

AVMT 161

Unmanned Aircraft Systems Operations

3 Credits

Community College of Baltimore County Common Course Outline

Description

AVMT 161 - Unmanned Aircraft Systems Operations: presents an overview of Unmanned Aircraft Systems (UAS) including the history and development of UAS, Remotely Piloted Aircraft (RPA), UAS types, payloads and employment, control functions, flight operations, regulations, and safety considerations.

Pre-requisites: AVMT 131 or approval of the Aviation Program Director

Co-requisites: AVMT 101 or approval of the Aviation Program Director

Overall Course Objectives

Upon completion of this course, students will be able to:

1. describe the historical relationship and integration of UAS with manned aircraft types;
2. demonstrate the proper employment of UAS in the National Airspace System;
3. explain key components of the Federal Aviation Administration regulations applicable to UAS;
4. relate UAS operations to Department of Homeland Security and law enforcement missions;
5. recognize the technical concepts associated with UAS command and control;
6. identify support and maintenance functions required for UAS operations;
7. identify the capabilities and flight parameters of each UAS category, class and type;
8. explain the function of sensor, kinetic, and electronic systems installed on UAS;
9. discuss UAS mission planning considerations; and
10. identify safety procedures and backup systems applicable to the operation of UAS.

Major Topics

- I. Historical development of UAS
- II. UAS employment in the National Airspace System
- III. Publications and regulations applicable to UAS operations
- IV. Control data links, communications, and connectivity
- V. Training, support, and maintenance functions associated with UAS operations
- VI. UAS capabilities and flight characteristics
- VII. Sensor, kinetic, and various electronic systems installed on UAS
- VIII. UAS mission planning factors
- IX. Command and control of UAS
- X. Safety considerations relating to UAS operations

The Common Course Outline (CCO) determines the essential nature of each course.
For more information, see your professor's syllabus.

Course Requirements

Grading will be determined by the individual faculty member, but shall include the following, at minimum:

- 2 examinations
- comprehensive final exam
- 2 writing assignments such as flight plans, special topic papers, current events reports, article or textbook summaries, research or case study analysis papers, and personal journals

Written assignments and research projects: Students are required to use appropriate academic resources in their research and cite sources according to the style selected by their professor.

Date Revised: 1/21/2020