |
| CHEM A106* | General Chemistry II | 3 |
| CHEM A106L* | General Chemistry II Laboratory | 1 |
| COMM A111 | Fundamentals of Oral Communication (3) | 3 |
| | or | |
| COMM A235 | Small Group Communication (3) | |
| | or | |
| COMM A237 | Interpersonal Communication (3) | |
| | or | |
| COMM A241 | Public Speaking (3) | |
| ENGL A111* | Methods of Written Communication | 3 |
| ENGL A212 | Technical Writing | 3 |
| ENGR A151* | Engineering Practices I | 3 |
| ENGR A161* | Engineering Practices II | 3 |
| ES A103 | Engineering Graphics | 3 |
| ES A209* | Engineering Statics | 3 |
| ES A210* | Engineering Dynamics | 3 |
| ES A302 * | Engineering Data Analysis | 3 |
| ES A309 | Elements of Electrical Engineering | 3 |
| ES A331* | Mechanics of Materials | 3 |
| ES A341* | Fluid Mechanics | 3 |
| ES A341L | Fluid Mechanics Laboratory | 1 |
| ES A346 | Basic Thermodynamics | 3 |
| ESM A450 | Economic Analysis and Operations | 3 |
| GEO A155* | Fundamentals of Surveying | 3 |
| MATH A200* | Calculus I | 4 |
| MATH A201* | Calculus II | 4 |
| MATH A202* | Calculus III | 4 |
| MATH A302* | Ordinary Differential Equations | 3 |
| PHYS A211* | General Physics I | 3 |
| PHYS A211L* | General Physics I Laboratory | 1 |
| PHYS A212* | General Physics II | 3 |
| PHYS A212L* | General Physics II Laboratory | 1 |

2. A natural science elective (minimum 3 credits) must be taken in addition to the 7-credit natural science General Education Requirement and may be selected from the following list: 3
- | | |
|----------------------|---|
| BIOL A115/L | Fundamentals of Biology I with Laboratory (4) |
| BIOL A271/L | Principles of Ecology with Laboratory (4) |
| CHEM A450 | Environmental Chemistry (3) |
| GEOL A111 | Physical Geology (4) |
| GEOL/BIOL A178 | Fundamentals of Oceanography (3) |
| PHYS A303 | Modern Physics (3) |
| PHYS/EE A314 | Electromagnetics (3) |
| PHYS A320 | Simulation of Physical Systems (3) |
| PHYS/BIOL/ CHEM A456 | Nonlinear Dynamics and Chaos (3) |
- Note: GEOL A111 is the recommended course.
3. Six credits of technical elective courses are required that must be chosen from the following list of courses. These electives are intended to improve students' knowledge and skills relating to site characterization, problem identification, criteria development, and project design in the civil engineering sub-disciplines of water resources, geotechnical, structural, transportation, and environmental engineering. Graduate courses may not be applied to both a baccalaureate and master's degree. 6

Water Resources Engineering

| | |
|---------|---|
| CE A662 | Surface Water Dynamics (3) |
| CE A663 | Ground Water Dynamics (3) |
| CE A674 | Waves, Tides, and Ocean Process for Engineers (3) |
| CE A682 | Ice Engineering (3) |
| CE A683 | Arctic Hydrology and Hydraulic Engineering (3) |
| CE A684 | Arctic Utility Distribution (3) |

Geotechnical Engineering

| | |
|---------|---|
| CE A611 | Geotechnical Earthquake Engineering (3) |
| CE A612 | Advanced Foundation Design (3) |
| CE A676 | Coastal Engineering (3) |
| CE A681 | Frozen Ground Engineering (3) |

Structural Engineering

| | |
|--|--|
| CE A432 | Steel Design (3) |
| or | |
| CE A433 | Reinforced Concrete Design (3) |
| <i>Either CE A432 or CE A433 may be chosen as a technical elective, if not applied to satisfy the Civil Engineering Professional requirements described above.</i> | |
| CE A434 | Timber Design (3) |
| CE A610 | Engineering Seismology (3) |
| CE A631 | Structural Finite Elements (3) |
| CE A633 | Structural Dynamics (3) |
| CE A634 | Structural Earthquake Engineering (3) |
| CE A636 | Multi-Story Building Structural Design (3) |
| CE A637 | Earthquake Resistant Structural Design (3) |
| CE A639 | Loads on Structures (3) |

Transportation Engineering

| | |
|----------|---------------------------------|
| CE A423 | Traffic Engineering (3) |
| CE A424 | Pavement Design (3) |
| CE A425 | Highway Engineering (3) |
| CE A675 | Design of Ports and Harbors (3) |
| GEO A456 | Geomatics and Civil Design (3) |

Environmental Engineering

- | | |
|-----------|--|
| AEST A601 | Aquatic Process Chemistry (3) |
| CE A442 | Environmental Systems Design (3) |
| CE A605 | Chemical and Physical Water and Wastewater Treatment Processes (3) |
| CE A606 | Biological Treatment Processes (3) |
4. A total of 132 credits is required for the degree, of which 42 credits must be upper division (300-, 400-, or 600-level).
5. All Civil Engineering students are strongly encouraged to take the Fundamentals of Engineering Examination in their senior year as an initial step toward professional registration. Civil Engineering students are also encouraged to consider minors in Mathematics or Physics and graduation with departmental honors.

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ENGINEERING: COMPUTER SYSTEMS, ELECTRICAL, AND MECHANICAL ENGINEERING

Engineering Building (ENGR), Room 201, (907) 786-1900
www.engr.uaa.alaska.edu/programs/bse

Bachelor of Science, Engineering

The Bachelor of Science in Engineering (BSE) program is a design-oriented curriculum that incorporates topics that span the foundations of engineering disciplines. BSE students select courses for a specialization track that best suits their needs. Thus, the BSE curriculum can custom fit a student's education with the needs of the community and industry. The three tracks of specialization are: 1) Computer Systems Engineering, 2) Electrical Engineering, and 3) Mechanical Engineering.

The Computer Systems Engineering (CSE, also known as Computer Engineering) specialty track focuses on applied computer theory, the design and implementation of computer hardware and software, and specialized areas of computing such as network architecture, security, and distributed systems. Students take courses such as computer programming, computer hardware design, networking, operating/software systems engineering, signals, and electronic device and circuit design.

The Electrical Engineering (EE) specialty track focuses on fundamental electrical concepts including circuit theory, electrical devices, electromagnetism, and signals and systems. Students take courses in computer design, antenna theory, communication theory, and control systems.

The Mechanical Engineering (ME) specialty track focuses on the design of systems related to transfer of thermal and mechanical energies where topics such as HVAC (heating, ventilation, and air conditioning) and design of mechanisms are covered in detail. Students take courses in heat transfer, HVAC, manufacturing, and machine design, including hands-on exposure in a state of the art manufacturing lab with rapid prototyping through three dimensional printers and CNC machining.

Accreditation

All BSE programs are separately accredited by the Engineering Accreditation Commission of ABET, which is the only accreditor of engineering programs and related fields of study in the US. The accredited BSE programs include: 1) Computer Systems Engineering, 2) Electrical Engineering, and 3) Mechanical Engineering.

Program Objectives and Expected Outcomes

The curriculum of the BSE program has also been carefully designed to prepare students for the profession of engineering through study, experience, and practice. Each of the three specializations in the BSE program has objectives that are consistent with the needs of the respective program's constituents, as follows:

Computer Systems Engineering

1. Graduates are successful practitioners of computer engineering in a variety of industries, government agencies, and research/academic institutions, serving the State of Alaska as well as national/international needs.
2. Graduates exhibit high standards regarding ethical behavior and social responsibility.
3. Graduates successfully engage in life-long learning experiences such as graduate education, short courses, technical talks, conferences, training program, community groups, and writing and/or publishing papers.

Electrical Engineering

1. To produce electrical engineering graduates with the training and skills to enter the job market or to continue their education by attending graduate school.
2. To produce graduates who will become business and community leaders in Alaska and throughout the world.
3. To produce graduates who will, through their training in electrical engineering and their commitment to their continuing education, become the entrepreneurs driving Alaska's growth in the future.
4. To produce graduates in electrical engineering who conduct themselves and practice their profession with the highest of professional standards.

Mechanical Engineering

1. To produce graduates who are able to practice mechanical engineering through design and analysis of mechanical systems in industry, government, and academic settings.
2. To produce graduates who are prepared for graduate-level education, research and development, and other creative endeavors in science and technology.
3. To produce graduates who are able to conduct themselves in a professional and ethical manner.
4. To produce graduates who are able to become contributors and leaders in the economic development and improving the quality of life in the State of Alaska, the nation, and the world.

