

Course Code: AVI 111

Course Title: Commercial Drone Ground School

Department: Aviation

Effective Date: Summer 2026

PCS Code: 1.2 - Occupational/Technical Instruction

CIP Code: 49.0199

Repeatability: 0

Credit Hours

Catalog Notation: 3-0-3

Credit Hour Distribution:

Lecture: 3

Lab: 0

Clinical: 0

Total: 3

General Course Information

Catalog Description

Prepares the student for FAA Commercial Unmanned Aircraft Systems (UAS) Pilot Certification. Covers regulations, airspace, aerodynamics, weather, performance, registration, and aeromedical factors. Commercial UAS certification requires passing an FAA written exam.

General Course Objectives

The student will obtain the necessary aeronautical knowledge to pass the FAA Commercial UAS Pilot written exam and be able to operate a UAS commercially.

Minimum Placement Levels

English

None

Reading

None

Math

None

Prerequisites

None

Methods of Evaluation

2-4 exams, final examination.

Instructional Materials and Additional Supplies

[Pilot's Handbook of Aeronautical Knowledge, FAA-H-8083-25B](#)

[Airplane Flying Handbook, FAA-8083-3B](#)

[Airman Knowledge Testing Supplement for Sport, Recreational, and Private Pilot, FAA-CT-8080-2F](#)

Course Content

General Learning Outcomes (GLOs)

- Reasoning and Inquiry: Students will demonstrate the ability to solve problems using deductive reasoning and logic, quantitative reasoning, or the scientific method.
- Technology: Students will demonstrate the ability to evaluate, select, and appropriately use current and emerging tools.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Overview of UAS	1. Identify the different types of UAS, applications, and career outlooks. 2. Determine the difference between recreational and commercial operations and requirements.	3	0	0
Commercial UAS Regulations	1. Explain pertinent sections of 14 CFR Parts 47, 48, 61, 91, and 107 and determine applicable regulations.	5	0	0
Aeronautical Charts	1. Identify, interpret, and access various symbols, frequencies, and data on aeronautical charts.	3	0	0
Airport Operations	1. Demonstrate comprehension of how to operate in different airport environments utilizing traffic patterns, radio frequencies, and their different requirements.	3	0	0
Airspace	1. Determine the different classes and types of airspace within the National Airspace System and how it applies to UAS operations. 2. Recognize and explain the operating limitations based on airspace restrictions.	6	0	0
Waivers and Authorizations	1. Determine when it is required by the FAA to apply for waivers and authorizations to conduct certain UAS operations and explain the process.	2	0	0
Principles of Aerodynamics	1. Identify and explain the basic components of aircraft terminology and aerodynamic theory and how they relate to flight.	5	0	0
Performance	1. Identify and assess the effects of different atmospheric conditions on UAS flight and performance characteristics.	3	0	0
Maintenance	1. Determine basic maintenance criteria and explain basic troubleshooting skills.	2	0	0
Weather Theory	1. Interpret and explain the basics of weather theory and how it relates to UAS flight.	2	0	0
Weather Products	1. Demonstrate reading and interpretation of FAA weather products to determine current and forecast weather conditions for UAS operations.	3	0	0
Aeromedical and Human Factors	1. Assess how aeromedical, crew resource management, aeronautical decision making, and other human factors impact the safety of flight.	3	0	0
Emergencies	1. Demonstrate how to anticipate and recognize various UAS emergency situations. 2. Explain emergency procedures and how to minimize risks.	2	0	0
Mission Planning	1. Demonstrate how to safely plan a UAS flight including airspace and regulatory requirements.	3	0	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
45	0	0