AFPM F111  General Airframe and Powerplant  
3 Credits  
Offered As Demand Warrants  
Shop practices, basic math, applied physics, FAA regulations, basic electricity, aircraft weight and balance, ground operations and servicing, cleaning and corrosion control, and materials and process. Preparation for the FAA Mechanics Airframe Structures Written, Oral and Practical Exam.  
Prerequisites: Experience requirements of FAR 65.77 or permission of instructor.  
Lecture + Lab + Other: 3 + 0 + 0

AFPM F145  Basic Mathematics  
1 Credit  
Offered As Demand Warrants  
Review of applied and technical mathematics related to the construction and engines of aircrafts. Common, decimal, fractions and mixed numbers; extracting square roots and raising numbers to a given power; solving ratios, proportions and percentage problems; fundamental algebraic operations.  
Prerequisites: Admission to A & P program; or permission of instructor.  
Lecture + Lab + Other: 1 + 0 + 0

AFPM F146  Basic Electricity  
2 Credits  
Offered As Demand Warrants  
Electrical theory and concepts for the aviation mechanic. Ohm’s law, electrical circuits, diagrams, batteries and a variety of electrical components.  
Prerequisites: Admission to A & P Program; or permission of instructor.  
Lecture + Lab + Other: 2 + 0 + 0

AFPM F147  Physics for Mechanics  
0.5 Credit  
Offered As Demand Warrants  
Applications of mechanics; levers, sound, fluid and heat dynamics. Basic aircraft structures and aerodynamics. (Course does not fulfill natural science requirements for any degree.)  
Prerequisites: Admission to A & P Program; or permission of instructor.  
Lecture + Lab + Other: 0.5 + 0 + 0

AFPM F148  Aircraft Drawing  
1 Credit  
Offered As Demand Warrants  
Basic drafting. Drawings, symbols and schematic diagrams, sketches of repairs and alterations, blueprint information, graphs and charts.  
Prerequisites: Admission to A & P Program; or permission of instructor.  
Lecture + Lab + Other: 1 + 0 + 0

AFPM F149  Fluid Lines and Fittings  
0.5 Credit  
Offered As Demand Warrants  
Rigid and flexible fluid lines and fittings, fabrication and installation.  
Prerequisites: Admission to A & P Program; or permission of instructor.  
Lecture + Lab + Other: 0.5 + 0 + 0

AFPM F150  Materials and Processes  
2 Credits  
Offered As Demand Warrants  
Basic shop practices, including selection, identification and installation of aircraft hardware and materials, precision measuring tools and operations, basic heat treating processes, forms of nondestructive inspections.  
Prerequisites: Admission to A & P Program; or permission of instructor.  
Lecture + Lab + Other: 2 + 0 + 0

AFPM F151  Cleaning and Corrosion Control  
1 Credit  
Offered As Demand Warrants  
Basic aircraft cleaning materials, methods and corrosion control.  
Prerequisites: Admission to A & P Program; or permission of instructor.  
Lecture + Lab + Other: 1 + 0 + 0

AFPM F152  Federal Aviation Regulations  
1 Credit  
Offered As Demand Warrants  
Federal Aviation Regulations for maintenance of aircraft. Maintenance forms and records, publications, privileges and limitations of aircraft mechanics.  
Prerequisites: Admission to A & P Program; or permission of instructor.  
Lecture + Lab + Other: 1 + 0 + 0

AFPM F153  Weight and Balance  
1 Credit  
Offered As Demand Warrants  
Weighing procedures, weight, arms, moments, center of gravity computations and placarding. Aircraft loading, required forms, weighing.  
Prerequisites: Admission to A & P Program; or permission of instructor.  
Lecture + Lab + Other: 1 + 0 + 0

AFPM F154  Ground Operations and Servicing  
0.5 Credit  
Offered As Demand Warrants  
Starting, moving, servicing, securing and fueling aircraft.  
Prerequisites: Admission to A & P Program; or permission of instructor.  
Lecture + Lab + Other: 0.5 + 0 + 0

