

Aviation Maintenance Technology (AMT) / AMT Curriculum – 2000 Hours

First Term:

[Block One]

AMT-111. Aircraft Fundamentals

Basic aircraft introduction. Explanation of the basic principles of primary and secondary flight controls of fixed wing and rotor wing aircraft. Explanation of the different types of aircraft structures. Explanation of the theory of life and the forces and stresses of flight.

AMT-112. Mathematics

A reintroduction of mathematics, geometric, trigonometric and algebraic functions for basic level requirements for aircraft technicians.

AMT-113. Physics

Discussion of basic physics as it related to the aviation technician.

AMT-114. Aircraft Drawings

Discussion of aircraft drawings, blueprints, graphs, charts and system schematics.

AMT-115. Weight and Balance

Weight and Balance Principles with practical applications of checks and data recording.

AMT-116. Materials and Processes

The identification and selection of materials that are to be used on the aircraft, precision measurements, and safety procedures.

[Block Two]

AMT-121. Forms and Regulations

Including Mechanic Privileges and Limitations, Maintenance Publications, and Maintenance Forms and Records. Discussion of regulations governing mechanics, maintenance publications as they related to the aviation technician, and practical application of forms and records used during aircraft maintenance.

AMT-122. Basic Electricity

From the basics of Ohm's law and Kirchoff's law to reading and interpreting law to reading and interpreting electrical schematics and circuits. Measuring of electrical functions and solving electrical problems.

Second Term:

[Block One]

AMT-211. Ground Operations and Service

Ground handling and servicing of aircrafts, methods of securing aircraft.

Aviation Maintenance Technology (AMT) / AMT Curriculum – 2000 Hours

Second Term: *[continued]*

[Block One]

AMT-212. Cleaning and Corrosion Control

Discussion of cleaning and corrosion materials as it related to the aircraft.

AMT-213. Fluid Lines and Fittings

Fabrication and installation of rigid and flexible fluid lines.

AMT-214. General Review

Review of all General subjects

AMT-215. General Schools Final Exam

Start of Powerplant Subject Area

AMT-216. Reciprocating Engines

Inspection, repair, maintenance practices, overhaul procedures of reciprocating opposed and radial engines.

[Block Two]

AMT-221. Powerplant Systems (Reciprocating)

Including Lubrication Systems, Engine Cooling Systems, Engine Exhaust Systems, Induction and Engine Airflow Systems, Engine Fuel Systems, and Engine Fuel Metering Systems. The inspection, service and troubleshooting of the above systems.

AMT-222. Troubleshooting Reciprocating Engines

Inspection, repair, maintenance practices and troubleshooting of propped and radial engines.

Third Term:

[Block One]

AMT-311. Ignition and Starting Systems

Removal, installation, troubleshooting and operation of ignition systems and starting systems.

AMT-312. Engine Electrical Systems

Inspect, check and repair of engine electrical systems.

Aviation Maintenance Technology (AMT) / AMT Curriculum – 2000 Hours

Third Term: *[continued]*

[Block One]

AMT-313. Engine Instrumental Systems
Inspect, check, remove and install engine instruments.

[Block Two]

AMT-321. Turbine Engines
Inspection and repair, identification of maintenance practices, troubleshooting of centrifugal and axial flow type turbine engines. Turbine engine operation practices.

AMT-322. Powerplant Systems (Turbine)
Fuel Systems, Engine Fuel Metering, Lubrication Systems, Induction and Airflow Systems, Engine Cooling Systems, Engine Exhaust and Reverser Systems, and Auxiliary Powerplants and Unducted Fans. The inspection, repair, servicing, and troubleshooting of the above systems.

Fourth Term:

[Block One]

AMT-411. Engine Fire Protection Systems
Inspect, check, service engine fire protection systems.

AMT-412. Propellers
Inspect, check, service and repair fixed pitch, constant speed propellers and control systems. Removal and installation of propellers.

AMT-413. Engine Inspections
Perform engine inspections on Powerplants.

AMT-414. Powerplant Review
Review of all Powerplant subjects

AMT-415. Powerplant School Final Exam

[Block Two]

AMT-421. Aircraft Electrical Systems
Inspect, check, service aircraft electrical systems.

Aviation Maintenance Technology (AMT) / AMT Curriculum – 2000 Hours

Fourth Term: *[continued]*

[Block Two]

AMT-422. Aircraft Instrumental Systems

Inspect, check, remove and install aircraft instruments.

AMT-423. Communication and Navigation Systems

Inspect, check, remove and install communication and navigation systems.

Fifth Term:

[Block One]

AMT-511. Sheet Metal and Non-Metallic Structures

Rivet and fastener installations as it relates to the aircraft. The layout of repairs to sheet metal and composite components of aircraft.

[Block Two]

AMT-521. Sheet Metal and Non-Metallic Structures (continued from Block One)

Rivet and fastener installations as it relates to the aircraft. The layout of repairs to sheet metal and composite components of aircraft.

