Aviation Maintenance

College of Rural and Community Development
Tanana Valley Campus
(907) 455-2809
www.tvc.uaf.edu/programs/amt/

Certificate; A.A.S. Degree

Minimum Requirements for Certificate: 31–49 credits;
for Degree: 64–69 credits

Aviation maintenance offers an A.A.S. degree and certificates in three areas: airframe, powerplant, or airframe and powerplant.

Students who receive a certificate in airframe and powerplant may elect to complete the A.A.S. degree in aviation maintenance to enhance their employability.

Students in the airframe and powerplant certificate program may complete requirements for the Federal Aviation Administration (FAA) mechanic's certificate with both airframe and powerplant ratings in as little as one year. The aviation maintenance program covers many subject areas, but it places special emphasis on those skills most sought after in the Alaska job market. Through classroom and hands-on laboratory instruction, this intensive curriculum prepares students for entry into the aviation field. Graduates who pass the FAA examinations for the airframe and powerplant ratings are qualified for entry-level positions in the maintenance, repair, overhaul and modification of aircraft.

Students interested in qualifying for an FAA airframe mechanic's certificate may choose to earn only the airframe certificate, and those who wish to qualify for an FAA powerplant mechanic's certificate may choose to earn only the powerplant certificate.

Admission to the airframe and powerplant programs is at the discretion of the program faculty and requires an interview with the faculty advisor. The program normally starts around the first of July of each year. Applicants may start at other times if they meet experience and educational qualifications that meet departmental approval.

Airframe and Powerplant—Certificate Program

1. Complete the general university requirements (page 80.).
2. Complete the certificate requirements. (See page 82. As part of the certificate requirements, the communication, computation and human relations content is embedded in the major required courses for this program.)
3. Complete the following general requirements:
   - AFPM 145—Basic Mathematics 1
   - AFPM 146—Basic Electricity 2
   - AFPM 147—Physics for Mechanics 0.5
   - AFPM 148—Aircraft Drawing 1
   - AFPM 149—Fluid Lines and Fitting 0.5
   - AFPM 150—Materials and Processes 2
   - AFPM 151—Cleaning and Corrosion Control 1
   - AFPM 152—Federal Aviation Regulations 1
   - AFPM 153—Weight and Balance 1
   - AFPM 154—Ground Operations and Servicing 0.5
4. Complete the following airframe structures requirements:
   - AFPM 261—Non Metallic Structures 1
   - AFPM 262—Aircraft Coverings 1
   - AFPM 263—Aircraft Finishes 0.5
   - AFPM 264—Sheet Metal Structures 3
   - AFPM 265—Aircraft Welding 1.5
   - AFPM 266—Assembly and Rigging 1.5
   - AFPM 267—Airframe Inspections 0.5
   - AFPM 270—Airframe Testing 0.5
5. Complete the following airframe systems and components requirements:
   - AFPM 230—Aircraft Electrical Systems 2.5
   - AFPM 253—Transport Category Aircraft 1
   - AFPM 254—Ice and Rain Control Systems 0.5
   - AFPM 256—Communications and Navigation Systems 0.5
   - AFPM 258—Cabin Atmosphere Control Systems 1
   - AFPM 259—Hydraulic and Pneumatic Systems 1.5
   - AFPM 260—Aircraft Landing Gear Systems 1.5
6. Complete the following powerplant theory and maintenance requirements:
   - AFPM 235—Aircraft Reciprocating Engines 4.5
   - AFPM 240—Turbine Engines 2
   - AFPM 271—Powerplant Inspections 0.5
   - AFPM 272—Powerplant Testing 0.5
7. Complete the following powerplant systems and components requirements:
   - AFPM 231—Powerplant Electrical Systems 1.5
   - AFPM 244—Lubrication Systems 1.5
   - AFPM 245—Ignition Systems 2
   - AFPM 246—Fuel Metering Systems 2
   - AFPM 248—Induction Systems 0.5
   - AFPM 249—Powerplant Cooling Systems 0.5
   - AFPM 250—Powerplant Exhaust Systems 0.5
   - AFPM 252—Propellers 2
8. Complete the following combined systems and components requirements:
   - AFPM 251—Fuel Systems 1.5
   - AFPM 255—Fire Protection Systems 0.5
   - AFPM 257—Instrument Systems 0.5
9. Minimum credits required 49