AFPM F205  Airframe Structures  
3 Credits  
Offered As Demand Warrants  
Prerequisites: Experience requirements of FAR 65.77; or permission of instructor.  
Lecture + Lab + Other: 3 + 0 + 0

AFPM F206  Airframe System and Components  
2 Credits  
Offered As Demand Warrants  
Aircraft electrical, hydraulic and pneumatic systems. Landing gear, instruments, fuel, communication and navigation, cabin atmosphere control, and fire protection systems. Inspection, checking, troubleshooting, repair and servicing. Preparation for the FAA Mechanics Airframe Structures written, oral and practical exam.  
Prerequisites: Experience requirements of FAR 65.77; or permission of instructor.  
Lecture + Lab + Other: 2 + 0 + 0
AFPM F215 MOS Powerplant Theory/Maintenance  
2 Credits 
Offered As Demand Warrants 
Prerequisites: Experience requirements of FAR 65.77; or permission of instructor. 
Lecture + Lab + Other: 2 + 0 + 0 

AFPM F216 MOS Powerplant System/Components  
3 Credits 
Offered As Demand Warrants 
Prerequisites: Experience requirements of FAR 65.77; or permission of instructor. 
Lecture + Lab + Other: 3 + 0 + 0 

AFPM F230 Aircraft Electrical Systems  
2.5 Credits 
Offered As Demand Warrants 
Wiring, control, indication and protection devices for AC and DC systems. Inspection, troubleshooting service and repair of these systems. 
Prerequisites: Admission to A & P Program; or permission of instructor. 
Lecture + Lab + Other: 2.5 + 0 + 0 

AFPM F231 Powerplant Electrical Systems  
1.5 Credits 
Offered As Demand Warrants 
Installation, inspection, testing, servicing engine electrical system wiring, controls, indicators and protective devices. Repair and service of electrical generating systems. 
Prerequisites: Admission to A&P program; or permission of instructor. 
Lecture + Lab + Other: 1.5 + 0 + 0 

AFPM F235 Aircraft Reciprocating Engines  
4.5 Credits 
Offered As Demand Warrants 
History and development of the aircraft reciprocating engine. Repair, overhaul and inspection of various types of engines. Operation and troubleshooting of engines. 
Prerequisites: Admission to A & P Program; or permission of instructor. 
Lecture + Lab + Other: 4.5 + 0 + 0 

AFPM F240 Turbine Engines  
2 Credits 
Offered As Demand Warrants 
Prerequisites: Admission to A & P Program; or permission of instructor. 
Lecture + Lab + Other: 2 + 0 + 0 

AFPM F244 Lubricating Systems  
1.5 Credits 
Offered As Demand Warrants 
Identification and selection of lubricants for aircraft powerplants. Inspection, service, troubleshooting and repair of the lubrication systems and components. 
Prerequisites: Admission to A & P Program; or permission of instructor. 
Lecture + Lab + Other: 1.5 + 0 + 0 

AFPM F245 Ignition Systems  
2 Credits 
Offered As Demand Warrants 
Overhaul, inspection and troubleshooting of reciprocating and gas turbine ignition systems. Repair and bench testing of components. 
Prerequisites: Admission to A & P Program; or permission of instructor. 
Lecture + Lab + Other: 2 + 0 + 0 

AFPM F246 Fuel Metering Systems  
2 Credits 
Offered As Demand Warrants 
Prerequisites: Admission to the A & P Program; or permission of instructor. 
Lecture + Lab + Other: 2 + 0 + 0 

AFPM F248 Induction Systems  
0.5 Credit 
Operation and service of aircraft induction, preheat, anti-ice and supercharger systems. 
Prerequisites: Admission to A&P program; or permission of instructor. 
Lecture + Lab + Other: 0.5 + 0 + 0 

AFPM F249 Powerplant Cooling Systems  
0.5 Credit 
Inspection, service and repair of engine cooling systems – both air and liquid cooled installations. 
Prerequisites: Admission to A & P Program; or permission of instructor. 
Lecture + Lab + Other: 0.5 + 0 + 0 

