



**Aviation Maintenance
Training School**
www.amtschool.com

**A&P Oral and Practical
Exam Guaranteed Preparation Course**

(Revised with 10-01-2015 FAA Exam Changes)

1-Week (7 Days)

Oral and Practical Exam Preparation

One Price with No Hidden Fees

(see web site for pricing)

(Includes a Set of 3 ASA Q&A Books and AMT Study Material)

Guarantee: AMT Students registered for the 1-Week Oral & Practical A&P Exam Preparation Course will receive training for two (2) years upon failing any FAA Oral & Practical A&P Exam until they successfully pass the FAA Oral & Practical A&P Exam.

Course Schedule 1 Week

(Course begins on the first Monday of every month)

- Monday through Friday 5:00 P.M. until 10:00 P.M.
- Saturday 9:00 A.M. until 6:00 P.M.
- Sunday 9:00 A.M. until 6:00 P.M.

EDUCATION IS THE KEY TO SUCCESS

Aviation Maintenance Training School (AMT School)

www.amtmiami.com

www.amtschool.com

Miami International Airport and Kendall Tamiami Airport

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Course Agenda
General / Section I - AMG

Welcome, Introduction and Overview	Monday
A. Basic Electricity DC & AC circuits. OHM's law. ID symbols. Measure voltage, current, resistance and continuity in a circuit. Multimeter use. Troubleshooting, opens and shorts circuits. Batteries lead acid & nicked. Resistors.	Monday
B. Drawing Symbols, sketches, schematics blueprints, graphs and charts.	Monday
C. Weight & Balance Weight & balance problems, ballast, tare, datum, center of gravity. Weigh an aircraft.	Monday
D. Fluid Lines & Fittings Construct a rigid line, and a flexible line. Identify fittings. ID defects In lines. Determine routing. ID fittings.	Monday
E. Materials & Processes Inspect welds, torque, safety wire, DNT, ID hardware, heat treatments, precision measurements, micrometers and calipers, dye penetrant inspection, turnbuckle safety wire, heat treatment.	Tuesday
F. Ground Operations Start up procedures both recip and turbine, identify fuel select fuels, markings, hand signals, liquid lock clearing, fuel/water contamination.	Tuesday
G. Cleaning & Corrosion Identify & remove corrosion, cleaning materials, plastic protection.	Tuesday
H. Mathematics Review of various mathematics problems decimals, percentages, volume, square root, area, volume, convert fraction to decimals, ratios.	Tuesday



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Course Agenda
General / Section I

- | | |
|---|----------------|
| I. Maintenance Forms & Records | Tuesday |
| Complete aircraft records, logbooks, Form 337, inspection reports, 100 hour & annual inspection entry, AD's, MEL, IPC, discrepancy list following a 100 hour inspection. | |
| J. Basic Physics | Tuesday |
| Simple machines, aerodynamics, flight theory, temperature conversion, force, area, pressure, lever advantages, incline planes, venturi pressure and velocity. | |
| K. Maintenance Publications | Tuesday |
| Maintenance Manual, IPC, AD's, FAR's TCDS, AC, locate CG range, ATA codes for an item, aircraft gross weight and empty weight. | |
| L. Aviation Mechanic's | Tuesday |
| Privileges and Limitations understanding of mechanic privileges and limitations per the FAA, FAR's, major repairs/alterations and minor repairs/alterations, address change, preventive maintenance, maintenance unction limits of an A&P mechanic. | |



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Course Agenda
Airframe Section II – Airframe Structures

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|--|-----------------------------------|
| A. Wood Structures
Knowledge of types and inspection of wood structures, glue selection
enlarged hole repairs, wood defects. | Wednesday |
| B. Aircraft Covering
Locate instructions for the inspection, testing and repair of coverings,
doped and lapped seams. | Wednesday |
| C. Aircraft Finishes
Knowledge of finishes, identification, finishing materials, “N” number
Requirements, ID paint, paint defect identification. | Wednesday |
| D. Sheetmetal
Fasteners, layout, composites, acrylic windows. Sheetmetal patch
layout, installation and removal. Rivet patterns given pitch, gauge
and edge distance. Metallic ring test on a bonded structure.
Inspect windshield. | Wednesday |
| E. Welding
Soldering, welding methods and steps to include oxy-acetylene weld.
Welding repair procedure for tubular structure. | Wednesday
Sunday |
| F. Assembly & Rigging
Balancing, rigging, cable tension rigging tools. Leveling methods,
Inspection of flight controls and swaged cables. Locate jacking
procedures and jacking points. | Wednesday
Sunday |
| G. Airframe Inspection
Inspect aircraft and make thorough and correct logbook entries.
Applicability of an AD, 100 hour entries, conformity checks,
100 checklist construction. | Wednesday
Sunday |



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Course Agenda
Airframe Section III / Airframe Systems

