

Master Syllabus

AVT 2126 - Reciprocating Engines

Division: Science, Mathematics and Engineering

Department: Aviation Technology

Credit Hour Total: 7.0

Lecture Hrs: 1.0 **Lab Hrs:** 18.0

Date Revised: October 2012

Course Description:

This course covers reciprocating engine removal, engine configurations, firing order, inspections, critical parts measurement, use of overhaul manual, powerplant troubleshooting, installation and repair. One classroom, eighteen lab hours per week.

General Education Outcomes:

- ▣ Written Communication Competency
- ▣ Critical Thinking/Problem Solving Competency
- ▣ Values/Citizenship/Community Competency
- ▣ Computer Literacy Competency
- ▣ Information Literacy Competency
- ▣ Oral Communication Competency

Course Outcomes:

Installation and removal

Demonstrate an understanding of the installation and removal procedures of a reciprocating engine, corrosion inspection, linkages, seals, hoses, operational controls, engine mounts, engine piping, turbocharger installation, post installation engine run, and required aircraft records entry and documentation.

Assessment Method: Locally developed exams

Performance Criteria: 70% or higher on exams

Engine theory

Demonstrate an understanding of reciprocating engine operation and operation of components to include different types and number of valves, camshafts, lifters, gears, timing, seals, and crankshaft.

Assessment Method: Locally developed exams

Performance Criteria: 70% or higher on exams

Engine operational requirements

Demonstrate knowledge of the requirements for operating a reciprocating engine, to include the following: fuel types, fuel induction, spark timing, wiring to engine and ground, fuel injection, carburetors and their adjustments, idle and static power runs.

Assessment Method: Locally developed exams

Performance Criteria: 70% or higher on exams

Outline:

Engine theory
Engine operational requirements
Engine configurations
Engine inspection
Installation and removal
Engine testing