Knowing that all engineering programs must demonstrate that their students attain a level of proficiency in a number of important areas, the BSE program has chosen the following set of program outcomes for all three specializations. Students will have:

- (a) an ability to apply knowledge of mathematics, science, and engineering
- (b) an ability to design and conduct experiments, as well as analyze and interpret data
- (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health, and safety manufacturability, and sustainability
- (d) an ability to function on multidisciplinary teams
- (e) an ability to identify, formulate, and solve engineering problems
- (f) an understanding of professional and ethical responsibility

- (g) an ability to communicate effectively
- (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- (i) a recognition of the need for, and the ability to engage in, lifelong learning
- (j) a knowledge of contemporary issues
- (k) and an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Honors in Engineering

Undergraduate BSE students may be recognized for exceptional performance by earning Departmental Honors in each of the three specialty tracks: Computer Systems Engineering, Electrical Engineering, or Mechanical Engineering. The award will be noted on their permanent university transcript. In order to receive Honors in the BSE program, a student must meet each of the following requirements.

1. Complete all requirements for a BSE. A minimum of 30 credits applicable to the BSE must be completed at UAA.
2. Be an active member for at least one year of both a national and an on-campus student chapter of a professional engineering society that addresses issues relevant to the engineering profession.
3. Have a GPA of 3.30 or higher in courses applicable to the BSE.
4. Gain approval for and complete a design/research project prior to applying for graduation. An oral presentation of the project results to an appropriate audience will be required. The project proposal and final written report must be approved by the student's academic advisor and the chair of BSE program.
5. For Mechanical and Electrical Engineering specializations, take and pass the Fundamentals of Engineering examination in the senior year. For Computer Systems Engineering specialization, take and pass the CSE Exit Examination in the senior year.
6. Document a minimum of eight weeks work experience in an engineering or engineering-related position.

Preparation

While in high school, students can prepare for entering and succeeding in the university engineering program. In order to be the best prepared, students should complete the following high school courses with grades of C or better:

| | |
|--------------|----------|
| Algebra | 2 years |
| Chemistry | 1 year |
| English | 3 years |
| Physics | 1 year |
| Trigonometry | 1/2 year |

Students successfully completing the above courses will be prepared to enroll in the first year of courses that count towards the engineering degree. Students without the above preparatory courses will need to take equivalent university courses before taking some of the first year of courses that count towards the engineering degree. Students are encouraged to work with their faculty advisors for developing a course plan.

Admission Requirements

Admission to the Bachelor of Science in Engineering program is to one of two levels: Pre- Engineering or Engineering. Students admitted to either of the two levels are considered to be degree-seeking engineering students majoring in engineering

Pre-Engineering Level

Applicants for admission who have completed only the general Baccalaureate Degree Program Admission Requirements in Chapter 7 of this catalog are admitted to the Engineering program at the Pre-Engineering level.

Engineering Level

Applicants for admission who, in addition to the general Baccalaureate Degree Program Admission Requirements, have completed at least the

level of high school courses listed above under Preparation (or their university equivalents) with grades of C or better will be admitted to the Engineering program at the Engineering level.

Advancement

Pre-Engineering to Engineering

Pre-Engineering students must work with their assigned advisor to develop a course plan to make up the high school course requirements for advancement to the Engineering level. Once the Pre-Engineering course work outlined in the student's course plan is completed, students must meet with their advisor to apply for advancement to the Engineering level or may also be advanced to the Engineering level by the department chair upon review of the student's academic progress.

Curriculum

The BSE degree requires a total of 130 credits for the Computer Systems Engineering specialization and 132 credits for the Electrical Engineering and Mechanical Engineering specializations. There are five main categories of required credits.

| <u>Category</u> | <u>Credits</u> |
|--|----------------|
| *General Education Requirements (GER) | 15 |
| Core Curriculum | 49 |
| Engineering Emphasis Track Courses | |
| Computer Systems Engineering | 51 |
| Electrical Engineering | 53 |
| Mechanical Engineering | 53 |
| Engineering Science, Advanced Math and Statistics Elective | 3/4 |
| Advanced Engineering/Science Electives | 12 |
| Total Credits for CSE Specialization | 130 |
| Total Credits for EE or ME Specialization | 132 |

*Note: For rules and information about selecting courses to meet General Education Requirements, see the link on the main School of Engineering website at: www.uaa.alaska.edu/schoolofengineering.

During the first two years (freshman and sophomore) of the BSE program, the student completes a set of core courses that cover basic sciences, mathematics, oral and written communications, and other General Education Requirement courses. This provides the student with a broad and solid background in the topics necessary to build a specialization in a field of engineering.

The engineering emphasis track courses are taken mostly in the third and fourth (junior and senior) years. Each track has a series of required courses totaling 51 credits for the CSE specialization and 53 credits for the EE and ME specializations. In addition, the student selects an additional 12 credits of advanced engineering or science electives, where at least 6 of those credits must be from a class with the prefix of the student's specialization, and a 3 credit advanced mathematics elective.

Engineering design is introduced early in the curriculum and is emphasized throughout the program. In addition a seminar course, a two-course introductory Engineering Practices series is a required part of the curriculum. This is an outstanding customized coordination of courses that specifically teaches engineering students what they most need to know early in the curriculum. These courses help students become more successful in all of their subsequent courses and to be more effective as practicing engineers. Topics include applied mathematics, computer applications, experimental data gathering and analysis, collaborative teamwork, and report preparation and presentation. Also, a senior capstone design course is required.

Since the BSE program allows for the selection of more electives than the traditional BS engineering programs, students can custom design their curriculum to specialize in the areas of engineering most applicable for their plans. So, students can prepare themselves to specifically meet the needs of specific companies, and state and federal agencies.

Professional registration is emphasized throughout the program. Students attend a professional seminar course that exposes them to multiple experts from education and industry speaking about their fields of expertise. All students are encouraged to take the Fundamentals of Engineering examination before graduation.

Advising

All undergraduate students are encouraged to meet with their faculty advisor each semester for the purpose of reviewing their academic progress and planning future courses. It is particularly important for students to meet with their advisor whenever academic difficulties arise.

Mathematics Minor

Upon completion of the BSE with the Mechanical or Electrical Engineering specialization, or upon completion of the BSE with the Computer Systems Engineering specialization with a 300- or 400-level mathematics class taken from the MATH advanced electives, the requirements for obtaining a minor in Mathematics are also satisfied. Students are encouraged to apply for the Mathematics minor with the BSE when applying for graduation.

Academic Progress

All prerequisites for engineering courses must be completed with a grade of C or higher. A student who has a cumulative semester GPA in engineering courses below 2.00 will be placed on academic warning by the School of Engineering. If a student on academic warning status receives a semester GPA for engineering courses of at least 2.00, that student will be removed from academic warning status by the School of Engineering. Otherwise, if a student on academic warning status receives a cumulative semester GPA in engineering courses below 2.00, the student will be dropped from the BSE program and must reapply in order to continue in the BSE program. Re-admittance requires a letter from the student requesting re-admittance with an explanation of the reasons why. Re-admittance is subject to approval by the department chair.

Graduation Requirements

A. General University Requirements

Complete the General University Requirements for All Baccalaureate Degrees listed at the beginning of this chapter.

B. General Education Requirements

Every UAA baccalaureate degree requires a minimum of 37 credits of General Education Requirements in eight different categories. The specifically identified courses required for the BSE satisfies five of these categories. However, there are 15 GER credits in the remaining three categories (Social Sciences, Humanities, and Fine Arts) that the student selects:

| | |
|-----------------|---|
| Fine Arts | 3 |
| Humanities | 6 |
| Social Sciences | 6 |

One of the following criteria must be met:

1. Six credits are from courses that are at the 200 level or above.
2. Three credits are from courses that are at the 200 level or above and 6 credits are from a sequence of courses at the 100-level. For example, HIST 101 and HIST 102 is considered to be a 6-credit course sequence.

In addition, the courses selected for Social Science must be from two different disciplines.

It is very important that students see their faculty advisors and review the rules for selecting these 15 GER credits. A website with the rules is linked on the main School of Engineering website.