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|--|----------------------------|
| K. Aircraft Landing Gear Systems
Landing gears, wheel and brake assemblies, tire inspection, brake lining and brake disk inspection, oleo struts, shimmy damper. | Thursday |
| L. Hydraulic & Pneumatic Systems
Fluids, hydraulic seals, compatibility of fluids and seals, reservoirs, selector valves, pressure regulators, filters, accumulators, pumps, pressure relief valves, pneumatic brakes. | Thursday |
| M. Cabin Atmosphere
Air conditioning both vapor cycle and air cycle, heaters, oxygen, pressurization systems, oxygen systems. | Thursday |
| N. Aircraft Instruments
Vacuum systems and gyro systems, pitot static, compass, Instrument markings, fuel instruments, pitot static heat, manifold pressure, magnetic compass, turn & back indicator vacuum pumps. | Thursday |
| O. Communication and Navigation
Transponders, ELTs, autopilot system, VHF, VOR, ILS, DME, Antennas, coaxial cables, static discharge wicks, transponders. | Thursday |
| P. Aircraft Fuel Systems
Fuel system types, metal and bladder fuel tanks, fuel valves, strainers, fuel pressure warning systems, fuel selector & valves, quantity indicators. | Thursday |
| Q. Electrical Systems
Troubleshooting, connectors, switches, circuit breakers, AC, DC Components generators, CSD's, IDG' aircraft lighting. | Thursday
Sunday |
| R. Position and Warning
Configuration warning systems, antiskid, components, landing gear & flap position, brake control inspection and locations | Friday
Sunday |
| S. Ice and Rain Protection
Anti-ice and de-ice, inspection rubber boots, Prist. Pitot tube heat electrically operated windshield, pneumatic rain removal & repellent. | Friday
Sunday |
| T. Fire Protection
Smoke and carbon monoxide, fire detention, fire extinguishing. | Friday
Sunday |



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Course Agenda
Powerplant Section IV / Powerplant Theory

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|--|--------------------------|
| A. Reciprocating Engines
Recip theory, operation, components, materials, inspection,
Cylinders, crankshafts, pins, rings. ID parts. Seals. Valve clearance,
Inspect engine mounts. Demonstrate engine starting procedures.
Locate top dead center. Compression check. | Friday
Sunday |
| B. Turbine Engines
Turbine theory, operation, components, materials, types.
ID airflow. Combustion liners. Rotor blades. Inle guide vanes and
Compressor vane inspection. Trimming procedures. | Friday |
| C. Engine Inspection
Inspection of recip and turbine engines, 100 Hr, Annuals,
Phaze checks, FAR's and AD's. Over temperature inspections. | Friday
Sunday |



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Course Agenda
Powerplant Section V / Powerplant Systems

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|---|----------------------------|
| H. Engine Instrument Systems
Engine temperature, pressure, RPM, rate of flow instruments, tachometers, thermocouples, EGT, EPR, CHT, manifold pressure gages. | Saturday |
| I. Engine Fire Protection
Types of fire protection and extinguishing systems, operation, insp. Carbon dioxide systems. Extinguishing blow out plugs, container pressures. Identify components in the systems. | Saturday |
| J. Engine Electrical
Engine electrical wiring, controls, switches, and protective devices. wire bundles. bonding jumpers, generators, CSD's and IDG's. | Saturday
Sunday |
| K. Lubrication Systems
Identify lubricants and systems, inspect, check and service systems. | Saturday |
| L. Ignition and Starting Systems
Magnetos, check engine timing, magneto switch, magneto points spark plugs, inspect a turbine engine system, starter generator. | Saturday
Sunday |
| M. Engine Fuel Metering Systems
Identify and inspect metering systems, carburetors, injection systems, fuel controls. ID float carburetor parts. | Saturday
Sunday |
| N. Engine Fuel System
Inspect a fuel selector valve, fuel filter, fuel valves, boost pumps. | Saturday |
| O. Induction Systems
Inspect and identify engine ice control system and induction manifold systems, preheat systems, turbochargers. | Saturday |
| P. Engine Cooling Systems
Inspect and identify cooling system components, cylinder head Baffles, cowl flaps, cooling fins, augmentor. | Saturday |
| Q. Exhaust Systems
Inspect and identify an exhaust system, baffles and diffusers, heat exchangers, exhaust system leak checks. | Saturday |



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Course Agenda
Powerplant Section V / Powerplant Systems

R. Propellers

Propeller operation. Types of propellers. Inspect a propeller and propeller governor. Perform a minor repair and on a propeller. Use TCDS & determine minor propeller alterations that are acceptable. Propeller tracking. Pitch angle. Synchronization and ice control.

Saturday
Sunday

S. Turbine Powered APU

Identify and understand an APU.

Saturday



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Course Agenda
Sunday Hangar Projects

Sunday / Aircraft and Hangar projects @ Kendall Tamiami Airport

Sunday

Examples:

- Piston engines, Magnetos timing / internal and engine timing, Propellers, Governors, Carburetor, Sheetmetal, Electrical troubleshooting, Aircraft inspection, Aircraft component identification, Engine component identification,

Students spend approximately 65% of the time participating in classroom / CBT activities and 35% in lab/shop activities. Students are issued a certificate upon successful completion of the course.



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Course Agenda
Powerplant Section V / Powerplant Systems

A&P EXAM GUARANTEED PREPARATION COURSE / 1 WEEK

The FAA requires that all practical tests be conducted in accordance with the appropriate Aviation Mechanic Practical Test Standards and the policies and procedures set forth in the current FAA Order.

Proficiency levels are defined as:

Level I

Knowledge of general principles, but no practical application. No development of manipulative skills. Instruction by lecture, demonstration, and discussion.

Level II

Knowledge of general principles and limited practical application. Development of sufficient manipulative skills to perform basic operations. Instruction by lecture, demonstration, discussion, and limited practical application.

Level III

Knowledge of general principles and performance to a high degree of practical application. Development of sufficient manipulative skills to accomplish simulated return to service. Instruction by lecture, demonstration, discussion, and a high degree of practical application.

The following terms are used in the objectives and defined as:

"Inspect"	Means to examine by sight and touch.
"Check"	Means to verify proper operation.
"Troubleshoot"	Means to analyze and identify malfunctions.
"Service"	Means to perform functions that assure continued operation.
"Repair"	Means to correct a defective condition or repair of an airframe and/or powerplant system, including component replacement and adjustment, but not component repair.
"Overhaul"	Means to disassemble, inspect, repair as necessary, and check.