Sinclair Community College
444 E. Third St.
Dayton, OH 45402

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

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