AFPM F250 Powerplant Exhaust Systems  
0.5 Credit 
Inspection, service and repair of engine exhaust systems. Includes operations of turbo compounded engines, thrust reversers and noise suppressors. 
Prerequisites: Admission to A & P Program; or permission of instructor. 
Lecture + Lab + Other: 0.5 + 0 + 0 

AFPM F251 Fuel Systems  
1.5 Credits 
Offered As Demand Warrants 
Inspection, servicing, troubleshooting and repair of aircraft and engine fuel systems and components. 
Prerequisites: Admission to A & P Program; or permission of instructor. 
Lecture + Lab + Other: 1.5 + 0 + 0 

AFPM F252 Propellers  
2 Credits 
Offered As Demand Warrants 
Identification and nomenclature of aircraft propellers. Operation, control and repair of both reciprocating and turbine engine installations. 
Prerequisites: Admission to A & P Program; or permission of instructor. 
Lecture + Lab + Other: 2 + 0 + 0 

AFPM F253 Transport Category Aircraft  
1 Credit 
Offered As Demand Warrants 
Introduction to transport category aircraft systems and components. 
Prerequisites: Admission to A & P Program; or permission of instructor. 
Lecture + Lab + Other: 1 + 0 + 0
AFPM F254  Ice and Rain Control Systems  
0.5 Credit  
Offered As Demand Warrants  
Inspection, operation and troubleshooting of de-ice and anti-ice systems.  
**Prerequisites:** Admission to A&P program; or permission of instructor.

Lecture + Lab + Other: 0.5 + 0 + 0

AFPM F255  Fire Protection Systems  
0.5 Credit  
Offered As Demand Warrants  
Inspection, servicing, troubleshooting and repair of aircraft and engine fire detection and extinguishing systems.  
**Prerequisites:** Admission to A & P Program; or permission of instructor.

Lecture + Lab + Other: 0.5 + 0 + 0

AFPM F256  Communications and Navigation Systems  
0.5 Credit  
Offered As Demand Warrants  
Operation of aircraft avionics, autopilots and antennas, including inspection and installation.  
**Prerequisites:** Admission to A&P program; or permission of instructor.

Lecture + Lab + Other: 0.5 + 0 + 0

AFPM F257  Instrument Systems  
0.5 Credit  
Offered As Demand Warrants  
Inspection, troubleshooting, removal and replacement of aircraft and engine instruments and indicating systems.  
**Prerequisites:** Admission to A & P Program; or permission of instructor.

Lecture + Lab + Other: 0.5 + 0 + 0

AFPM F258  Cabin Atmosphere Control Systems  
1 Credit  
Offered As Demand Warrants  
Aircraft pressurization, air conditioning, heating and oxygen systems. Operation, inspection, troubleshooting, service and repair.  
**Prerequisites:** Admission to A & P Program; or permission of instructor.

Lecture + Lab + Other: 1 + 0 + 0

AFPM F259  Hydraulic and Pneumatic Systems  
1.5 Credits  
Offered As Demand Warrants  
Operation of hydraulic and pneumatic systems and uses in aircraft. Identification of hydraulic fluids, seals, hydraulic and pneumatic control devices, inspection and servicing and troubleshooting.  
**Prerequisites:** Admission to A&P program; or permission of instructor.

Lecture + Lab + Other: 1.5 + 0 + 0

AFPM F260  Aircraft Landing Gear Systems  
1.5 Credits  
Offered As Demand Warrants  
Simple and complex landing gear systems. Operation, service and repair of mechanical and hydraulic retraction mechanisms. Wheel, tire and brake service. Aircraft speed and configuration warning systems, electric brake controls, anti-skid systems, landing gear position and warning systems.  
**Prerequisites:** Admission to A & P Program; or permission of instructor.

