

Master Syllabus

AVT 2125 - Developments in Aviation

Division: Science, Mathematics and Engineering

Department: Aviation Technology

Credit Hour Total: 2.0

Lecture Hrs: 2.0

Prerequisite(s): DEV 0012 OR DEV 0062OR DEV 0044AND DEV 0022OR DEV 0072

Date Revised: October 2013

Course Description:

Provides pilots and other aviation professionals with an in-depth understanding of how aviation technology has evolved, from the earliest balloon flights to the invention of the airplane, to today's sophisticated jet aircraft and their equally sophisticated flight systems and to the developments of space flight and travel.

General Education Outcomes:

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

Course Outcomes:

Communication and navigation

Demonstrate a basic understanding of airborne communication, navigation, and air traffic control.

Assessment Method: Locally developed exams

Performance Criteria: 65% or higher correct responses on exams

Assessment Method: Oral examination

Performance Criteria: 65% or more of possible points on oral presentation

Assessment Method: Written surveys and/or questionnaires

Performance Criteria: 65% or more of possible points on term paper

Early attempts at flight

Demonstrate knowledge of the history of balloons, dirigibles, early attempts at manned and powered flight and evaluate the early concepts of flight and their development.

Assessment Method: Locally developed exams

Performance Criteria: 65% or higher correct responses on exams

Assessment Method: Oral examination

Performance Criteria: 65% or more of possible points on oral presentation

Assessment Method: Written surveys and/or questionnaires

Performance Criteria: 65% or more of possible points on term paper

Development of lifting surfaces and powered flight

Understand the principle factors influencing lift on a wing, the development of thrust from propellers, jet engines and rockets and how they have been developed, used and improved.

Assessment Method: Locally developed exams

Performance Criteria: 65% or higher correct responses on exams

Assessment Method: Oral examination

Performance Criteria: 65% or more of possible points on oral presentation

Assessment Method: Written surveys and/or questionnaires

Performance Criteria: 65% or more of possible points on term paper

Stability and control

Understand the principles of stability and control of a manned aircraft.

Assessment Method: Locally developed exams

Performance Criteria: 65% or higher correct responses on exams

Assessment Method: Oral examination

Performance Criteria: 65% or more of possible points on oral presentation

Assessment Method: Written surveys and/or questionnaires

Performance Criteria: 65% or more of possible points on term paper

Developments and improvements in manned flight

Demonstrate a basic understanding of the developments and improvements that have occurred since the pioneering efforts of the Wright Brothers.

Assessment Method: Locally developed exams

Performance Criteria: 65% or higher correct responses on exams

Assessment Method: Oral examination

Performance Criteria: 65% or more of possible points on oral presentation

Assessment Method: Written surveys and/or questionnaires

Performance Criteria: 65% or more of possible points on term paper

Outline:

Early attempts at flight

Development of lifting surfaces

Development of powered flight

Stability and control

Developments and improvements in manned flight

Communication and navigation developments

Historical evidence of developments in aviation