

Aviation Maintenance Technology Course Descriptions

Aviation Maintenance Technology – General

AMT 105 Technical Mathematics 2.0 Cr Hrs

Designed to study multiple concepts in mathematics. The student obtains a functional efficiency in ratios, proportions, areas, volumes, angular measurements, graphs, roots, squares, cubes and basic trigonometry.

AMT109 Physics 2.0 Cr Hrs

Intended to provide basic information on principles, fundamentals and technical procedures of physics as it relates to the powerplant rating.

AMT 113 Basic Electricity 4.0 Cr Hrs

A fundamental treatment of electricity with emphasis on physical circuit components, direct current circuit analysis and related mathematics.

AMT 107 Aircraft Drawings 1.0 Cr Hr

Designed to study the basics of blueprint drawings and to practice obtaining desired information from blueprints. Includes types of drawings, lines, dimensions, tolerances, specifications, sketching techniques and graphic interpolation.

AMT 119 Maintenance Publications, Forms and Records 2.0 Cr Hrs

Designed to enable the student to read, comprehend and apply information contained in Federal Aviation Administration's and manufacturers' aircraft maintenance specifications, data sheets, manuals, publications and related Federal Aviation Regulations (FAR). This course enables the student to write descriptions of work performed including aircraft discrepancies and corrective actions using typical aircraft maintenance records.

AMT 117 Mechanic Privileges and Limitations 1.0 cr hr

Designed to acquaint and exercise mechanic privileges within the limitations prescribed by part 65 of the Federal Aviation Regulations (FAR) AMT manual.

AMT 127 Ground Operations and Services 2.0 Cr Hrs

Intended to provide basic information on principles, fundamentals and technical procedures used in ground handling and support equipment as they relate to powerplant. Students should learn to demonstrate the correct and safe procedure for aircraft tie-down, fueling, using auxiliary power units and identifying the different types of fire extinguishers and their proper applications.

AMT 115 Weight and Balance 2.0 Cr Hrs

An introduction to Federal Aviation Administration required subjects relating to the weighing of aircraft, the performance of weight and balance calculations and appropriate maintenance record entries.

AMT 111 Materials and Processes 4.0 Cr Hrs

Designed to enable students to identify plumbing lines by size and fitting, different tube forming processes, types of aircraft bolts and threaded fasteners. Students will be able to demonstrate knowledge of torques, torque wrenches, control cables, rivets, seals, wipers, sealing compounds and acquire technical skills required for preventative maintenance inspections.

AMT 125 Fluid Lines and Fittings 1.0 Cr Hr

Designed to provide basic information on principles, fundamentals and technical procedures relating to fuel, fuel systems, fluid lines and fittings.

AMT 123 Cleaning and Corrosion Control 1.0 Cr Hr

Designed to provide basic information on identifying and selecting cleaning materials, inspecting, removing and treating aircraft corrosion and performing aircraft cleaning.

AMT 169 Communication and Navigation Systems 2.0 Cr Hrs
Designed to develop correct safety practices, comprehensive knowledge and technical skills required to perform maintenance procedures relevant to aircraft communication and navigation systems. The curriculum is designed to meet specific Federal Aviation Administration regulations that pertain to Airframe Subjects No. 38, No. 39 and No. 40.

AMT 173 Position and Warning Systems 1.0 Cr Hr
Designed to develop correct safety practices, comprehensive knowledge and technical skills required to perform maintenance procedures relevant to aircraft position and warning systems. The curriculum is designed to meet specific Federal Aviation Administration regulations that pertain to the airframe mechanic.

AMT 161 Fire Protection Systems 1.0 Cr Hr
Designed to develop correct safety practices, comprehensive knowledge and technical skills required to perform maintenance procedures relevant to fire protection systems. The curriculum is designed to meet specific Federal Aviation Administration regulations that pertain to Airframe Subjects No. 54 and No. 55.

AMT 167 Aircraft Welding 2.0 Cr Hrs
Topics address repair procedures for steel, magnesium, brass and aluminum materials used in aircraft assembly and selection and application of appropriate methods of welding, brazing, and soldering steel, magnesium, brass and aluminum.

AMT 177 Wood Structures 1.0 Cr Hr
Designed to develop correct safety practices, comprehensive knowledge and technical skills required to perform maintenance procedures relevant to airframe wood structure. The curriculum is designed to meet specific Federal Aviation Administration regulations that pertain to the airframe mechanic.

AMT 179 Aircraft Sheetmetal and Non-Metallic Structures 8.0 Cr Hrs
Designed to develop correct safety practices, comprehensive knowledge and technical skills required to perform maintenance procedures relevant to airframe aircraft sheetmetal structures. The curriculum is designed to meet specific Federal Aviation Administration regulations that pertain to the airframe mechanic.

AMT 183 Aircraft Finishes 2.0 Cr Hrs
Designed to develop correct safety practices, comprehensive knowledge and technical skills required to perform maintenance procedures relevant to aircraft finishes. The curriculum is designed to meet specific Federal Aviation Administration regulations that pertain to Airframe Subjects No. 7, No. 8 and No. 9. Academic standard for passing this class is a minimum of 70 percent for the written and practical project exams.

AMT 186 Airframe Review and Test 4.0 Cr Hrs
Students apply for airframe certification, complete the Airframe Laser Grade written exam and the Airframe Oral and Practical Exam.

