



# GEORGE T. BAKER AVIATION TECHNICAL COLLEGE

## GENERAL, AIRFRAME, POWERPLANT AND AVIONICS SYSTEM TECHNICIAN CREDENTIALS

### GENERAL

#### 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 Maintenance General Technician, Occupational  
Completion Point A: 450 hrs.**

### AIRFRAME

#### 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 Maintenance Airframe Technician 1 and 2: 900 hrs.**

### **POWERPLANT**

#### **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 turbojet engines, turbo fan engines and turbo prop engines.
- Identify sections, explain operation of a turbine engine, and demonstrate 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 Maintenance Powerplant Technician 1 and 2: 900 hrs.**

### **AVIONICS SYSTEM TECHNICIAN**

Occupational Completion Points:

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| • 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.**