Aircraft Maintenance Tech (AIRM)

Courses

**AIRM 1100 Introduction to Aircraft Maintenance and Aviation Aerodynamics: 2 semester hours.**
Familiarization of aircraft structures and forces that act upon an airframe in flight.
PREREQ: Minimum score of 14 on ALEKS or equivalent. F

**AIRM 1101 Mathematics: 3 semester hours.**
Math topics relevant to technical drawings, aircraft weight and balance, area calculations, volumes, ratios/proportions, and calculating physical forces on an aircraft.
PREREQ: Minimum score of 14 on ALEKS or equivalent. F

**AIRM 1104 Materials and Processes: 4 semester hours.**
Includes the use of non-destructive testing, selection of hardware and materials for repair, repair fittings/fluid lines, cleaning and corrosion testing, testing/inspection of repairs, and shop/tool safety.
PREREQ: Minimum score of 14 on ALEKS or equivalent. F

**AIRM 1107 Forms and Regulations: 2 semester hours.**
Addresses the specific learning needs of individuals for the enhancement of knowledge and skills within the program area under the guidance of an instructor.
May be repeated. Graded S/U, or may be letter-graded. PREREQ: Permission of the instructor. D

**AIRM 1108 Basic Electricity: 3 semester hours.**
Provides knowledge of electrical voltage, current, resistance, continuity, and includes practical application of theory to repair of aircraft.
PREREQ: Minimum score of 14 on ALEKS or equivalent. F

**AIRM 1109 Fluid Systems: 2 semester hours.**
Identification, uses, and safe handling of all fluids related to aircraft maintenance through practical application. Emphasis will be given to hydraulics, fuels, plumbing, and instrumentation associated with fluids.
S

**AIRM 1110 Landing Gear Systems: 2 semester hours.**
Operational theory, services, component inspection/replacement, and comprehensive maintenance of landing gear.
S

**AIRM 1111 Auxiliary Systems: 3 semester hours.**
Cabin pressure/atmospheric controls, ice/rain/snow/fire protection systems, inspection, troubleshooting, and service of systems.
Su

**AIRM 1112 Aircraft Electrical Systems: 3 semester hours.**
Installation, trouble-shooting, and servicing of aircraft electrical systems to include: wiring, controls, switches, speed indicators, alternators, generators, and starters.
Su

**AIRM 1113 Rigging and Inspection: 2 semester hours.**
Proper rigging for fixed and rotary winged aircraft followed by inspection in accordance with FAA conformity and airworthiness standards.
PREREQ: Minimum score of 14 on ALEKS or equivalent. F

**AIRM 1114 Metallic Structures: 4 semester hours.**
Combination of welding skill development in SMAW, GMAW, and GTAW processes combined with joining structural airframe materials using multiple types of rivets and fasteners.
S

**AIRM 1115 Aircraft Instruments, Communications, and Navigation: 2 semester hours.**
Service and inspection of electronic flight control instruments, communications systems, and navigation components.
S

**AIRM 1116 Non-Metallic Structures: 3 semester hours.**
All non-metallic components of the airframe are covered from wood to composites, fabric coverings, and painting. Emphasis will be given to inspection of repaired components and bonded structures to include: fiberglass, plastic, composite, and honeycomb structures.
F

**AIRM 2221 Reciprocating Engine Theory and Practice: 3 semester hours.**
Engine design, engine purpose, functions, diagnostics, maintenance, services, and troubleshooting.
S

**AIRM 2222 Advanced Reciprocating Engine Inspection and Maintenance: 2 semester hours.**
Repair/overhaul using approved FAA procedures used to check engines for conformity to manufacturer's specifications, testing, and installation.
F

**AIRM 2223 Basic Turbine Engines: 3 semester hours.**
Design, construction, operating principles, and materials used in turbine engines. Inspection, maintenance, and troubleshooting will be covered.
F

**AIRM 2224 Advanced Turbine Engines: 2 semester hours.**
Testing of repaired engines to determine compliance with manufacturer's specifications, airworthiness, and phased inspections.
F

**AIRM 2225 Powerplant Lubrication Systems: 2 semester hours.**
Components of engine lubrication, system diagnosis, troubleshooting, and repair of lubrication systems. Concepts of pressure maintenance, lubrication specifications, and overall preventative maintenance will be included.
F

**AIRM 2227 Engine Fuel Metering Systems: 2 semester hours.**
Design, purpose, and function of carburetors, fuel injection, and hydro-mechanical fuel systems for reciprocating and jet engines.
S

**AIRM 2228 Engine Ignition Systems: 2 semester hours.**
Design, operation, and overhaul of magneto ignition and capacitor discharge ignition, and cooling systems.
S

**AIRM 2229 Engine Electrical and Instrument Systems: 2 semester hours.**
Design, operation, and overhaul of the various electrical components and system indicators used on aircraft engines.
S

**AIRM 2230 Propeller Systems: 2 semester hours.**
Propeller design, purpose, and components will be covered to include controllable, reversing, and feathering propellers. Service, maintenance, and installation will be covered.
F

**AIRM 2296 Independent Study: 1-8 semester hours.**
Addresses specific learning needs of individuals for the enhancement of knowledge and skills within the program area under the guidance of an instructor.
May be repeated. Graded S/U, or may be letter-graded. PREREQ: Permission of the instructor. D

**AIRM 2298 Special Topics: 1-8 semester hours.**
Addresses the specific needs of industry, enabling students to upgrade technical skills that are not included in the current program curriculum.
PREREQ: Permission of the instructor. D