C. Major Requirements

1. Complete the following core courses (49 Credits):

| | | |
|------------|---|---|
| CHEM A105 | General Chemistry I | 3 |
| CHEM A105L | General Chemistry I Laboratory | 1 |
| COMM A111 | Fundamentals of Oral Communications (3) | 3 |
| | or | |
| COMM A235 | Small Group Communication (3) | |
| | or | |
| COMM A237 | Interpersonal Communication (3) | |
| | or | |

| | | |
|------------|----------------------------------|---|
| COMM A241 | Public Speaking (3) | |
| ENGL A111 | Methods of Written Communication | 3 |
| ENGL A212 | Technical Writing | 3 |
| ENGR A151 | Engineering Practices I | 3 |
| ENGR A161 | Engineering Practices II | 3 |
| ENGR A192 | Engineering Seminar I | 1 |
| ES A302 | Engineering Data Analysis | 3 |
| ESM A450 | Economic Analysis and Operations | 3 |
| MATH A200 | Calculus I | 4 |
| MATH A201 | Calculus II | 4 |
| MATH A202 | Calculus III | 4 |
| MATH A302 | Ordinary Differential Equations | 3 |
| PHYS A211 | General Physics I | 3 |
| PHYS A211L | General Physics I Laboratory | 1 |
| PHYS A212 | General Physics II | 3 |
| PHYS A212L | General Physics II Laboratory | 1 |

2. Choose one of the following specializations:

Computer Systems Engineering (51 credits)

Complete the following required courses:

| | | |
|--------------|--|---|
| CS A330 | Algorithms and Data Structures | 3 |
| CSE A205 | Introduction to C Programming for Engineers | 3 |
| CSE A215 | Object-Oriented Programming for Engineers | 3 |
| CSE A225 | Assembly Language Programming for Engineers using Xilinx | 3 |
| CSE A335 | Operating Systems Engineering | 3 |
| CSE A342 | Digital Circuits Design | 3 |
| CSE A355 | Computer Networking for Engineers | 3 |
| CSE A438 | Design of Computer Engineering Systems | 3 |
| CSE A465 | Network Security | 3 |
| CSE A481 | Engineering Software/Hardware Systems | 3 |
| EE A203 | Fundamentals of Electrical Engineering I | 4 |
| EE A204 | Fundamentals of Electrical Engineering II | 4 |
| EE/CS A241 | Computer Hardware Concepts | 4 |
| EE/PHYS A314 | Electromagnetics | 3 |
| EE A353 | Circuit Theory | 3 |
| MATH A231 | Introduction to Discrete Mathematics | 3 |

Electrical Engineering (53 credits)

Complete the following required courses:

| | | |
|--------------|--|---|
| CSE A205 | Introduction to C Programming for Engineers | 3 |
| CSE A215 | Object-Oriented Programming for Engineers | 3 |
| CSE A225 | Assembly Language Programming for Engineers using Xilinx | 3 |
| EE A203 | Fundamentals of Electrical Engineering I | 4 |
| EE A204 | Fundamentals of Electrical Engineering II | 4 |
| EE/CS A241 | Computer Hardware Concepts | 4 |
| EE/ME A308 | Instrumentation and Measurement | 3 |
| EE/PHYS A314 | Electromagnetics | 3 |
| EE/PHYS A324 | Electromagnetics II | 3 |
| EE A324L | Electromagnetics Laboratory II | 1 |
| EE A353 | Circuit Theory | 3 |
| EE A353L | Circuit Theory Laboratory | 1 |
| EE A354 | Engineering Signal Analysis | 3 |
| EE A438 | Design of Electrical Engineering Systems | 3 |
| EE A441 | Integrated Circuit Design | 3 |
| EE A465 | Telecommunications | 3 |
| ENGR A105A | Engineering Computer-Aided Design I | 1 |
| ENGR A105B | Engineering Computer-Aided Design II | 1 |
| ES A208 | Engineering Mechanics | 4 |

Mechanical Engineering (53 credits)

Complete the following required courses:

| | | |
|------------|--|---|
| CHEM A106 | General Chemistry II | 3 |
| CHEM A106L | General Chemistry II Laboratory | 1 |
| ENGR A105A | Engineering Computer-Aided Design I | 1 |
| ENGR A105B | Engineering Computer-Aided Design II | 1 |
| ENGR A105C | Engineering Computer-Aided Design III | 1 |
| ES A209 | Engineering Statics | 3 |
| ES A210 | Engineering Dynamics | 3 |
| ES A309 | Elements of Electrical Engineering | 3 |
| ES A331 | Mechanics of Materials | 3 |
| ES A341 | Fluid Mechanics | 3 |
| ES A341L | Fluid Mechanics Laboratory | 1 |
| ES A346 | Basic Thermodynamics | 3 |
| ME A280 | Solid Modeling for Engineers | 3 |
| ME/EE A306 | Dynamics of Systems | 3 |
| ME/EE A308 | Instrumentation and Measurement | 3 |
| ME A313 | Mechanical Engineering Thermodynamics | 3 |
| ME A334 | Elements of Material Science | 3 |
| ME A403 | Mechanical Design II | 3 |
| ME A414 | Thermal Systems Design | 3 |
| ME A438 | Design of Mechanical Engineering Systems | 3 |
| ME A441 | Heat and Mass Transfer | 3 |

3. Advanced Electives

BSE students are required to take 12 credits of advanced engineering/science electives from an approved list of electives for the particular emphasis area. Of the 12 elective credits, at least 6 of them must be from the prefix of the student's specialization. Also, a 3-credit advanced mathematics elective is required that is selected from a single list common for the Electrical and Mechanical Engineering specializations. The Computer Systems Engineering specialization requires 3 or 4 credits to be selected from a separate list. Many elective courses require prerequisite courses that are also elective courses. Thus, in selecting elective courses students are strongly advised to work with their advisor to develop a cohesive set of elective courses. Choice of engineering electives is subject to approval by the student's advisor and the department head.

Engineering Science, Advanced Mathematics and Statistics Electives (3-4 credits)

BSE Computer Systems Engineering students are required to take one course from the following:

| | |
|-----------|---|
| ES A208 | Engineering Mechanics (4) |
| MATH A314 | Linear Algebra (3) |
| MATH A410 | Introduction to Complex Analysis (3) |
| MATH A422 | Partial Differential Equations (3) |
| MATH A423 | Advanced Engineering Mathematics (3) |
| STAT A307 | Probability and Statistics in Science (4) |

BSE Electrical Engineering and BSE Mechanical Engineering students are required to take one course from the following list of advanced mathematical elective courses:

| | |
|-----------|--------------------------------------|
| MATH A314 | Linear Algebra (3) |
| MATH A321 | Analysis of Several Variables (3) |
| MATH A371 | Stochastic Processes (3) |
| MATH A407 | Mathematical Statistics I (3) |
| MATH A410 | Introduction to Complex Analysis (3) |
| MATH A422 | Partial Differential Equations (3) |
| MATH A423 | Advanced Engineering Mathematics (3) |
| MATH A426 | Numerical Methods (3) |

Advanced Engineering & Science Electives (12 credits)

BSE students are required to take 12 credits from one of the following lists of approved advanced engineering and science elective courses based on their specialty. Of the 12 credits,

at least 6 of them must be from the prefix of the student's specialty. Students should meet with their faculty advisor for selection of courses.

A. Computer Systems Engineering Specialty Electives

| | |
|--------------|-------------------------------------|
| CS A385 | Computer Graphics (3) |
| CS A401 | Software Engineering (3) |
| CS A405 | Artificial Intelligence (3) |
| CSE A442 | VLSI Circuit Design (3) |
| CSE A445 | Computer Design and Interfacing (4) |
| CSE A451 | Digital Signal Processing (3) |
| EE/PHYS A324 | Electromagnetics II (3) |
| EE A324L | Electromagnetics Laboratory II (1) |
| EE A354 | Engineering Signal Analysis (3) |
| EE A441 | Integrated Circuit Design (3) |
| EE A462 | Communication Systems (3) |
| EE A465 | Telecommunications (3) |

B. Electrical Engineering Specialty Electives

| | |
|--|---------------------------------------|
| CE A403/A603 | Arctic Engineering (3) |
| | or |
| ES A411 | Northern Design (3) |
| <i>Note: Either CE A403 or CE A603 or ES A411 can be taken for the degree.</i> | |
| CSE A355 | Computer Networking for Engineers (3) |
| CSE A445 | Computer Design and Interfacing (4) |
| CSE A451 | Digital Signal Processing (3) |
| CSE A465 | Network Security (3) |
| EE/ME A306 | Dynamics of Systems (3) |
| EE A407 | Power Distribution (3) |
| EE A458 | Antenna Theory (3) |
| EE A462 | Communication Systems (3) |
| EE/ME A471 | Automatic Control (3) |

