

Common Course Outline
AVMT 162
Unmanned Aircraft Systems Flight Training
3 Credits

The Community College of Baltimore County

Description

AVMT 162 – 3 credits – Unmanned Aircraft Systems Flight Training provides academic, flight, and simulator training on selected Unmanned Aircraft Systems (UAS). The topics include flight and sensor operations, airspace coordination, command and control, communications, mission planning, application and utilization. This course has additional lab fees.

3 Credits

Co-requisite: AVMT 141 or approval of Aviation Program Coordinator

Overall Course Objectives

Upon completion of this course students will be able to:

1. describe the aerodynamic forces affecting UAS during flight operations;
2. identify the capabilities and flight parameters of each UAS category, class and type;
3. describe UAS design and flight control systems;
4. describe the Federal Aviation Administration regulations applicable to UAS flight operations;
5. recognize the technical components associated with UAS command and control;
6. demonstrate safe and proper flight control of a remotely piloted aircraft;
7. explain the fundamentals of communications with regard to UAS operations;
8. identify the operational use of sensor, kinetic, and electronic systems installed on UAS;
9. demonstrate long range, prolonged duration UAS mission planning; and
10. identify safety procedures and backup systems applicable to the operation of UAS.

Major Topics

- I. UAS aerodynamics and aircraft platform design
- II. Flight control systems used in UAS
- III. Implementation of UAS capabilities in the National Airspace System
- IV. Publications and regulations specific to UAS flight operations
- V. Hands-on flight control of remotely piloted aircraft
- VI. Command and control data links and connectivity
- VII. Communications and airspace coordination for UAS missions
- VIII. Operational use of sensor, kinetic, and electronic systems installed on UAS
- IX. Mission planning for long range and prolonged duration UAS flights
- X. Safety considerations relating to UAS operations

Course Requirements

Grading/exams: Grading procedures will be determined by the individual faculty member but will include three (3) in-class examinations and one (1) practical remotely piloted aircraft flight evaluation.

Writing: The individual faculty member will determine specific writing assignments such as special topic papers, current events reports, article or textbook summaries, research analysis papers, and personal journals.

Students are required to utilize appropriate academic resources.

Other Course Information

This course is designed to be used as an elective or substituted course in the Aviation Management, Associate of Applied Science degree.

This course is taught in a classroom, simulator, and flight lab environment.

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