

## Master Syllabus

### AVT 1118 - Weight & Balance

**Division:** Science, Mathematics and Engineering

**Department:** Aviation Technology

**Credit Hour Total:** 3.0

**Lecture Hrs:** 2.0 **Lab Hrs:** 3.0

**Date Revised:** October 2012

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### Course Description:

This course covers aviation maintenance performance calculations to include theory of aircraft weight and balance encompassing documentation, weighing the aircraft, locating the center of gravity, adverse center of gravity checks, large aircraft weight and balance computations and determination of ballast requirements. Two classroom, three 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:

#### Record keeping

Demonstrate an indepth knowledge of aircraft weight and balance and documentation requirements, to include center of gravity (cg), forward and rearward cg calculations for small and transport category aircraft.

**Assessment Method:** Locally developed exams

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

#### Aircraft weighing

Demonstrate an indepth knowledge of aircraft weighing to include the following: regulation compliance for weighing, safety during weighing, forward and rearward center of gravity calculations.

**Assessment Method:** Locally developed exams

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

#### Aircraft calculations

Demonstrate a knowledge of geometric shapes, and arithmetic and algebraic operations required for weight and balance computations.

**Assessment Method:** Locally developed exams

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

### Outline:

Geometrical shapes, charts, algebraic operations, roots and exponents, ratio, proportion, and percentage

Aircraft weighing

Record keeping

Forward center of gravity

Rearward center of gravity

Fuel dumping