

Aviation

AV170 General Maintenance Practices

Cr-5

This course introduces general aviation maintenance practices, including topics in Mathematics, blueprints/charts, Physics, maintenance forms and publications, human factors, ethics, and aircraft weight and balance. This course also introduces students to airframe material testing procedures. Additional topics include precision measurements, identification and selection of aircraft materials, basic heat-treating processes, penetrant, chemical etching and magnetic particle inspections, welding inspection, and the identification and selection of non-destructive testing methods.

AV171 Materials and Processes

Cr-2

This course introduces methods and procedures needed to maintain cleaning and corrosion controls, fluid lines, and fittings. Aircraft general servicing and ground operations are also included.

AV172 Basic Electricity

Cr-2

This course introduces the basic electricity terms and calculations, including voltage, resistance, capacitance, inductance, and power. Reading and interpreting electrical circuit diagrams and the inspection and servicing of batteries are also introduced.

AV173 Airframe Systems 1

Cr-5

This course introduces methods and procedures needed to maintain, service and repair airframe electrical and electronic systems.

AV174 Airframe Systems 2

Cr-3

This course introduces methods and procedures needed to maintain Ice and Rain control, Fire Protection, and aircraft associated utility systems, including hydraulic and pneumatic power systems. Other topics covered are methods and procedures needed to maintain aircraft landing gear systems, cabin atmosphere control systems, and oxygen systems.

AV175 Aircraft Structures 1

Cr-3

This course introduces methods and procedures needed to inspect and repair wood structures, aircraft coverings, and exterior finishes as defined by the Federal Aviation Administration (FAA) publication AC43.13-1B (Acceptable Methods, Techniques and Practices). Topics include identifying, inspection, and repair of wood structures; selection, inspection, testing, and repair of fabric and fiberglass coverings; application of trim and letters; and the identification, selection, application, and inspection of aircraft finishing materials. Proper rigging of a fixed and rotary wing aircraft, checking alignment, of structures, assembling aircraft, balancing and rigging movable surfaces, and properly raising and lowering an airplane are also introduced.

AV176 Aircraft Structures 2

Cr-3.5

This course introduces the materials, equipment, tools and procedures needed for the inspection and repairs to aircraft sheet metal structures as defined by the Federal Aviation Administration (FAA) publication AC43.13-1B (Acceptable Methods, Techniques and Practices). Topics also include the inspection and repair of bonded, plastic, honeycomb, and laminated structures, and the inspection and repair of windows doors, and interior furnishings.

AV177 Airframe Inspection & Welding

Cr-2

This course introduces methods and procedures needed to understand basic principles of various types of aircraft welding. Students learn inspection, troubleshooting and repair, and operation of aircraft fuel systems, as well as perform airframe conformity and airworthiness inspections.

AV178 Introduction to Powerplant

Cr-2.5

This course introduces methods and procedures needed to maintain Engine Fire Protection and Engine Systems. This course also introduces auxiliary power units (APU), unducted fan engines, and reciprocating engines.

AV179 Reciprocating Engines

Cr-2

The course introduces the basic skills necessary to overhaul a reciprocating engine.

AV180 Turbine Engines & Powerplant Systems

Cr-4

This course introduces methods and procedures necessary to inspect, service, repair, install, and troubleshoot gas turbine engines and associated engine systems.

AV181 Powerplant Systems

Cr-6

This course introduces methods and procedures necessary to inspect, service, repair, install, and troubleshoot engine systems and associated components, and to control for engine fuel, induction, ignition and starting systems, and associated instruments. Other topics include methods and procedures necessary to inspect, service, troubleshoot, and repair exhaust systems, engine reverser systems, and propeller systems.

AV182 Powerplant Inspection & Electrical Systems

Cr-2

This course introduces installation and repair of engine electrical systems. Methods and procedures required for airframe and engine airworthiness inspections are introduced.