National Aviation ACADEMY

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

Block One:

G101. Human Factors
A review of how human factors affect the avition maintnace technician's job.

G102. 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 lift, and the forces and stress of flight.

G103. Mathematics
Reintroduction of mathematics, geometric, trigonometric and algebraic functions for basic level requirements for aircraft technicians.

G104. Basic Physics
Discussion of basic physics as it relates to the aviation technician.

G105. Basic Electricity
From the basic 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.

G106. Aircraft Drawings
Discussion of aircraft drawings, blueprints, graphs, charts and system schematics.

G107. Mechanic Privileges and Limitations
FAR Part 65 – Subpart A General, Subpart – D Mechanics, Subpart E Repairman: requirements, responsibilities, behavior and penalties.

Block Two:

G201. Maintenance Publications
Demonstrate the ability to read, comprehend and apply information contained in manufacturer and FAA publications.

G202. Maintenance Forms and Records
Select, identify and maintain the forms and records necessary for the conformity with manufacturer's specifications and current Federal Aviation Regulations.

G203. Weight and Balance
Weight and Balance principles with practical applications of checks and data recording.

G204. Fluid Lines and Fittings
Fabrication and installation of rigid and flexible fluid lines.

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Block Two:

G205. Cleaning and Corrosion Control
Discussion of cleaning and corrosion materials as it relates to the aircraft.

G206. Ground Operation and Servicing
Ground handling and servicing of aircrafts, methods of servicing aircraft.

Block Three:

G301. Materials and Process
The identification and selection of materials that are to be used on the aircraft, precision measurements and safety procedures.

GF General Subjects Review and Final Exam

Start of Airframe Subject Area

A301. Hydraulic and Pneumatic Power Systems
Inspect, Check, service and troubleshooting of hydraulic and pneumatic systems.

G302. Aircraft Landing Gear Systems
Inspect, check, service and troubleshoot aircraft landing gear systems.

Block Four:

A401. Aircraft Electrical Systems
Inspect, check, service aircraft electrical systems.

A402. Communication and Navigation Systems
Inspect, check, remove and install communication and navigation systems.

Block Five:

A501. Aircraft Instrument Systems
Install, inspect, troubleshoot and repair aircraft instrument systems, electronic and mechanical flight instrument systems.

A502. Position and Warning Systems
Inspect, check, service and troubleshoot aircraft position and warning systems.

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Block Five:

A503. Ice Rain Control Systems
Inspection, servicing and troubleshooting of aircraft ice and rain systems.

A504. Welding
Welding, soldering, brazing of steel and aluminum structures and components.

A505. Sheet Metal Structures
Rivet and fastener installations as it relates to the aircraft. The layout of repairs to Sheet metal and composite components of the aircraft.

Block Six:

A601. Non-Metalic Structures
Types of bonded, honeycomb, plastic and laminated structures. Composites of primary and secondary structures.

A602. Wood Structures
Construction, inspection, maintenance and repair of wood aircraft structures.

A603. Aircraft Covering
Discussion of repair of fabric covered aircraft.

A604. Aircraft Finishes
The application and types of protective finishes found on aircraft.

A605. Cabin Atmosphere Control Systems
Inspect, check, service and troubleshooting of heating, cooling, air conditioning and Pressuring systems and air cycle machines. Inspect, check, troubleshoot, service and repair oxygen systems.

A606. Airframe Fire Protection Systems
Inspect, check, service and troubleshooting of airframe fire protection systems.

Block Seven:

A701. Aircraft Fuel Systems
Inspecting, servicing and troubleshooting and repair procedures of airframe fuel systems.

A702. Assembly and Rigging
Inspect, check and troubleshoot aircraft flight control systems, including the proper methods of assembling the aircraft.

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Block Seven:

A703. Airframe Inspection
Conformity checks, airworthiness inspections and proper data entry in the aircraft maintenance records.

AF. Airframe Review and Final Exam

Start of Powerplant Subject Area

Block Eight:

P801. Non-Metalic Structures
Types of bonded, honeycomb, plastic and laminated structures. Composites of primary and secondary structures.

P802. Lubrication Systems
Remove, clean, inspect lubricate and reintall oil lines. Inspect oil instrument indicators.

P803. Engine Cooling Systems
Inspect, check and service engine cooling systems.

P804. Induction and Engine Air Flow System
Inspect, remove, adjust, replace and repair engine air flow systems.

Block Nine:

P901. Engine Fuel Systems
Knowledge of fuel system components.

P902. Fuel Metering Systems
Inspection, overhaul and theory and principles of fuel metering devices.

P903. Engine Electrical Systems
Inspect, check and repair of engine electrical systems.

Block Ten:

P1001. Ignition and Starting Systems
Removal, installation, troubleshooting and operation of ignition and starting systems.

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

Block Ten: *[continued]*

P1002. Engine Instrument Systems
Inspect, check, remove and install engine instruments.

P1003. Engine Fire Protection Systems
Inspect, check and service engine fire protection systems.

Block Eleven:

P1101. Turbine Engines
Inspect and repair, identification of maintenance practices, troubleshooting of centrifugal and axial flow type turbine engines. Turbine engine operation practices.

P1102. Unducted Fans
Theory, construction, troubleshooting of unducted fan engines and related components.

P1103. Engine Exhaust and Reverser Systems
Theory, construction, troubleshooting and repair of turbine engine exhausts and thrust reverser systems.

P1104. Auxiliary Power Units
Maintenance, inspection, servicing and troubleshooting power systems, air conditioning and engine starting.

Block Twelve:

P1201. Propellers
Inspect, check, service and repair fixed pitch, constant speed propellers and control systems. Removal and installation of propellers.

P1202. Engine Inspection
Perform engine inspections on powerplants.

PF Powerplant Review and Final Exam