Associate of Applied Science in Technology

This program is delivered only through Kodiak College.

The Associate of Applied Science (AAS) in Technology offers career specialty concentrations in the following emphasis areas:

- Construction
- Occupational Safety and Health
- Welding

The AAS in Technology 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.

The Associate of Applied Science (AAS) in Technology prepares students with entry-level skills, continuing education and advanced technical skills in several specialized fields including welding, construction, and safety. The comprehensive technology curriculum with applied math, science and technical writing components ensures student readiness for rewarding careers in a variety of technical fields.

The AAS in Technology constitutes the first two years of the Bachelor of Science (BS) in Applied Technologies Leadership.

Admission Requirements

Complete the Admission Requirements for Associate Degrees (http://catalog.uaa.alaska.edu/academicpoliciesprocesses/admissions/undergraduate/).

Graduation Requirements

- Complete the General University Requirements for Associate of Applied Science Degrees (http://catalog.uaa.alaska.edu/undergraduateprograms/aasrequirements/).
- Complete the General (http://catalog.uaa.alaska.edu/undergraduateprograms/baccalaureaterequirements/gers/) Education Requirements for Associate of Applied Science Degrees.
- Complete the following major requirements with a minimum grade of C:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AET A101</td>
<td>Fundamentals of Construction Documents</td>
<td>3</td>
</tr>
<tr>
<td>CIS A105</td>
<td>Introduction to Personal Computers and Application Software</td>
<td>3</td>
</tr>
<tr>
<td>ET A151</td>
<td>Basic Electricity for the Trades</td>
<td>4</td>
</tr>
<tr>
<td>OSH A101</td>
<td>Introduction to Occupational Safety and Health</td>
<td>3</td>
</tr>
<tr>
<td>OSH A250</td>
<td>Hazardous Materials Operations</td>
<td>3</td>
</tr>
<tr>
<td>PSY A153</td>
<td>Human Relations</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete one of the following emphasis areas: 22-26

Construction (26 credits)

- AET A102 | Methods and Materials of Building Construction | 3       |
- AET A123 | Codes and Standards                           |         |
- AET A242 | Mechanical, Electrical and Plumbing Systems  |         |
- AET A332 | Structural Technology                         |         |
- CM A201  | Construction Project Management I             |         |
- CM A205  | Construction Safety                           |         |
- CM A213  | Construction Civil Technology                 |         |
- TECH A295| Technical Internship (3 credits)              |         |

Occupational Safety and Health (22 credits)

- OSH A108 | Injury Prevention and Risk Management        |         |
- OSH A111 | Occupational Safety Training Needs and Methods |         |
- OSH A120 | Safety Program Management and Recordkeeping |         |
- OSH A180 | Introduction to Industrial Hygiene           |         |
- OSH A201 | Hazard Control: Inspections, Audits and Investigations |         |
- OSH A211 | Safety Management Systems                    |         |
- TECH A295| Technical Internship (2 credits)             |         |

Welding (23 credits)

- TECH A295| Technical Internship (3 credits)             |         |
- WELD A112| Shielded Metal Arc Welding (SMAW)            |         |
- WELD A114| Welding of High Strength Steels              |         |
- WELD A157| Technical Drawings for Welders               |         |
- WELD A161| Gas Metal Arc Welding (GMAW)                 |         |
- WELD A190| Selected Topics in Welding Technology (7 credits) |         |

Total 41-45

A minimum of 60 credits is required for the degree.

Program Student Learning Outcomes

Students successfully completing the core of the Associate of Applied Science in 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.

Construction emphasis
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:

• Documentation: Create, interpret and use construction drawings and other documents, and calculate quantities of material, labor, and equipment needed for a project.
• Human Resources: Define the roles, relationships, and responsibilities of the participants in the construction process, and understand employee relations and contract law.
• 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.
• Codes and Standards: Interpret standard building codes for application in modern construction processes.
• Construction Project Management: Familiarity with effective contract administration methods to control, organize, and monitor construction projects.
• Management Tools: Utilize industry standard software for computer-aided drafting (CADD) and gain familiarity with estimating, scheduling and resource management.
• Safety: Apply knowledge of safety, health, and environmental issues related to construction activities.

Occupational Safety and Health emphasis
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:

• Identify risks to life, health and property, and plan and implement strategies that prevent injuries.
• Develop, implement and manage safety programs that comply with government regulations, industry standards and best safety practices.
• Design and maintain company and personnel records related to safety activities, training and incidents.
• Perform hazard recognition and mitigation related to chemical and physical conditions in the workplace.
• 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.

• Prepare and present employee training modules and programs based on training needs assessments and properly prepare objectives and materials, and practice effective presentations.

Welding emphasis
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:

• Technical and administrative skills required in today’s metal fabrication and welding environments.
• Application of specifications and welding procedures to specific job tasks.
• Skills in welding and thermal cutting processes and familiarity with basic metallurgy theory.
• Competence in all-position welder qualification tests for two welding process and familiarity with other welding processes.
• Safe work habits by assessing hazards and using best practices to avoid exposure to risk of injury, and to avoid damaging equipment.
• Effective communication with other employees, customers, and management.