Lecture + Lab + Other: 1.5 + 0 + 0

AFPM F261  NonMetallic Structures  
1 Credit  
Offered As Demand Warrants  
Inspection, service and repair of wood structures. Preliminary and secondary repair of interior and service of plastic, honeycomb, bonded, and composite and laminated structures.  
**Prerequisites:** Admission to A & P Program; or permission of instructor.

Lecture + Lab + Other: 1 + 0 + 0

AFPM F262  Aircraft Coverings  
1 Credit  
Offered As Demand Warrants  
Selection, application, inspection and testing of fabric and fiberglass coverings and methods of repair.  
**Prerequisites:** Admissions to A & P Program; or permission of instructor.

Lecture + Lab + Other: 1 + 0 + 0

AFPM F263  Aircraft Finishes  
0.5 Credit  
Offered As Demand Warrants  
Identification and selection of aircraft finishing materials. Application of paints, dopes, primers and trim.  
**Prerequisites:** Admission to A & P Program; permission of instructor.

Lecture + Lab + Other: 0.5 + 0 + 0

AFPM F264  Sheet Metal Structures  
3 Credits  
Offered As Demand Warrants  
Aircraft sheet metal fabrication, inspection and repair, including rivets and fasteners.  
**Prerequisites:** Admission to A & P Program; or permission of instructor.

Lecture + Lab + Other: 3 + 0 + 0

AFPM F265  Aircraft Welding  
1.5 Credits  
Offered As Demand Warrants  
Contemporary welding methods on aircraft structures. Oxyacetylene, arc, inert gas and brazing techniques. Inspection of welded structure and safety procedures.  
**Prerequisites:** Admission to A & P Program; or permission of instructor.

Lecture + Lab + Other: 1.5 + 0 + 0

AFPM F266  Assembly and Rigging  
1.5 Credits  
Offered As Demand Warrants  
Aerodynamic theory and function of aircraft control surfaces. Fabrication and installation of control devices for fixed and rotary wing aircraft; jacking and control surface balance.  
**Prerequisites:** Admission to A & P Program; or permission of instructor.

Lecture + Lab + Other: 1.5 + 0 + 0

AFPM F267  Airframe Inspections  
0.5 Credit  
Offered As Demand Warrants  
Inspection and return of aircraft to service. Procedural and legal aspects of 100 hour, annual and periodic inspections.  
**Prerequisites:** Admission to A & P Program; or permission of instructor.

Lecture + Lab + Other: 0.5 + 0 + 0

AFPM F270  Airframe Testing  
0.5 Credit  
Offered As Demand Warrants  
Preparation for the Federal Aviation Administration written, oral and practical exams for the powerplant mechanics' license.  
**Prerequisites:** Admission to A & P Program; or permission of instructor.

Lecture + Lab + Other: 0.5 + 0 + 0
AFPM F271  Powerplant Inspections
0.5 Credit
Offered As Demand Warrants
Methodology and record keeping for inspection of aircraft reciprocating
and gas turbine engines.
Prerequisites: Admission to A & P Program; or permission of instructor.
Lecture + Lab + Other: 0.5 + 0 + 0

AFPM F272  Powerplant Testing
0.5 Credit
Offered As Demand Warrants
Preparation for the Federal Aviation Administration written, oral and
practical exams for the powerplant mechanics' license.
Prerequisites: Admission to A & P Program; or permission of instructor.
Lecture + Lab + Other: 0.5 + 0 + 0

AFPM F325  Inspection Authorization Preparation
2 Credits
Offered As Demand Warrants
Technical background training for the working airframe and powerplant
mechanic in selecting, reviewing and utilizing the appropriate federal
regulatory and advisory information as well as the manufacturer's
maintenance information to inspect and return to service aircraft,
engines, propellers, appliances and related parts in accordance with
FAR Part 65.95. Final exam is the FAA Inspection Authorization exam
administered by an FAA airworthiness inspector.
Prerequisites: FAA A & P Certificate, meet additional requirements of FAR
65.91.
Lecture + Lab + Other: 1 + 2 + 0