

## 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

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### 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