Aviation Maintenance Technology — Powerplant

AMT 136 Propellers 4.0 Cr Hrs
Intended to provide basic information on principles, fundamentals and technical procedures associated with propellers as they relate to the powerplant rating. The course is designed to enable students to inspect, check, service and repair propeller synchronizing and ice control systems, repair fixed-pitch, constant-speed and feathering propellers, and propeller governing systems, identify and select propeller lubricants, balance propellers, repair propeller control system components and repair aluminum alloy propeller blades.

AMT 151 Engine Electrical Systems 2.0 Cr Hrs
Designed to provide the student with the basic information to install, check, service and repair engine electrical system components, electrical wiring, controls, switches, indicators and protective devices.

- AMT 159 Engine Fuel Systems 1.0 Cr Hr**
 Designed to enable the student to inspect, check, service, troubleshoot and repair engine fuel systems and components.
- AMT 200 Reciprocating Engines 11.0 Cr Hr**
 Designed to enable students to inspect and repair radial engines, overhaul reciprocating engines, inspect, check, service and repair opposed and radial engines and reciprocating engine installations, troubleshoot and remove reciprocating engines and perform powerplant conformity and airworthiness inspections.
- AMT 202 Engine Inspection 2.0 Cr Hrs**
 Designed to enable the student to perform powerplant conformity and air-worthiness inspections.
- AMT 203 Ignition and Starting Systems 3.0 Cr Hrs**
 Designed to enable the student to overhaul magneto and ignition harness, repair engine ignition and starting system components, inspect, check, service, troubleshoot and repair reciprocating and turbine engine ignition systems and pneumatic starting system components.
- AMT 206 Auxiliary Power Units 1.0 Cr Hr**
 Designed to enable students to inspect, check, service and troubleshoot turbine-driven auxiliary power units and provide basic information on principles, fundamentals and technical procedures involving auxiliary power units as they relate to the powerplant rating.
- AMT 207 Fuel Metering Systems 4.0 Cr Hrs**
 Designed to enable students to overhaul aircraft carburetors, repair engine fuel metering system components, inspect, check, service, troubleshoot repair and adjust turbine engine fuel metering systems and electronic engine fuel controls and reciprocating engine fuel metering systems.
- AMT 211 Engine Cooling Systems 1.0 cr hr**
 Designed to enable the student to repair engine cooling system components and inspect, check, troubleshoot, service and repair engine cooling systems.
- AMT 213 Engine Lubrication Systems 3.0 Cr Hrs**
 Enables students to learn to identify and select correct lubricants for aircraft use, repair engine lubrication system components and inspect, check, service, troubleshoot and repair engine lubrication systems.
- AMT 217 Induction and Airflow Systems 1.0 cr hr**
 Covers the basics of induction and airflow systems. Students learn to inspect, check, troubleshoot, service and repair engine ice and rain control systems, heat exchangers, superchargers and turbine engine airflow and temperature control systems as well as carburetor air intake and induction manifolds.
- AMT 219 Engine Exhaust and Reverser Systems 2.0 Cr Hrs**
 Enables students to learn to repair engine exhaust system components, inspect, check, troubleshoot, service and repair engine exhaust systems and engine thrust reverser systems and related components.
- AMT 223 Engine Fire Protection Systems 1.0 cr hr**
 Intended to provide basic information on principles, fundamentals and technical procedures in the engine fire protection system as it relates to the powerplant rating. Students learn to inspect, check, service, troubleshoot and repair engine fire detection and extinguishing systems.
- AMT 225 Engine Instrument Systems 1.0 cr hr**
 Designed to enable students to troubleshoot, service, inspect and repair electrical and mechanical fluid rate-of-flow indicating systems and engine temperature, pressure and RPM indicating systems.

AMT 227 Turbine Engines**9.0 Cr Hrs**

Designed to enable students to overhaul, install, troubleshoot and remove turbine engines. Students inspect, check, service and repair turbine engines and turbine engine installations and perform powerplant conformity and air-worthiness inspections.

AMT 231 Powerplant Review and Test**4.0 Cr Hrs**

Students apply for powerplant certification, complete the Powerplant Laser Grade written exam and complete the Powerplant Oral and Practical Exam.

Aviation Maintenance Technology – Instruction**AVI 3805 Private Pilot Ground School****4.0 Cr Hrs**

Designed to develop knowledge in all aspects of being a safe private pilot with special emphasis on passing the required Federal exam.

AVI 3809 Instrument Pilot Ground School**4.0 Cr Hrs**

Prepares students to take the computerized Instrument-Airplane Knowledge Test offered by the Federal Aviation Administration. It includes material in support of the ground instruction required by the Federal Aviation Regulations for the Instrument-Airplane Rating. Covers altitude instrument flying and advanced flying skills through instrument interpretation, cross check and aircraft control. Other areas covered include cross-country instrument navigation, communication with Air Traffic Control (ATC), advanced human factors (physiology), meteorology and federal regulations relating to instrument flight (IFR). The course helps students understand the instrument flight environment where commercial, military, and general aviation aircraft operate. Upon completion, the student will be able to:

- Take and pass the computerized FAA Instrument-Airplane Knowledge Test.
- Demonstrate the knowledge necessary to prepare for and execute a flight under the Instrument Flight Rules as described in the Federal Aviation Regulations.
- Understand responsibilities as a pilot when operating among other aircraft within the IFR/ATC environment.

While the instrument rating is encouraged as the next logical step in proficiency for the private pilot, this course does not provide actual in-aircraft flight instruction. Instrument flying lessons are available from many fine Fixed Base Operators (FBOs), Certified Instrument Flight Instructors (CIFIs) and flying clubs.