

## Master Syllabus

### AVT 1218 - Utility Systems

**Division:** Science, Mathematics and Engineering

**Department:** Aviation Technology

**Credit Hour Total:** 6.0

**Lecture Hrs:** 3.0 **Lab Hrs:** 9.0

**Date Revised:** October 2012

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### Course Description:

Hydraulic and pneumatic aircraft systems, introduction to landing gear systems, development of repair and inspection skills, critical thinking and development of analysis used in troubleshooting and repair of hydraulic and pneumatic systems and landing gear. Three classroom, nine lab hours per week.

### General Education Outcomes:

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

### Course Outcomes:

#### Hydraulic systems and components

Demonstrate knowledge of hydraulic systems and components to include removal and installation, troubleshooting, types of hydraulic fluids, hazardous materials (hazmat) requirements, crossfeeds, pumps, seals, and fittings.

**Assessment Method:** Locally developed exams

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

#### Pneumatic systems and components

Demonstrate knowledge of pneumatic systems and components to include removal, installation, inspection, and repair.

**Assessment Method:** Locally developed exams

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

#### Troubleshooting and repair of landing gear

Demonstrate knowledge of landing gear systems and the ability to operate, inspect, repair, adjust, and service.

**Assessment Method:** Locally developed exams

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

### Outline:

Hydraulic systems and components  
Pneumatic systems and components  
Seals, O-rings, rings, and fluid lines  
Troubleshooting and repair of hydraulic components  
Troubleshooting and repair of landing gear