C. Mechanical Engineering Specialty Electives

| | |
|--|---|
| AEST A608 | Fundamentals of Air Pollution (3) |
| CE A403/A603 | Arctic Engineering (3) |
| | or |
| ES A411 | Northern Design (3) |
| <i>Note: Either CE A403 or CE A603 or ES A411 can be taken for the degree.</i> | |
| CE A441 | Introduction to Environmental Engineering (3) |
| CE A442 | Environmental Systems Design (3) |
| CE A600 | Fundamentals of Environmental Science and Engineering (3) |
| ME A408 | Mechanical Vibrations (3) |
| ME A450 | Manufacturing Design (3) |
| ME A453 | Renewable Energy Systems Engineering (3) |
| ME A455 | HVAC Systems Optimization (3) |
| ME A459/A659 | Fracture Mechanics (3) |
| <i>Note: Only one of ME A459 or ME A659 can apply to the degree.</i> | |
| ME/EE A471 | Automatic Control (3) |
| ME A664 | Corrosion Processes and Engineering (3) |
| ME A685 | Arctic Heat and Mass Transfer (3) |

4. A total of 130 credits is required for the BSE degree with a specialization in Computer Systems Engineering. A total of 132 credits is required for the BSE degree with a specialization in Electrical or Mechanical Engineering, of which 42 credits must be upper division.

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GEOMATICS

Engineering Building (ENGR), Room 213, (907) 786-1972

www.engr.uaa.alaska.edu

The Department of Geomatics offers a two-year Associate of Applied Science in Geomatics, a four-year Bachelor of Science in Geomatics, a minor in Geographic Information Systems (GIS), and an Undergraduate Certificate in Geographic Information Systems (GIS). Students seeking the baccalaureate degree may graduate in one of two emphasis areas: Surveying or GIS. Students seeking continuing education for technical or professional enhancement or a concentrated area of study in GIS should consider either the minor in GIS or the Undergraduate Certificate in GIS. The Geomatics program is science-based and includes:

- Land surveying using global positioning systems and conventional techniques
- Automated mapping
- Computational analysis and adjustment
- Geodesy
- Principles of boundary law
- Geographic Information Systems (GIS)
- Digital photogrammetry
- Remote sensing and image analysis.

The wide diversity in the profession creates a similar diversity of employment opportunities. The Undergraduate Certificate in GIS educates students with a broad base of concepts and theory, provides them with hands-on training in real world problems that are relevant to Alaska's environment, and allows them to explore several thematic areas in GIS applications, such as facilities management, transportation, marine environments, and natural resources.

The minor in GIS is designed for students to enhance their knowledge of GIS and remote sensing to complement a major baccalaureate degree in a variety of disciplines including science, art, business management and engineering. GIS, as a part of geospatial science and information technologies, is widely used in many industries important to Alaska (e.g. oil, gas), governance and administrations (municipalities and the state), statewide and federal agencies and departments (transportation, natural resources, land management, parks and recreation, etc.), research (sustainability, biodiversity, ecology, geology, anthropology, socioeconomics, etc.), homeland security, military applications and non-profit organizations.

The Associate of Applied Science in Geomatics prepares students for technician-level employment as land survey technicians or as automated mapping technicians. Those working as survey technicians frequently work outdoors, travel to various job locations, and enjoy an independent lifestyle. Automated mapping technicians work with the latest cartographic techniques and equipment and easily transfer skills learned in geomatics courses to other disciplines.

The Bachelor of Science prepares students for a wide variety of professional-level opportunities. Since Alaska poses unique geomatics challenges, the curriculum emphasizes northern principles and practices. UAA graduates are highly employable in the Alaska marketplace and worldwide. Employment opportunities are found in private industry, government, and municipal agencies. Geomatics graduates working at the professional level enjoy responsibility and a choice of indoor and outdoor employment with many opportunities for advancement and diversification.

The new high-tech fields open employment in GIS, photogrammetry, remote sensing, land surveying, automated mapping, land design and planning, survey engineering, and resource management positions. In Alaska, geomatics professionals work on state and Native land claims, mining claims, fishing leases, petroleum reserves, forest selections, transportation corridors, private developments, and government and military projects. In Alaska and elsewhere, geomatics professionals work in land surveying, land development and design, mapping and tax assessment, the defense industry, environmental engineering assessment and management, public safety and welfare, medicine, transportation, agriculture, business, and natural sciences.

Professional predictors indicate that employment opportunities will be strong for the various geomatics specialties in Alaska and the Pacific Rim well into the 21st century. While enrolled in the program, students are eligible for cooperative employment programs with government agencies and with private industry during the summer and for intern programs during the school year.

The Department of Geomatics accommodates a wide variety of student objectives from entry level to professional preparation and encourages the nontraditional student to return for training in current practices and principles.

Students seeking professional licensing as registered land surveyors and those who are interested in specializing in surveying or geographic information systems should enroll in the Bachelor of Science program. For the most effective planning, bachelor's degree candidates should declare their intent by the second semester of their geomatics studies.

Accreditation

The Bachelor of Science, Geomatics program at UAA is accredited by the Applied Science Accreditation Commission (ASAC) of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202.

Program Educational Objectives and Program Outcomes

Program Educational Objectives

The UAA Bachelor of Science, Geomatics program has the following Program Educational Objectives.

Within five years of graduation, graduates of the Geomatics program will have achieved the following.

1. Graduates who are pursuing careers in the surveying area will have attempted the AELS Board's Fundamentals of Surveying examination, and their overall pass rate will be at least 80%.
2. At least 60% of graduates who are pursuing careers in non-surveying areas will have attempted equivalent professional certification or registration, e.g., CP, GISP, as appropriate for their career path.
3. At least 60% of graduates will be members of professional organizations relevant to their career of choice.
4. At least 80% of graduates will have found employment in the fields within the geomatics disciplines, including: surveying of various types, mapping and cartography, GIS/LIS, remote sensing, geodesy, photogrammetry or hydrographic surveying.
5. At least 80% of graduates will have completed at least one professional development course or session, or completed one higher education course.
6. At least 50% of graduates will have taught at least one workshop or training session, made one conference presentation, or published one article relevant to their career.

Program Outcomes

In keeping with the program educational objectives, it is expected that graduates of the UAA Geomatics program will have:

1. An ability to apply knowledge of mathematics, statistics, and general physics;
2. An ability to collect, analyze and interpret data in all of the recognized surveying and mapping areas;

3. An ability to identify, formulate, and design a geomatics system, component or process to meet desired needs;
4. An ability to function on multidisciplinary as well as on interdisciplinary teams;
5. An ability to think critically and to solve geomatics problems creatively and constructively;
6. An understanding of professional and ethical responsibility;
7. An ability to communicate effectively;
8. The broad education necessary to understand the impact of geomatics solutions in a global and societal context;
9. A recognition of the need for, and ability to engage in, lifelong learning;
10. A knowledge of contemporary issues in professional practice;
11. An ability to use the techniques, skills and modern geomatics tools necessary for geomatics practice; and
12. An ability to apply knowledge in all six areas of surveying and mapping:
 - i. Field surveying and methods;
 - ii. Photogrammetric mapping, image interpretation and remote sensing;
 - iii. Surveying calculation and data adjustment;
 - iv. Geodetic coordinates and astronomy;
 - v. Cartographic representation, projections, and map production;
 - vi. Computer-based multipurpose cadastre, geographic information systems.

Mission Statement

The Department of Geomatics' mission is to contribute to the wider body of knowledge in the geospatial sciences, and to disseminate this to society. By advancing our theoretical, professional, technical and educational capabilities, we will develop and maintain a community dedicated to the highest standards of scholarship. Within a student-centered environment, we are committed to the theoretical, professional and technical advancement of all our students, so that they may contribute to the advancement of their profession, their society, and their world, throughout their lives.

Honors in Geomatics

Undergraduate students may be recognized for exceptional performance by earning Departmental Honors in Geomatics. In order to receive honors in Geomatics, a student must meet each of the following requirements:

1. Complete all requirements for a BS in Geomatics.
2. Be an active member for at least one year of both a national and an on-campus student chapter of a professional geomatics society that addresses issues relevant to the geomatics profession.
3. Have a GPA of 3.50 or higher in their Geomatics and Geographic Information System courses of their catalog year. Have a GPA of 3.30 or higher for their overall cumulative GPA.
4. Pass the Fundamentals of Surveying Examination prior to the completion of the first semester of their senior year.
5. Document a minimum of eight weeks work experience while a student at the University of Alaska in a geomatics or geomatics-related position.

