

Course Objectives/Course Outline
Spokane Community College

Course Title: Powerplant Systems and Components I Shop

Prefix and Course Number: ARCFT 256

Course Learning Outcomes:

By the end of this course, a student should be able to:

- Demonstrate the servicing, maintenance and repair of powerplant systems
- Describe fire protection, lubrication, fuel and electrical systems

Course Outline:

- I. Identify the need for APU's and Explain How They Operate
- II. Research and Describe Unducted Fan Principles
- III. Inspect, Check, Service, Troubleshoot, and Repair Engine. Fire Detection and Extinguishing Systems
- IV. Inspect, Identify, and Operate Different Types of Fire Detection Sensors
- V. Change Oil / Inspect Screens
- VI. Remove, Check, and Reinstall Oil Bypass Valve On Oil Filter And Oil Cooler
- VII. Label Components, Indicate Oil Flow On Dry Sump Oil System
- VIII. Adjust Oil Pressure
- IX. Clean, Service and Repair Fuel Strainer
- X. Inspect, Service and Repair Primer System
- XI. Inspect, Check, Service and Repair Engine Fuel Metering Systems
- XII. Overhaul and Test Float Type Carburetor
- XIII. Label and Identify Principle Parts of a Fuel Injection System
- XIV. Label and Identify Principle Parts of a Pressure Injection System
- XV. Set Idle Mixtures/Idle RPM of Operating. Engine
- XVI. Rig and Adjust Carburetor Heat Controls
- XVII. Label Parts of Float Type Carburetor
- XVIII. Install Swaged / Soldered Terminals
- XIX. Install and Wire Solenoid Switch
- XX. Install Generator and Alternator
- XXI. Overhaul DC Generator, Alternator and Starter Motor and Test
- XXII. Check Aircraft Ignition System
- XXIII. Troubleshoot, Service and Repair Fuel Flow Indicating System
- XXIV. Inspect, Check, Service, Troubleshoot, and Repair Engine. Temperature. Pressure and RPM Indicating Systems
- XXV. Overhaul and Bench Test Magnetos
- XXVI. Install/Time Two Makes of Magnetos
- XXVII. Install/Test High Tension Ignition Harness
- XXIX. Remove, Test and Reinstall Shielded Spark Plugs
- XXX. Troubleshoot Ignition System Malfunction