AMT-522. Wood Structures

Discussion of repair of wood structures.

AMT-523. Aircraft Coverings

Discussion of repair of fabric covered aircraft.

AMT-524. Aircraft Finishes

The application and types of protective finishes found on aircraft.

AMT-525. Welding

Welding, soldering, brazing of steel and aluminum structures and components.

AMT-526. Airframe Fuel Systems

Inspection, servicing, troubleshooting, and repair procedures of airframe fuel systems.

AMT-527. Ice & Rain Systems

Inspection, servicing, and troubleshooting of aircraft ice and rain systems.

Aviation Maintenance Technology (AMT) / AMT Curriculum – 2000 Hours

Sixth Term:

[Block One]

AMT-611. Hydraulic and Pneumatic Systems

Inspect, check, remove and install aircraft instruments.

AMT-612. Aircraft Landing Gear Systems

Inspect, check, service and troubleshoot aircraft landing gear systems.

AMT-613. Position and Warning Systems

Inspect, check, service and troubleshoot aircraft position and warning systems.

AMT-614. Fire Protection Systems - Airframe

Inspect, check, service and troubleshoot airframe fire protection systems.

AMT-615. Cabin Atmospheric Control Systems

Inspect, check, service and troubleshoot heating, cooling, air conditioning and pressurization systems and cycle machines.

[Block Two]

AMT-615. Cabin Atmospheric Control Systems (continued from Block One)

Inspect, check, service and troubleshoot heating, cooling, air conditioning and pressurization systems and cycle machines. Inspect, check, troubleshoot, service and repair oxygen systems.

AMT-622. Assembly and Rigging

Inspect, check and troubleshoot aircraft flight control systems, including the proper methods of assembling the aircraft.

AMT-623. Airframe Inspections

Conformity checks, airworthiness inspections, and proper data entry in the aircraft maintenance records.

AMT-624. Airframe Review

Review of all airframe subjects.

AMT-625. Airframe School Final Exam

Avionics Technology (AVT) / AVT Curriculum – 1000 Hours

First Term:

AVT-1-100. Basic DC Circuits

Identify sources of electricity. Apply Ohm's law, analyze and troubleshoot circuits. Learn and apply theory of basic DC circuits.

AVT-1-200. AC Circuits

Define the characteristics of AC circuits. Verify the operation of AC circuits. Analyze and measure power in AC circuits.

AVT-1-300. Solid State Devices

Identify and define properties of semiconductor materials. Define operating properties and applications among different diodes, transistors, amplifiers and solid state devices.

AVT-1-400. Digital Circuits

Identify, set up, operate, analyze, and troubleshoot a multitude of Digital Circuits.

AVT-1-500. Fundamental Microprocessors

Identify central processing unit (CPU) building blocks and their uses. Analyze bus concepts, memory schemes, etc. Operate relevant devices.

AVT-1-600. Analog Circuits

Identify define, analyze, troubleshoot, and operate a myriad of tasks among analog circuits.

Second Term:

AVT-2-100. Aircraft Electrical Systems and Ground Safety

Define standard aircraft bus voltage. Analyze aircraft electrical systems and practice ground handling safety procedures.

AVT-2-200. Line Maintenance of Airborne Communication Systems

Theory of operation of air-to-ground communication systems. Troubleshoot, repair and return to service communication systems and related equipment.

AVT-2-300. Solid State Devices

Define DSB, SSB, and FM modulation. Draw, analyze and troubleshoot a multitude of circuits. Describe FCC rules to AM and PM transmitter maintenance and operation.

AVT-2-400. AM and FM Receivers

Draw, analyze and troubleshoot circuits. Make receiver sensitivity, selectivity, and bandwidth measurements. Align and troubleshoot AM and FM receivers.

AVT-2-500. AM and PM Transceivers

Analyze and troubleshoot transceiver control, metering, switching circuits, frequency synthesizers, and squelch circuits.

AVT-2-600. Electromagnetic Wave Emissions

Define the radio frequency spectrum. Definitions and techniques.

Avionics Technology (AVT) / AVT Curriculum – 1000 Hours

Third Term:

AVT-3-100. Avionics Radio Station Regulations

Define repair station related regulatory agencies and their purposes. Practice proper station operation procedures and prepare reports and documentation.

AVT-3-200. Technical Recording

Draw and interpret electronic schematics. Write reports and make oral presentations.

AVT-3-300. Wire and Component Techniques

Learn, practice, and demonstrate different wire and component techniques.

AVT-3-400. Wire and Soldering Techniques

Learn, practice, and demonstrate different wire and soldering techniques.

AVT-3-500. Installing Avionics Systems

Interconnect an IFR Avionics system. Install proper placement of antennas. Apply the formula for weight and balance computation.

AVT-3-600. Avionics Integration Programs

From incoming inspection to post installation support, learn the full process of managed avionics integration programs, including the FAA STC process.

AVT-3-700. Human Factors / Ergonomics

Visual displays, audio displays, controls, marking and labeling and workspace design.