UNMANNED SAFETY INSTITUTE™

SAFETY TRAINED. USI CERTIFIED.

SMALL UAS SAFETY CERTIFICATION™

STEM CURRICULUM • INDUSTRY CERTFICATION • WORKFORCE DEVELOPMENT

SMALL UAS SAFETY CERTIFICATION™

Learning Modules:

1. Foundations of Unmanned Aviation
2. Robotics
3. Data Links
4. UAS Command and Control
5. Payloads
6. Meteorology & the Elements
7. Small UAS Applications
8. Rules & Regulations (FAA)
9. Airspace Operations
10. Human Factors
11. Crew Resource Management
12. Aeronautical Decisionmaking
13. Safety Management Systems
14. Safety Risk Management
15. Safety Assurance
16. Safety Promotion
17. Professionalism

USI has been offering its *Small UAS Safety Certification*™ to high schools in Florida.

Since 2015, over 70 high school teachers have been credentialed and over 1,000 high school students have been taught.

Students who earn the *Small UAS Safety Certification*™ also earn college credit at Embry-Riddle Aeronautical University and are competitive in the workforce as qualified remote pilots.

ACE® American Council on Education®

Leadership and Advocacy

Currently undergoing national accreditation review with ACE for 12 college credits.

MASTER COURSE OBJECTIVES

Certificate Objectives;

- The learner will identify important UAS technologies, platforms, and systems.
- The learner will discuss the origins and development of unmanned aviation.
- The learner will discuss commercial and government application of small UAS technology.
- The learner will explore the key concepts and theories associated with Remote Sensing
- The learner will discuss the ethics and privacy considerations in the operation of unmanned aircraft.
- The learner will generalize the principles of small UAS aerodynamics and performance.
- The learner will interpret aviation rules and regulations as they pertain to UAS.
- The learner will plan for powered flight in the National Airspace System (NAS).
- The learner will prepare to communicate with air traffic control and conflict aircraft.
- The learner will identify the appropriate attitudes and behaviors associated with commercial aviation
- The learner will recall regulation mandated remote pilot standards and restrictions.
- The learner will interpret the concept of small UAS airworthiness.
- The learner will generalize how aviation safety systems apply to UAS.
- The learner will discuss the human factors associated with UAS.
- The learner will relate Crew Resource Management (CRM) principles to UAS operations.
- The learner will develop attitudes and behaviors associated with aviation safety.

ABOUT THE CURRICULUM

A complete 155-content hour certification program comprised of four (4) college-equivalent courses.

Adopt one course, or package all four and deliver a complete certification!

The Small UAS Safety Certificate revolves around four major themes that are derived from the lessons learned in traditional aviation. These themes are:

- Understanding the capabilities and limitations of the technology to include hardware and software.
- Understanding the environment in which UAS technology will be applied, to include both the physical and political environment.
- Understanding the capabilities and limitations of human remote pilots and using that understanding to become a responsible member of the aviation community
- Explore the concept of safety and the role of managing risk and organizational decision-making to improve unmanned aviation safety.

Each of these themes are explored in separate courses and sequenced in order to build the learner's competency in the field of small UAS aviation safety.

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The ***Unmanned Aircraft*** course is divided into six units of study. Each unit varies in length and difficulty with a standardized structure consisting of required readings, assignments, and progress assessments. The following units and lessons are required to complete the Unmanned Aircraft Course:

- Unit 0 Orientation
- Unit 1 Foundations
- Unit 2 Robotic Aircraft
- Unit 3 Data Links
- Unit 4 UAS Control
- Unit 5 Payloads

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The ***UAS Applications*** course is divided into five units of study. Each unit varies in length and difficulty with a standardized structure consisting of required readings, assignments, and progress assessments. The following units are required to complete the Applications Course

- Unit 6 Applications
- Unit 7 Elements
- Unit 8 The Remote Pilot Professional
- Unit 9 Regulations
- Unit 10 Operating in the NAS

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The ***UAS Personnel*** course is divided into three units of study. Each unit varies in length and difficulty with a standardized structure consisting of required readings, assignments, and progress assessments. The following units are required to complete the Personnel Course

- Unit 11 Human Factors
- Unit 12 Crew Resource Management
- Unit 13 Aeronautical Decision Making

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The ***Safety Management*** course is divided into four units of study. Each unit varies in length and difficulty with a standardized structure consisting of required readings, assignments, and progress assessments. The following units are required to complete the Management Course

- Unit 14 Safety Policy
- Unit 15 Safety Risk Management
- Unit 16 Safety Assurance
- Unit 17 Safety Promotion

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The ***Small UAS Safety Certification***™ is designed to set a safety inspired foundation for any UAS operation. The Unmanned Safety Institute's *Small UAS Safety Certification*™ covers all pertinent aeronautical knowledge as outlined by the FAA and augments this knowledge with safety practices that will ensure all participants are responsible remote pilots ready to lead in the UAS industry. The *Small UAS Safety Certification*™ meets both the safety-training requirement for USI's *Professional Remote Operator (*PRO™) ratings and the FAA knowledge areas required for the Remote Pilot Airman Certificate.

The ***Small UAS Safety Certification***™ also gives remote pilots a sound foundation in the theoretical, covering a wide survey of UAS technologies and concepts. In order to qualify for the certificate, applicants must complete an approved course of study covering the course themes and a pass a proctored exam. This curriculum will require learners to dedicate considerable time and independent study. The total time required is estimated at 155 hours, with each of the four courses requiring approximately 39 hours of work.

SMALL UAS SAFETY CERTIFICATION™

✓ **Aviation Insurance Endorsed!**

USAIG UNITED STATES AIRCRAFT INSURANCE GROUP

GLOBAL AEROSPACE

allrisks Get It Done Right. Now.

✓ **Employer Preferred!**

CEMC

ppl PPL Electric Utilities

Anadarko Petroleum Corporation

MEASURE

SOUTHERN COMPANY

WAYPOINT GLOBAL STRATEGIES

PHOENIX AIR

Trihydro

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DUKE ENERGY®

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SAFETY TRAINED. USI CERTIFIED.

CAREER PATHWAYS

Training & Certifying the Next Generation of Elite Pilots

The Unmanned Safety Institute is the **world leader** in safety education and training to remote pilots for the UAS industry.

- ✓ Exclusively devoted to UAS safety.
- ✓ Over 30 years of hands-on experience in UAS.
- ✓ Endorsed as “best in class” by major aviation insurance providers.
- ✓ *Small UAS Safety Certification*™ is recognized by the Florida Dept. of Education and around the world by many employers.

READY FOR TAKEOFF?

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