Advising

All undergraduate students are encouraged to meet with their academic advisor each semester for the purpose of reviewing their academic progress and planning future courses. It is particularly important for students to meet with their advisor whenever academic difficulties arise.

Students are encouraged to consult the faculty in the Department of Geomatics for assistance in designing their course of study to ensure that all prerequisites have been met and that university and major degree requirements are understood and followed.

Preparation

The university offers courses to help students without this preparation to meet the skill level required in the Geomatics program. Insufficient preparation will increase the number of semesters required to complete either degree.

Students seeking the Undergraduate Certificate in Geographic Information Systems, the Associate of Applied Science or Bachelor of Science in Geomatics should prepare for entrance into the program by completing the following high school courses:

| | |
|----------------------------|---|
| Mathematics | Algebra II Trigonometry |
| Science | Physics |
| English Composition | Skill level as demonstrated by ACT, SAT or approved placement test to qualify for enrollment in ENGL A111 |

Undergraduate Certificate, Geographic Information Systems (GIS)

Admission Requirements

Satisfy the Admission to Certificate and Associate's Degree Programs Requirements in Chapter 7, Academic Standards and Regulations.

Course Requirements

Certain courses require prerequisites or faculty permission. Call (907) 786-1972 for further information.

Major Requirements

In order to receive an Undergraduate Certificate in GIS, students must achieve a grade of C or higher in all courses applied to the certificate.

- Complete the following required courses (23 credits):

| | | |
|----------|--|---|
| GEO A137 | Principles of Mapping | 3 |
| GEO A167 | Remote Sensing and Image Analysis | 4 |
| GIS A268 | Elements of Geographic Information Systems (GIS) | 4 |
| GIS A366 | Spatial Information Analysis and Modeling | 3 |
| GIS A367 | GIS and Remote Sensing | 3 |
| GIS A458 | Design and Management of Spatial Data | 3 |
| GIS A460 | GIS Senior Project | 3 |
- Complete 9 credits from the following elective courses: 9

| | | |
|----------|---|--|
| GEO A490 | Selected Advanced Topics in Geomatics (3) | |
| GIS A295 | Internship in Geographic Information Systems I (3) | |
| | or | |
| GIS A495 | Internship in Geographic Information Systems II (3) | |
| GIS A369 | Land Information Systems (3) | |
| GIS A370 | GIS and Remote Sensing for Natural Resources (3) | |
| GIS A371 | GIS Applications I (3) | |
| GIS A433 | Coastal Mapping (3) | |
| GIS A468 | Integration of Geomatics Technologies (3) | |
| GIS A471 | GIS Applications II (4) | |
| GIS A490 | Selected Advanced Topics in GIS (3) | |
- A maximum of 3 credits of Internship (GIS A295 or GIS A495) and 3 credits of Advanced Topics in Geomatics (GEO A490) or Advanced Topics in GIS (GIS A490) can be counted toward the Certificate in GIS. Faculty approval of the GEO A490 or GIS A490 topic is necessary for application of the course to the certificate program.
- A total of 32 credits is required for the Certificate in GIS.

Associate of Applied Science, Geomatics

Admission Requirements

Satisfy the Admission to Undergraduate Certificate and Associate's Degree Programs Requirements in Chapter 7, Academic Standards and Regulations.

General University Requirements

Complete the Associate of Applied Science General Degree Requirements located at the beginning of this chapter. Some of the major requirements will also fulfill Associate of Applied Science degree general requirements. Students should coordinate choices carefully with their academic advisor in the Department of Geomatics.

Academic Progress

A student who is unable to earn a satisfactory grade in the major requirement courses during their initial enrollment may attempt to earn a satisfactory grade one additional time, on a space-available basis. 'Satisfactory grade' means a grade of C or better, as this is the usual requirement for prerequisites in Geomatics courses (GEO and GIS). Failure to earn a grade of C or better on the second attempt may result in removal from the Geomatics program.

Major Requirements

- Complete 4 credits in Physics: 4

| | | |
|------------|----------------------------------|--|
| PHYS A123 | Basic Physics I (3) | |
| PHYS A123L | Basic Physics I Laboratory (1) | |
| | or | |
| PHYS A211 | General Physics I (3) | |
| PHYS A211L | General Physics I Laboratory (1) | |
- Complete the following required courses (50 credits):

| | | |
|-----------|--|---|
| CSE A102 | Introduction to Computer Systems | 1 |
| ENGL A212 | Technical Writing | 3 |
| ENGR A161 | Engineering Practices II | 3 |
| GEO A137 | Principles of Mapping | 3 |
| GEO A146 | Surveying Computations | 3 |
| GEO A155 | Fundamentals of Surveying | 3 |
| GEO A157 | Analytical and Digital Cartography | 3 |
| GEO A158 | Geomatics Computer Fundamentals | 1 |
| GEO A167 | Remote Sensing and Image Analysis | 4 |
| GEO A248 | Digital Terrain Cartography | 3 |
| GEO A256 | Municipal and Civil Geomatics | 3 |
| GEO A257 | Elements of Photogrammetry | 3 |
| GEO A266 | Advanced Surveying | 3 |
| GEO A267 | Boundary Law I | 4 |
| GIS A268 | Elements of Geographic Information Systems (GIS) | 4 |
| MATH A109 | Precalculus † | 6 |

†MATH A107 College Algebra and MATH A108 Trigonometry (both courses) may be substituted for MATH A109 Precalculus.
- Electives to total of 63 credits.

Bachelor of Science, Geomatics

Admission Requirements

Complete the Admission to Baccalaureate Programs Requirements in Chapter 7, Academic Standards and Regulations.

Graduation Requirements

A. General University Requirements

Complete the General University Requirements for all Baccalaureate Degrees at the beginning of this chapter.

B. General Education Requirements

Complete the General Education Requirements for Baccalaureate Degrees at the beginning of this chapter.

Academic Progress

A student who is unable to earn a satisfactory grade in the major requirement courses during their initial enrollment may attempt to earn a satisfactory grade one additional time, on a space-available basis. 'Satisfactory grade' means a grade of C or better, as this is the usual requirement for prerequisites in Geomatics courses (GEO and GIS). Failure to earn a grade of C or better on the second attempt may result in removal from the Geomatics program.

C. Major Requirements

1. Complete 4 credits in Physics from one of the following course pairs: 4

| | | | |
|------------|----------------------------------|--|--|
| PHYS A123 | Basic Physics I (3) | | |
| PHYS A123L | Basic Physics I Laboratory (1) | | |
| | or | | |
| PHYS A211 | General Physics I (3) | | |
| PHYS A211L | General Physics I Laboratory (1) | | |
2. Complete the following (21 credits):

| | | | |
|-----------|-------------------------------------|--|---|
| CSE A102 | Introduction to Computer Systems | | 1 |
| ENGL A212 | Technical Writing | | 3 |
| ENGR A161 | Engineering Practices II | | 3 |
| GEO A158 | Geomatics Computer Fundamentals | | 1 |
| MATH A109 | Precalculus † | | 6 |
| MATH A272 | Applied Calculus * | | 3 |
| STAT A253 | Applied Statistics for the Sciences | | 4 |

† MATH A107 College Algebra and MATH A108 Trigonometry (both) may be substituted for MATH A109 Precalculus.
* MATH A200 Calculus I may be substituted for MATH A272 Applied Calculus.
3. Complete all of the following (71 credits):

| | | | |
|--------------|--|--|---|
| BA/JUST A241 | Business Law I | | 3 |
| GEO A137 | Principles of Mapping | | 3 |
| GEO A146 | Surveying Computations | | 3 |
| GEO A155 | Fundamentals of Surveying | | 3 |
| GEO A157 | Analytical and Digital Cartography | | 3 |
| GEO A167 | Remote Sensing and Image Analysis | | 4 |
| GEO A248 | Digital Terrain Cartography | | 3 |
| GEO A256 | Municipal and Civil Geomatics | | 3 |
| GEO A257 | Elements of Photogrammetry | | 3 |
| GEO A266 | Advanced Surveying | | 3 |
| GEO A267 | Boundary Law I | | 4 |
| GEO A301 | Professional Development I | | 1 |
| GEO A302 | Professional Development 2 | | 1 |
| GEO A303 | Professional Development 3 | | 1 |
| GEO A355 | Land Development and Design | | 3 |
| GEO A359 | Geodesy and Map Projections | | 3 |
| GEO A365 | Geomatics Adjustment and Analysis | | 4 |
| GEO A457 | Boundary Law II | | 4 |
| GEO A460 | Geomatics Design Project | | 3 |
| GEO A466 | Geopositioning | | 3 |
| GIS A268 | Elements of Geographic Information Systems (GIS) | | 4 |
| GIS A366 | Spatial Information Analysis and Modeling | | 3 |
| GIS A468 | Integration of Geomatics Technologies | | 3 |
| PHIL A405 | Professional Ethics | | 3 |
4. Complete at least 11 credits in one of the emphasis areas.

