University of Arkansas - Fort Smith
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General Syllabus

UAS 1143 Pilot Flight Operations

Credit Hours: 3 Lecture Hours: 2 Laboratory Hours: 2

Prerequisite(s): None
Prerequisite(s) or Corequisite(s): UAS 1003 Introduction to Unmanned Systems

Effective Catalog: 2021-2022

I. Course Information

A. Catalog Description

Basic flight operations and skills will be taught. Prepares student to take the FAA Part 107 Repot Pilot Certificate exam.

B. Additional Information

II. Student Learning Outcomes

A. Subject Matter

Upon successful completion of this course, the student will be able to:

1. Interpret applicable regulations relating to small unmanned aerial aircraft system rating privileges, limitations, and flight operations.
2. Compare Airspace classification, operating requirements, and flight restrictions affecting small unmanned aircraft operation.
3. Formulate plans based on aviation weather sources and effects of weather on small unmanned aircraft performance.
4. Evaluate small unmanned aircraft loading.
5. Demonstrate emergency procedures in UAS operations.
6. Demonstrate crew resource management.
7. Demonstrate radio communication procedures.
8. Evaluate the performance of small unmanned aircraft.
9. Explain physiological effects of drug and alcohol on unmanned aircraft operation.
10. Examine aeronautical decision-making and judgment.
11. Organize airport operations with respect to UAS.

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B. University Learning Outcomes

This course enhances student abilities in the following areas:
Communication Skills (Written and Oral)
Students will communicate effectively information relating to flight operations, crew resource management, and radio communication procedures.

Analytical Skills
Critical Thinking: Students will use analytical/critical thinking skills to draw conclusions and/or solve problems. They will access and evaluate appropriate information through written and electronic means and think critically to reach viable solutions to a problem and to justify those solutions.
Quantitative Reasoning: Students must be able to utilize mathematics to solve basic flight calculations relating to weather, evaluate aircraft loading, and flight operations.

Ethical Decision Making
Students will learn to safely operate UAS in the national air space abiding by all FAA rules and regulations as well as civil and local laws.

III. Major Course Topics

A. System Safety – electrical shock, burn, laser, RF, chemical, dust, fumes, and physical
B. FAA Regulations
C. National Airspace System (NAS)
D. Weather
E. Emergency Procedures
F. Crew Resource Management
G. Radio Communications Procedures
H. Aerophysiology
I. Aeronautical Decision-Making and Judgment
J. Airport Operations
K. Safety Assessments