AIRFRAME AND POWERPLANT MECHANIC (APMT)

Courses

APMT 101 Introduction to Airframe and Powerplant Mechanic 4 Credits
Introduction to basic subjects, such as mathematics, physics, and aircraft drawings. Provides a foundation for further studies in the Airframe and Powerplant Mechanic program.
Terms Typically Offered: Fall.

APMT 102 Regulations and Computations 4 Credits
Aircraft weight and balance theory and the performance of weight and balance calculations. Covers the requirements for ground handling, servicing, taxiing, and towing aircraft. Focuses on the Federal Aviation Administration and manufacturer's publications pertaining to aircraft operation and maintenance.
Terms Typically Offered: Fall.

APMT 103 Aircraft Materials I 4 Credits
Aircraft structures, materials, and hardware, use of precision measuring tools, and methods of non-destructive testing. Emphasizes causes of corrosion and methods to prevent and treat corrosion. Covers construction of rigid and flexible aircraft fluid lines. Focuses on application, maintenance, and repair of aircraft structural wood and fabric covering materials, and the application and maintenance of protective finishes.
Terms Typically Offered: Fall.

APMT 104 Aircraft Systems for Airframe & Powerplant I 4 Credits
Aircraft flight instrument theory and operation and the inspection, maintenance, and installation requirements for these systems. Focuses on the operation of aircraft fuel systems and the procedures utilized in inspecting, troubleshooting, and maintaining these systems.
Terms Typically Offered: Fall.

APMT 111 Electrical Systems in Aircraft 4 Credits
Introduction to basic electric theory as applied to aircraft systems. Focuses on the operation, troubleshooting, and repair of aircraft electrical systems, with emphasis on alternators, motors, lighting systems, wiring, and circuit protection devices. Study of currents and circuits, with emphasis on solid state and optical electric systems. Includes engine instruments that indicate pressure, temperature, position, and speed.
Terms Typically Offered: Spring.

APMT 113 Aircraft Materials II 4 Credits
Procedures, appropriate hardware selection, and principles of making repairs when working with aluminum alloys. Introduces methods of working with aircraft steel, including soldering and welding. Focuses on materials and principles of aircraft control rigging and the replacement of structural aircraft components. Performance of 100-hour and special inspections. Introduces the maintenance and repair of composite materials.
Terms Typically Offered: Spring.

APMT 114 Aircraft Systems for Airframe & Powerplant II 4 Credits
Hydraulic principles, hydraulic fluids, system components, and operation of hydraulic and pneumatic systems. Study of airframe systems, including communication, navigation, fire warning and extinguishing, and cabin atmospheric control. Focuses on operation, troubleshooting, and repair of aircraft landing gear systems.
Terms Typically Offered: Spring.

APMT 118 Systems Troubleshooting 1 Credit
Introduction to principles of troubleshooting systems and methods of analyzing problems. Helps students to better understand aircraft systems and extends these principles to troubleshooting of other complex aircraft systems.
Terms Typically Offered: Spring.

APMT 205 Reciprocating Engines I 4 Credits
Theory, operating principles, and construction features of aircraft reciprocating engines. Reviews aircraft fuel delivery system components and operating principles. Studies carburetor and fuel injection system controls that meter fuel to the engine.
Terms Typically Offered: Fall.

APMT 206 Reciprocating Engines II 4 Credits
Introduction to aircraft piston engine ignition systems, including classifications, components, theory, starting systems, maintenance, servicing, and repair. Designed for the second-year student working toward the FAA Powerplant rating. Focuses on engine maintenance and overhaul procedures and includes an actual engine overhaul. Introduces the study of aircraft propellers, including fixed pitch, constant speed, feathering, reversing, and de-icing systems.
Terms Typically Offered: Fall.

APMT 215 Turbine Engines I 4 Credits
Study of turbine engine fuel delivery, fuel control operation, fuel control design, and maintenance procedures. Covers turbo-prop system components, operations, and maintenance, including operation of a feathering and reversing turbo-prop.
Terms Typically Offered: Fall.

APMT 216 Turbine Engines II 4 Credits
Study of turbine engine starting, ignition, instrument, and fire protection systems, and the maintenance of these systems. Focuses on maintenance and inspection practices pertaining to turbine aircraft engines.
Terms Typically Offered: Fall.

APMT 218 Engine Troubleshooting 1 Credit
Introduction to principles of troubleshooting engine issues and methods of analyzing problems. Focuses on better understanding of aircraft engines and extends the principles to troubleshooting of related complex aircraft systems.
Terms Typically Offered: Fall.