

## Master Syllabus

### AVT 2139 - Induction/Exhaust/Cooling

**Division:** Science, Mathematics and Engineering

**Department:** Aviation Technology

**Credit Hour Total:** 2.0

**Lecture Hrs:** 1.0 **Lab Hrs:** 3.0

**Date Revised:** October 2012

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### Course Description:

Powerplant ice protection, reciprocating engine induction system, superchargers, turbochargers, heat exchangers, turbine engine inlet designs, exhaust system inspection, repair, removal, and installation, and thrust reversers. One classroom, three lab hours per week.

### General Education Outcomes:

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

### Course Outcomes:

#### **Turbine engine ice and rain control**

Demonstrate knowledge of the inspection, repair, and servicing of turbine engine ice and rain system components and controls in both fixed wing and rotary wing aircraft.

**Assessment Method:** Locally developed exams

**Performance Criteria:** 70% or higher correct responses on exams

#### **Reciprocating engine induction and exhaust manifolds**

Demonstrate knowledge of techniques to remove, inspect, service, replace, or reinstall engine induction components and exhaust manifolds.

**Assessment Method:** Locally developed exams

**Performance Criteria:** 70% or higher correct responses on exams

#### **Engine exhaust system removal, inspection, repair, and installation**

Demonstrate knowledge of techniques to remove, inspect, service, replace, or reinstall engine exhaust systems and components.

**Assessment Method:** Locally developed exams

**Performance Criteria:** 70% or higher correct responses on exams

#### **Turbine engine thrust reverser systems**

Demonstrate knowledge of turbine engine thrust reverser systems, proper operation, removal, inspection, repair, and installation.

**Assessment Method:** Locally developed exams

**Performance Criteria:** 70% or higher correct responses on exams

### Outline:

Turbine engine ice and rain protection  
Reciprocating engine induction and exhaust manifolds  
Turbine thrust reverser systems  
Engine baffling inspection, removal for repair, and installation  
Engine exhaust system removal, inspection, repair, and installation