

**AVIATION AIRFRAME MECHANICS, AVIATION POWERPLANT MECHANICS AND
AVIONICS SYSTEMS TECHNICIAN CREDENTIALS**

GENERAL (AVIATION AIRFRAME MECHANICS AND/OR AVIATION POWERPLANT MECHANICS)

Basic Electricity

At the completion of 77.5 hours of instruction, specific to Basic Electricity, the student will be able to accomplish the following objectives.

- Calculate and measure capacitance and inductance.
- Calculate and measure electrical power.
- Measure voltage, current, resistance, and continuity.
- Determine the relationship of voltage, current and resistance in electrical circuits.
- Read and interpret aircraft electrical circuit diagrams including solid state devices and logic functions.

By accomplishing these objectives, the applicant will have the skills to be employed as an entry level Electrician in an Electrical Repair Facility.

**Aviation Airframe Mechanics and/or Aviation Powerplant Mechanics (General), Occupational
Completion Point A: 450 hrs.**



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AVIATION AIRFRAME MECHANICS

Sheet Metal

At the completion of 120 hours of instruction, specific to Sheet Metal structures, the student will be able to accomplish the following objectives.

- Lay out and fabricate a riveting project using aircraft drawings.
- Select, install and remove special fasteners used in aircraft structures.
- Inspect aircraft structures and determine the appropriate repair procedure to be used.
- Lay out and install a flush patch or access panel using aircraft drawings.
- Select and use of bend allowance, layout, forming and fabrication.

By accomplishing these objectives, the applicant will have the skills to be employed as an entry level sheet metal mechanic.

Composites

At the completion of 90 hours of instruction, specific composite structures, the student will be able to accomplish the following objectives.

- Inspect bonded structures.
- Select, install and remove special fasteners for bonded and composite structures.
- Inspect, clean, check and repair plastics, windows and windshields.
- Inspect and repair composite, fiberglass and honeycomb structures.

By accomplishing these objectives, the applicant will have the ability to be employed as entry level mechanic in a Composites repair facility.

AVIATION AIRFRAME MECHANICS: 900 hrs.



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AVIATION POWERPLANT MECHANICS

Reciprocating Engine Theory and Overhaul Mechanic Certificate

At the completion of 172.5 hours of instruction, specific to reciprocating engine theory and overhaul, the student will be able to accomplish the following objectives.

- Calculate cubic inch displacement, compression ratio, and horsepower.
- Determine the length of the events, power overlap and valve overlap.
- Use manufacturer's maintenance manuals and illustrated parts catalogs.
- Disassemble clean and inspect a reciprocating engine.
- Repair, rework, and/or replace engine parts.
- Reassemble the engine while maintaining specific tolerances and proper fits and clearances.
- Service and check an engine in accordance with the manufacturer's specifications and determine its condition.

By accomplishing these objectives, the applicant will have the ability to be employed as entry level mechanic in a Reciprocating Engine Overhaul Facility.

Turbine Engine Theory and Overhaul Mechanic Certificate

At the completion of 112.5 hours of instruction, specific to turbine engine theory and overhaul, the student will be able to accomplish the following objectives.

- Identify, and explain the differences between a turbo jet engine, turbo fan engines and turbo prop engines.
- Identify sections, explain operation of a turbine engine, and demonstrate an understanding of station numbers.
- Explain the air flow in a turbine engine.
- Inspect, check, service, and troubleshoot turbine driven auxiliary power units (APU's)
- Disassemble a turbine engine.
- Clean, inspect, and protect engine parts.
- Rework, repair, and/or replace engine parts as required.
- Reassemble the engine maintaining required tolerance and fits and clearances.

By accomplishing these objectives, the applicant will have the ability to be employed as entry level mechanic in a Turbine Engine Overhaul Facility.

AVIATION POWERPLANT MECHANICS: 900 hrs.



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AVIONICS SYSTEMS TECHNICIAN

Occupational Completion Points:

- Basic Electronics Wiring Installer/Technician 150 hrs.
- Electrical Systems Technician 150 hrs.
- Analog Circuits Technician 150 hrs.
- Aircraft Electronics Technician 150 hrs.
- Avionics Installer/Technician 300 hrs.
- Advanced Avionics Installer/Technician 300 hrs.

By accomplishing any of these exit points, the applicant will have the ability to be employed as entry level technician in an avionics or electronic facility.