Surveying Emphasis

- a. Complete the following 4 credits):

| | | | |
|----------|------------------------|--|---|
| GEO A433 | Hydrographic Surveying | | 3 |
| PEP A110 | Remote First Aid (1) | | 1 |
| | or | | |

PEP A112 First Aid and CPR for Professionals (1)

- b. Complete 7 credits from the following: 6

| | | | |
|----------|---|--|--|
| GEO A354 | City and Regional Planning (3) | | |
| GEO A358 | Programming for Digital Cartography (3) | | |
| GEO A459 | Geodetic Geomatics (3) | | |
| GEO A467 | Analytical and Digital Photogrammetry (3) | | |
| GEO A490 | Selected Advanced Topics in Geomatics (1-6) | | |
| GIS A369 | Land Information Systems (3) | | |
| GIS A371 | GIS Applications I (3) | | |
| GIS A433 | Coastal Mapping (3) | | |
| GIS A471 | GIS Applications II (4) | | |

Geographic Information Systems (GIS) Emphasis

- a. Complete the following (3 credits):

| | | | |
|----------|---------------------------------------|--|---|
| GIS A458 | Design and Management of Spatial Data | | 3 |
|----------|---------------------------------------|--|---|
 - b. Complete 8 credits from the following: 8

| | | | |
|----------|--|--|--|
| GIS A367 | GIS and Remote Sensing (3) | | |
| GIS A369 | Land Information Systems (3) | | |
| GIS A370 | GIS and Remote Sensing for Natural Resources (3) | | |
| GIS A371 | GIS Applications I (3) | | |
| GIS A433 | Coastal Mapping (3) | | |
| GIS A471 | GIS Applications II (4) | | |
| GIS A490 | Selected Advanced Topics in GIS (1-6) | | |
| PEP A110 | Remote First Aid (1) | | |
| | or | | |
| PEP A112 | First Aid and CPR for Professionals (1) | | |
5. A total of 131 credits is required for the degree of which 42 must be upper division.

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MINORS IN THE SCHOOL OF ENGINEERING

To meet a variety of student needs, the School of Engineering offers several minors.

A choice of two types of engineering minors are offered. The first is a minor in General Engineering, which is for students who are majoring in a non-engineering baccalaureate degree. This program offers foundation coursework in core engineering topics.

The second is an Engineering Specialty minor which is for students majoring in an engineering baccalaureate degree who, therefore, have completed much of the coursework in the Bachelor of Science in Engineering (BSE) or Civil Engineering (CE) program. Students within the engineering program may choose to pursue an Engineering Specialty minor in Civil Engineering, Computer Systems Engineering, Electrical Engineering, or Mechanical Engineering.

Students enrolling in either engineering minor must satisfy all prerequisite requirements for the courses required for the chosen minor. Non-engineering majors, such as students in the sciences or mathematics, will likely be better positioned to meet the prerequisite requirements in the General Engineering minor. Students majoring in engineering disciplines will likely be better positioned to meet the prerequisite requirements for courses in the Engineering Specialty minor.

Additionally, a minor in Geographic Information Systems (GIS) is offered for students who are majoring in baccalaureate degrees in a variety of disciplines and who are seeking strong GIS knowledge and skills to enhance their specialty and further their professional career.

Course Requirements for Minors

A minor of study must consist of a minimum of 18 credit hours. At least 6 credits must be upper division. Students must earn a cumulative GPA of at least 2.00 (C) in the minor. A minor may only be issued simultaneously with a baccalaureate degree. For general information about minor requirements, see the minors section at the beginning of this chapter.

The course requirements for each of the minors are listed below. In cases where students have unique backgrounds or interests, course selection may be adapted accordingly through consultation with the School of Engineering faculty advisors.

A. General Engineering, Minor

The following courses are required:

| | | |
|-----------|--------------------------|---|
| ENGR A151 | Engineering Practices I | 3 |
| ENGR A161 | Engineering Practices II | 3 |
| ES A208 | Engineering Mechanics | 4 |

In addition, at least three courses must be selected from the following list:

| | | |
|------------|--|---|
| EE/ME A308 | Instrumentation and Measurement (3) | 9 |
| ES A309 * | Elements of Electrical Engineering (3) | |
| ES A331 | Mechanics of Materials (3) | |
| ES A341 * | Fluids Mechanics (3) | |
| ES A346 * | Basic Thermodynamics (3) | |
| ESM A450 | Economic Analysis and Operations (3) | |
| ME A334 | Elements of Material Science (3) | |

B. Engineering Specialty Minors

Minor, Civil Engineering

A minimum of 18 credits must be selected from:

| | | |
|-----------|---|----|
| CE A334 * | Properties of Materials (3) | 18 |
| CE A344 * | Water Resources Engineering (3) | |
| CE A402 | Transportation Engineering (3) | |
| CE A422 * | Foundation Engineering (3) | |
| CE A425 | Highway Engineering (3) | |
| CE A431 | Structural Analysis (4) | |
| CE A432 * | Steel Design (3) | |
| CE A433 * | Reinforced Concrete Design (3) | |
| CE A434 | Timber Design (3) | |
| CE A435/L | Soil Mechanics with Laboratory (3) | |
| CE A441 * | Introduction to Environmental Engineering (3) | |
| CE A442 | Environmental Systems Design (3) | |

Minor, Computer Systems Engineering

A minimum of 18 credits must be selected from:

| | | |
|------------|---|----|
| CS A330 | Algorithms and Data Structures (3) | 18 |
| CS A331 | Programming Language Concepts (3) | |
| CS A401 | Software Engineering (3) | |
| CS A405 | Artificial Intelligence (3) | |
| CSE A335* | Operating Systems Engineering (3) | |
| CSE A342 | Digital Circuits Design (3) | |
| CSE A355 * | Computer Networking for Engineers (3) | |
| CSE A442 | VLSI Circuit Design (3) | |
| CSE A445 * | Computer Design and Interfacing (4) | |
| CSE A451 * | Digital Signal Processing (3) | |
| CSE A465 * | Network Security (3) | |
| CSE A481 | Engineering Software/Hardware Systems (3) | |

Minor, Electrical Engineering

A minimum of 18 credits must be selected from:

| | | |
|-----------|---|----|
| CSE A451 | Digital Signal Processing (3) | 18 |
| EE A203 * | Fundamentals of Electrical Engineering I (4) | |
| EE A204 * | Fundamentals of Electrical Engineering II (4) | |

| | |
|------------|-------------------------------------|
| EE/CS A241 | Computer Hardware Concepts (4) |
| EE/ME A308 | Instrumentation and Measurement (3) |
| EE A314 * | Electromagnetics (3) |
| EE A324 | Electromagnetics II (3) |
| EE A324L* | Electromagnetics Laboratory II (1) |
| EE A353 * | Circuit Theory (3) |
| EE A407 | Power Distribution (3) |
| EE A441 | Integrated Circuit Design (3) |
| EE A458 | Antenna Theory (3) |
| EE A462 | Communication Systems (3) |
| EE A465 * | Telecommunications (3) |
| EE/ME A471 | Automatic Control (3) |

Minor, Mechanical Engineering

A minimum of 18 credits must be selected from:

| | | |
|--------------|---|----|
| ES A341 * | Fluid Mechanics(3) | 18 |
| ES A341L * | Fluid Mechanics Laboratory (1) | |
| ES A346 * | Basic Thermodynamics (3) | |
| ME A302 * | Mechanical Design I (4) | |
| ME/EE A306 | Dynamics of Systems (3) | |
| ME/EE A308 * | Instrumentation and Measurement (3) | |
| ME A313 | Mechanical Engineering Thermodynamics (3) | |
| ME A334 * | Elements of Material Science (3) | |
| ME A403 | Mechanical Design II (3) | |
| ME A408 | Mechanical Vibrations (3) | |
| ME A414 | Thermal System Design (3) | |
| ME A441 * | Heat and Mass Transfer (3) | |
| ME A450 | Manufacturing Design (3) | |
| ME A455 | HVAC Systems Optimization (3) | |
| ME A459/A659 | Fracture Mechanics (3) | |

