



THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Advanced Uncrewed Aviation Operations Beyond Visual Line of Sight

AVIATN 3800

Credit Hours:

3.00

Course Levels:

Undergraduate (1000-5000 level)

Course Components:

Lecture

Course Description:

This course introduces the student to Unmanned Aircraft Systems operating beyond the visual line of sight. The course covers specific UAS applications, human factors in the uncrewed aviation space, professionalism, regulations, and complex operations with a strong emphasis on safety. Prepares students for Advanced Safety Level 1 certification exam through Unmanned Safety Institute.

Prerequisites and Co-requisites:

AVN 2401

Course Goals / Objectives:

- Demonstrate and operationalize knowledge of rules and regulations applicable to operations within the NAS
 - Describe how meteorological conditions affect flight dynamics and operations within the NAS
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 - Demonstrate and apply knowledge of the Aeronautical Decision-Making Model
 - Explain how hazardous attitudes affect flight • Explain the principles of human cognition, capabilities, and limitations in the context of remotely piloted aircraft systems.
 - Develop sound decision-making skills for complex and challenging scenarios in UAS operations. • Use the Situation Awareness model to analyze conditions, assess risks, and make informed judgments to ensure safe and successful mission outcomes.
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Course Topics:

- atmosphere
 - operations
 - crew resource management
 - automation
 - human performance
 - aeronautical decision-making
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Designation:

Elective