Airframe—Certificate Program

1. Complete the general university requirements (page 80.).
2. Complete the certificate requirements. (See page 82. As part of the certificate requirements, the communication, computation and human relations content is embedded in the major required courses for this program.)
3. Complete the following general requirements:
   - AFPM 145—Basic Mathematics 1
   - AFPM 146—Basic Electricity 2
   - AFPM 147—Physics for Mechanics 0.5
   - AFPM 148—Aircraft Drawing 1
   - AFPM 149—Fluid Lines and Fitting 0.5
   - AFPM 150—Materials and Processes 2
   - AFPM 151—Cleaning and Corrosion Control 1
   - AFPM 152—Federal Aviation Regulations 1
   - AFPM 153—Weight and Balance 1
   - AFPM 154—Ground Operations and Servicing 0.5
4. Complete the following airframe structures requirements:
   - AFPM 261—Non Metallic Structures 1
   - AFPM 262—Aircraft Coverings 1
   - AFPM 263—Aircraft Finishes 0.5
   - AFPM 264—Sheet Metal Structures 3
   - AFPM 265—Aircraft Welding 1.5
   - AFPM 266—Assembly and Rigging 1.5
   - AFPM 267—Airframe Inspections 0.5
   - AFPM 270—Airframe Testing 0.5

5. Complete the following airframe systems and components requirements:
   AFPM 230—Aircraft Electrical Systems....2.5
   AFPM 253—Transport Category Aircraft....1
   AFPM 254—Ice and Rain Control Systems....0.5
   AFPM 256—Communications and Navigation Systems....0.5
   AFPM 258—Cabin Atmosphere Control Systems....1
   AFPM 259—Hydraulic and Pneumatic Systems....1.5
   AFPM 260—Aircraft Landing Gear Systems....1.5
6. Complete the following combined systems and components requirements:
   AFPM 251—Fuel Systems....1.5
   AFPM 255—Fire Protection Systems....0.5
   AFPM 257—Instrument Systems....0.5
7. Minimum credits required....31

Powerplant—Certificate Program

1. Complete the general university requirements (page 80.).
2. Complete the certificate requirements. (See page 82. As part of the certificate requirements, the communication, computation and human relations content is embedded in the major required courses for this program.)
3. Complete the following general requirements:
   AFPM 145—Basic Mathematics....1
   AFPM 146—Basic Electricity....2
   AFPM 147—Physics for Mechanics....0.5
   AFPM 148—Aircraft Drawing....1
   AFPM 149—Fluid Lines and Fitting....0.5
   AFPM 150—Materials and Processes....2
   AFPM 151—Cleaning and Corrosion Control....1
   AFPM 152—Federal Aviation Regulations....1
   AFPM 153—Weight and Balance....1
   AFPM 154—Ground Operations and Servicing....0.5
4. Complete the following powerplant theory and maintenance requirements:
   AFPM 235—Aircraft Reciprocating Engines....4.5
   AFPM 240—Turbine Engines....2
   AFPM 271—Powerplant Inspections....0.5
   AFPM 272—Powerplant Testing....0.5
5. Complete the following powerplant and systems components requirements:
   AFPM 231—Powerplant Electrical Systems....1.5
   AFPM 244—Lubrication Systems....1.5
   AFPM 245—Ignition Systems....2
   AFPM 246—Fuel Metering Systems....2
   AFPM 248—Induction Systems....0.5
   AFPM 249—Powerplant Cooling Systems....0.5
   AFPM 250—Powerplant Exhaust Systems....0.5
   AFPM 252—Propellers....2
6. Complete the following combined systems and components requirements:
   AFPM 251—Fuel Systems....1.5
   AFPM 255—Fire Protection Systems....0.5
   AFPM 257—Instrument Systems....0.5
7. Minimum credits required....31

Note: This is a one-year program, usually starting at the beginning of July. Entry at other times is allowed only with departmental approval. A personal background check and drug test will be required prior to acceptance into the airframe and powerplant, airframe or powerplant certificate programs.

Aviation Maintenance—A.A.S. Degree

1. Complete the general university requirements (page 80).
2. Complete the A.A.S. degree requirements (page 84).
3. Complete the requirements for the airframe and powerplant certificate....49
4. Minimum credits required....64

** Student must earn a C grade or better in each course.*

Note: Page numbers refer to the UAF 2006-2007 academic catalog, which can be viewed online at www.uaf.edu/catalog/.