Note: Only one of ME A459 or ME A659 can apply to the minor.

| | |
|------------|---|
| ME/EE A471 | Automatic Control (3) |
| ME A664 | Corrosion Processes and Engineering (3) |
| ME A685 | Arctic Heat and Mass Transfer (3) |

C. Geographic Information Systems (GIS), Minor

A minimum of 18 credits must be selected from:

| | | |
|----------|--|----|
| GEO A167 | Remote Sensing and Image Analysis (4) | 18 |
| GIS A268 | Elements of Geographic Information Systems (GIS) (4) | |
| GIS A366 | Spatial Information Analysis and Modeling (3) | |
| GIS A367 | GIS and Remote Sensing (3) | |
| GIS A369 | Land Information Systems (3) | |
| GIS A370 | GIS and Remote Sensing for Natural Resources (3) | |
| GIS A433 | Coastal Mapping (3) | |
| GIS A458 | Design and Management of Spatial Data (3) | |
| GIS A468 | Integration of Geomatic Technologies (3) | |
| GIS A470 | GIS for Facility Management and Transportation Systems (3) | |
| GIS A490 | Selected Advanced Topics in GIS (1-6) | |

Note #1: MATH A200, MATH A201, MATH A202, MATH A302, PHYS A211, PHYS A212, CHEM A105, and CHEM A106 are prerequisites for most of the Engineering minor listed. Students should plan and review the requirements for their specific minor to determine exactly what prerequisites will be required.

Note #2: An "" indicates a recommended set of courses for the minor.*

Note #3: BSE or CE majors may pursue a BSE Engineering Specialty minor but may not pursue the BSE General Engineering minor.

Collaborative Programs With Other UA Campuses

Two-Year (2+2) Programs of Electrical or Mechanical Engineering with UAF

The School of Engineering offers a program that allows the completion of the first two years of a four-year program leading to the Bachelor of Science in Electrical Engineering or a Bachelor of Science in Mechanical Engineering. The program is coordinated with the University of Alaska Fairbanks (UAF) College of Engineering and Mines so that students may transfer from UAF to UAA, or from UAA to UAF, with little or no loss of credit. For more information, please contact the UAA School of Engineering at (907) 786-1900.

One-Year (1+3) Engineering Program with UAS.

The University of Alaska Southeast in Juneau offers a 1+3 engineering program. Juneau students earn a Pre-Engineering Certificate while completing the first-year of an engineering degree at UAA. The programs at UAA and UAS are coordinated so that students may transfer to UAA with no loss of credit. For more information, please contact the UAA School of Engineering at (907) 786-1900.

UNIVERSITY HONORS COLLEGE

*Academic Affairs, Edward & Cathryn Rasmuson Hall (RH), Room 115,
(907) 786-1086*

<http://honors.uaa.alaska.edu>

The mission of the University Honors College is to be a catalyst for scholarly excellence in undergraduate education. The college advances, coordinates, and administers active learning and undergraduate research opportunities for students across the campus. Through its multi-disciplinary academic and student support programs, the college serves as a locus for inquiry, discovery, leadership and engagement.

The college houses the Office of Undergraduate Research and Scholarship, and three university honors programs: the University Honors Core Program, the Natural and Complex Systems Program, and the Forty-Ninth State Fellows Program. Students enrolled in these programs are also enrolled in the disciplinary school or college in which they complete their degree programs. University Honors students may pursue any major or minor they wish at the university, and foundation University Honors courses will satisfy General Education Requirements in humanities and social science.

Students who complete the requirements of their disciplinary school or college, and the program requirements of the University Honors College in good standing will graduate as Honors graduates. Students who complete these requirements with a GPA of 3.50 or above will earn the designation of University Honors Scholar on their transcripts and diplomas.

University Honors offers smaller classes with excellent faculty, guided individual and team-based research, personalized academic advising and mentoring, special leadership and internship opportunities, community involvement, and enhanced scholarship prospects. Honors courses will approach the course subject matter with more intensity and rigor than is demanded of typical courses. Students will also participate in a range of honors activities together, designed to enhance intellectual and personal opportunities. Intensive advising by college faculty and staff is an important element of University Honors, and Honors students are required to meet regularly with advisors.

Academic Programs

There are various options that students can select within the University Honors College: the Honors Core Program, the Natural and Complex Systems Program, and the Forty-Ninth State Fellows Program. The Honors Core Program requirements, taken by all Honors students, include courses in humanities, social science and community service. All Honors courses have an emphasis on critical thinking and analytical reading, taking on challenging activities through interdisciplinary projects, and preparing students for participating in independent research in their disciplines.

The Natural and Complex Systems (NCS) Program includes additional courses that focus on scientific, research-based projects that integrate student work across the natural, physical, engineering, mathematical, and computer sciences. This option is open to honors students in all disciplines but is targeted particularly toward students in science-oriented degrees. Honors students may take courses in the NCS Program if they meet the course prerequisites.

The Forty-Ninth State Fellows Program includes additional curriculum in democratic institutions and leadership. Focusing on politics, history, and Alaska, it consists of selected courses, weekly tutorials, and extracurricular activities. Spaces are limited in this intensive program and students typically apply prior to their freshman year to begin the program as they start their studies at UAA.

A limited number of students are admitted to the Honors Core Program, the Natural and Complex Systems Program, and the Forty-Ninth State Fellows Program each year. All baccalaureate degree-seeking students who are motivated to pursue honors-level work are encouraged to apply.

In addition to the University Honors College, many departments at UAA offer departmental honors options. Students may complete

both university and departmental honors requirements with dual designations upon graduation, and in some cases departmental honors courses may be substituted for one or more University Honors College requirements. In addition, students pursuing departmental honors and non-honors students may enroll in some University Honors College courses with permission of the University Honors College and on a space-available basis.

Admission to the University Honors College

1. Admission to the University Honors College is limited to baccalaureate degree-seeking students. Admission is separate from and in addition to general UAA admission requirements.
2. Students must submit a completed University Honors College application, including supporting documents, to the University Honors College Office (RH 115). Supporting documents include (1) high school transcripts and SAT or ACT scores for incoming freshmen, (2) university transcripts and GPA for transfer students, (3) an essay on personal goals, and (4) a completed reference form from two previous teachers (either high school or college). Application packets may be obtained from the University Honors College office.
3. In general, students applying to the University Honors College from high school or transferring into the program with previous college-level work must have at least a 3.00 GPA, and show strong evidence of ability to reach and maintain a 3.50 GPA level at UAA within a reasonable time. However, the initial GPA entrance requirement should be interpreted as a general guideline, and not as an absolute criterion; all students who believe that they can succeed and benefit in an honors program are encouraged to apply.
4. Admission to the University Honors College will be determined by the Honors College Admission Committee. Admission is based on an overall evaluation of the student's probability of success in the college, and not on any single criterion or formula. The committee may ask the applicant for additional information and/or suggest an interview. Applicants will be ranked, and admitted on a space-available basis. In some cases the committee may initially grant conditional admission, which will be changed to formal admission if the student demonstrates ability to do honors work.

Requirements to Graduate as a "University Honors Scholar"

1. Students must meet all General University Requirements, General Education Requirements, School/College requirements, and major requirements as printed in the UAA catalog.
2. Students must complete the following University Honors Core Curriculum requirements (16 credits) with a grade of C or higher (* indicates courses that satisfy GER requirements):

Honors Foundation Courses (Honors Core):

| | | |
|------------|--|---|
| HNRS A192* | Honors Seminar: Enduring Books | 3 |
| HNRS A292* | Honors Seminar in Social Science | 3 |
| HNRS A310 | Community Service: Theory and Practice | 3 |

Honors Senior Project/Thesis Requirements (Honors Core)

| | | |
|---|--------------------------------|---|
| HNRS A392 | Honors Thesis Seminar | 1 |
| and one of the following options to total 6 credits | | 6 |
| HNRS A490* | Senior Honors Seminar | |
| | (6 credits over two semesters) | |
| | or | |

- A. A course proposed by the student, and approved by the Honors College dean (3 credits minimum; may be an existing course or independent study) plus senior thesis or project (3 credits minimum; either departmental thesis/project, or HNRS A499 Honors Thesis)
 - or
- B. An upper division course listed in the catalog as a specific departmental honors requirement (3 credits minimum)
 - and

- C. Senior thesis or project (3 credits minimum; either departmental thesis/project, or HNRS A499 Honors Thesis)
 - or
- D. Six-credit thesis/project (either departmental thesis/project, and/or HNRS A499 Honors Thesis). Total University Honors Program credits required
 - (9 core + 7 upper division): 16

3. Students must have earned a cumulative grade point average of 3.50 or higher, as defined under Graduation with Honors in Chapter 7, Academic Standards and Regulations.
4. As part of the advising/mentoring process, Honors students' progress will be evaluated every semester. Students whose performance indicates potential difficulties in meeting the Honors graduation requirements will be counseled on how to correct these difficulties, but if performance improvements do not result, the student may be removed from the college.

