

AVIATION MAINTENANCE TECHNOLOGY (AAS)

Associate of Applied Science

Career-Technical Program

Interest Areas:

Manufacturing and Trades

This program prepares students for entry-level employment in aerospace technology airframe maintenance mechanical fields. The curriculum fulfills the FAA requirements for lecture and lab hours needed prior to taking the FAA licensing exam. Students will receive the knowledge and skills necessary to work in various phases of aviation general and airframe industries. Students will receive hands on instruction from certified FAA Airframe and Power licensed instructors in lab setting approved by the FAA as a CFR part 147 school.

Program Website (https://www.nic.edu/programs/viewprogram.aspx?program_id=100)

Program Requirements

| Course | Title | Credits |
|--|---|---------|
| Semester 1 | | |
| AERM-103 | Weight and Balance | 2 |
| AERM-104 | Shop Practices | 3 |
| AERM-106 | Federal Aviation Regulations | 2 |
| AERO-101 | Aviation Science | 3 |
| GEM 3 - A.A.S. Mathematical Ways of Knowing | | 3-5 |
| GEM 6 - A.A.S. Social and Behavioral Ways of Knowing | | 3 |
| | Credits | 16-18 |
| Semester 2 | | |
| AERM-102 | Basic Electricity | 3 |
| AERM-105 | Ground Operations | 3 |
| AERM-201 | Wood, Fabric, and Finishes | 2 |
| AERM-203 | Aircraft Composites | 2 |
| AERM-204 | Aircraft Welding | 2 |
| ENGL-101 | English Composition | 3 |
| | Credits | 15 |
| Semester 3 | | |
| AERM-202 | Aircraft Sheet Metal | 5 |
| AERM-205 | Assembly and Rigging | 2 |
| AERM-211 | Landing Gear Systems | 3 |
| AERM-215 | Airframe Electrical Systems | 3 |
| | Credits | 13 |
| Semester 4 | | |
| AERM-206 | Airframe Inspection | 2 |
| AERM-212 | Hydraulics, Pneumatics and Fuel Systems | 3 |
| AERM-213 | Airframe Auxiliary Systems | 3 |
| AERM-214 | Instruments, Navigation and Communication Systems | 2 |
| COMM-101 | Introduction to Speech Communication | 3 |
| A.A.S. Institutionally Designated | | 3 |
| | Credits | 16 |
| | Total Credits | 60-62 |

Course Key



GEM



WCHE

AAS
Institutionally
Designated

Gateway



Milestone

Program Outcomes

Upon completion of the program, students will be able to:

- Understand and perform mathematic operations.
- Understand basic Aerodynamic and Aircraft Structures.
- Demonstrate application of physics as it pertains to aircraft.
- Demonstrate application of drafting and drawings as it pertains to aircraft maintenance and repair.
- Demonstrate the ability to analyze and troubleshoot an electrical circuit.
- Understand the importance of weight and balance for aircraft operation.
- Demonstrate the ability to compute the effect of equipment changes and loading schedules.
- Identify and use general mechanics tools.
- Describe and identify aircraft hardware and materials.
- Understand and describe basic heat treating processes.
- Understand and use various non-destructive testing (NDT) methods to inspect aircraft components.
- Perform inspections of welded assemblies and identify weld defects.
- Identify and describe aircraft fuels.
- Demonstrate the proper method of aircraft movement.
- Understand and use common inspection techniques to detect corrosion on aircraft structures.
- Understand and demonstrate the ability to read and interpret the manufacturers' maintenance data.
- Understand and demonstrate the ability to read and interpret airworthiness directives.
- Understand and demonstrate the ability to read and interpret FAA advisory material.
- Understand and explain mechanics' privileges and limitations per 14 CFR part 65.
- Understand and correctly complete maintenance forms and records to document work accomplished.
- Demonstrate inspection techniques to determine serviceability of structures and repairs.
- Demonstrate the ability to design and implement a repair scheme for a sheet metal structure.
- Use and understand methods of inspecting, checking, servicing, and repairing windows, doors, and interior furnishings.
- Demonstrate the ability to select, remove, and install special fasteners for metallic, bonded, and composite structures.
- Demonstrate the ability repair a composite assembly and structure.
- Personal Responsibility - demonstrate good work ethics, study habits, completion of all tasks in a timely manner.

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- Human Relations - work safely and effectively in small groups on various projects

In addition to the program outcomes, students will meet the following North Idaho College General Education (GEM) Requirements: Written and Oral Communication; Mathematical Ways of Knowing; Social and Behavioral Ways of Knowing; and an additional program-designated or selected course from any of the GEM requirements.