Natural and Complex Systems (NCS) Program

The Natural and Complex Systems Program focuses on scientific, research-based projects that integrate student work across the natural, physical, engineering, mathematical and computer sciences. Students admitted to the Natural and Complex Systems Program receive the designation "University Honors Scholar: Natural and Complex Systems" on their transcripts upon successful completion of the program requirements.

Admission to the Natural and Complex Systems Program

The NCS program is open to students in all disciplines who have been admitted to the University Honors College. Honors students may take courses in the NCS Program if they meet the course prerequisites. Students wanting to enroll in this program should contact the University Honors College office for permission to register.

Requirements to Graduate as a "University Honors Scholar: Natural and Complex Systems"

1. Students must meet all General University Requirements, General Education Requirements, School/College requirements, and major requirements as printed in the UAA catalog.
2. Students must complete the following University Honors Core requirements and the Natural and Complex Systems Program requirements with a grade of C or higher (22 credits; * indicates courses that satisfy GER requirements):

Honors Foundation Courses (Honors Core)

| | | |
|------------|--|---|
| HNRS A192* | Honors Seminar: Enduring Books | 3 |
| HNRS A292* | Honors Seminar in Social Science | 3 |
| HNRS A310 | Community Service: Theory and Practice | 3 |

NCS Program Courses

| | | |
|------------|---|---|
| CPLX/ | | |
| BIOL A200* | Introduction to Complexity | 3 |
| HNRS A309 | Interdisciplinary Team-Based Research Methods | 3 |

Honors Senior Project//Thesis Requirements (Honors Core)

| | | |
|--|-----------------------|---|
| HNRS A392 | Honors Thesis Seminar | 1 |
| HNRS A490* | Senior Honors Seminar | 6 |
| (special section designated for NCS Program) | | |

3. Students must have earned a cumulative grade point average of 3.50 or higher, as defined under Graduation with Honors in Chapter 7, Academic Standards and Regulations.
4. As part of the advising/mentoring process, Honors students' progress will be evaluated every semester. Students whose performance indicates potential difficulties in meeting the Honors graduation requirements will be counseled on how to correct these difficulties, but if performance improvements do not result, the student may be removed from the college.

Forty-Ninth State Fellows Program

The Forty-Ninth State Fellows Program offers a limited number of students the opportunity to participate in an intensive, intellectually challenging four-year undergraduate program to develop new Alaskan leaders. Forty-Ninth State Fellows study the roots of liberty in Western civilization, the founding and development of American political institutions, and the challenges of self-government in Alaska, to become knowledgeable about American and Alaskan history, politics, and cultural diversity, and familiar with the application of leadership skills and ideas.

In addition to their common curriculum, Forty-Ninth State Fellows enjoy many activities together, including opportunities for summer internships, membership in civic organizations, lectures and colloquia, weekly tutorials, and special events. Intensive advising by program faculty and staff is an important element of the program, and Fellows are required to meet regularly with advisors.

Forty-Ninth State Fellows may pursue any major they wish at the university. They take selected courses together in economics, history, and political science, as well as the required courses for the University Honors Core. Many of these courses satisfy General Education Requirements (GER) at UAA and/or requirements for those pursuing degrees in the College of Arts and Sciences. Students admitted to study as Forty-Ninth State Fellows receive the designation "Forty-Ninth State University Honors Scholar" on their transcripts upon successful completion of the option requirements.

Admission to the Forty-Ninth State Fellows Program

- Admission to the Forty-Ninth State Fellows Program is limited each year to a small group of baccalaureate degree-seeking students. At the time of application, students are considered for admission to both the University Honors College and the Forty-Ninth State Fellows Program. Students should meet the general criteria for admission to University Honors (Admission to University Honors College No. 3).
- Students must submit a completed Forty-Ninth State Fellows Program application, including supporting documents, to the University Honors College Office (RH 119). Supporting documents include (1) high school transcripts and SAT or ACT scores for incoming freshmen, (2) high school and university transcripts and GPA for transfer students, (3) a letter of application explaining their background and interests, and why they want to be Forty-Ninth State Fellows and members of the University Honors College, (4) a short paper or essay (750-1000 words) addressing a contemporary social, political, or economic problem in Alaska, and (5) three letters of reference commenting on their academic ability and promise, one of which must be from an unrelated adult outside of high school who can speak to their skills and potential. Application forms may be obtained from the University Honors College office or website.
- Admission to the Forty-Ninth State Fellows Program will be determined by the Forty-Ninth State Admission Committee. The Committee may ask the applicant for additional information and/or request an interview. Applicants will be ranked and admitted on a space-available basis.

Requirements to Graduate as a "Forty-Ninth State University Honors Scholar"

- Students must meet all General University Requirements, General Education Requirements, School/College requirements, and major requirements as printed in the UAA catalog.
- Students also must complete all requirements to graduate in the University Honors College as a "University Honors Scholar," including Honors Core Program (see above), GPA requirements and completion of an Honors Senior Thesis.
- Students must complete the following Forty-Ninth State Fellows curriculum requirements with a grade of C or higher:

First-year Forty-Ninth State Fellows Program Requirements:

| | | |
|------------|---------------------------------|---|
| HIST A101+ | Western Civilization I | 3 |
| HIST A102+ | Western Civilization II | 3 |
| HNRS A191 | Freshman Honors Tutorial (fall) | 1 |

| | | |
|-----------|-----------------------------------|---|
| HNRS A191 | Freshman Honors Tutorial (spring) | 1 |
|-----------|-----------------------------------|---|

Second-year Forty-Ninth State Fellows Program Requirements:

| | | |
|------------|------------------------------------|---|
| ECON A201+ | Principles of Macroeconomics | 3 |
| HIST A131+ | History of United States I | 3 |
| HIST A132+ | History of United States II | 3 |
| HNRS A291 | Sophomore Honors Tutorial (fall) | 1 |
| HNRS A291 | Sophomore Honors Tutorial (spring) | 1 |
| PS A330 | The American Political Tradition | 3 |

Third-year Forty-Ninth State Fellows Program Requirements:

| | | |
|------------|--|---|
| HIST A341+ | History of Alaska | 3 |
| HNRS A391 | Junior Honors Tutorial | 1 |
| PS A332+ | History of Political Philosophy I: Classical | 3 |
| PS A333+ | History of Political Philosophy II: Modern | 3 |

Fourth-year Forty-Ninth State Fellows Program Requirements:

| | | |
|---------|--------------------------------|---|
| PS A345 | Alaska Government and Politics | 3 |
|---------|--------------------------------|---|

+ Indicates courses that can satisfy GERs and/or CAS requirements.

Forty-Ninth State Fellows ordinarily take all of the Forty-Ninth State requirements together as a cohort. Since Honors tutorials are paired with designated course sections, and specific courses are required, Fellows must secure advice and permission from the Forty-Ninth State advisors before registering for classes each term. In some cases, classes that meet General Education Requirements may be designated for Forty-Ninth State Fellows or for all University Honors students; these sections are highly recommended for Forty-Ninth State Fellows. In case of time conflicts between courses required for Forty-Ninth State Fellows and for other degree requirements, the program may allow Fellows to substitute sections or to take courses outside the usual sequence.

- As part of the advising and mentoring process, Forty-Ninth State Fellows' progress will be evaluated every semester. Fellows whose performance indicates potential difficulties in meeting the requirements for the Forty-Ninth State Fellows Program or for the University Honors College will be counseled on how to correct these difficulties, but if performance improvements do not result, Fellows may be removed from the program.

FACULTY

University Honors draws its faculty from across the schools and colleges.

Ronald Spatz, Dean/Professor, AFRMS1@uaa.alaska.edu
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