



Uncrewed Aircraft Systems and Operations

WW-UNSY 315

EagleVision

Course Syllabus

Worldwide 2026-03 March

## Course Information

Term Dates: Mar 23, 2026 - May 24, 2026

Credit Hours: 3

Meetings: 1800 PM - 21:20 PM Monday Time Zone: Eastern

Location: \*EagleVision Classroom

Delivery Method: EagleVision Classroom/Blended

## Instructor Information

Name: Chris Janke

Email: jankec@erau.edu - Office Hours: By appointment only

## Required Course Materials

**Title: Publication Manual of the American Psychological Association - (APA) ISBN:**

978-1433832161 Paperback

ISBN2: 978-1433832185 eBook

Authors: American Psychological Association

Publisher: American Psychological Association

Publication Date: 2019

Edition: 7th

Format: Manual

**Title: SIMNET Educational Edition**

Authors: SIMNET

Format: Ebook and Lab Simulation access

Notes

- For more information about the requirements for SIMNET, visit the [ERAU SIMNET Student User Guide](#).
- [B4UFly app](#) (free) along with one of the [LAANC UAS Service Suppliers from the FAA](#)
- Other required reading materials are provided free of charge in your course.

**Title: Required reading materials are provided free of charge in your course.**

Publisher: n/a

Format: Note

## Catalog Course Description

Uncrewed Aircraft Systems (UAS), Uncrewed Aircraft Vehicles (UAV), and their role in the aviation industry and importance in modern commercial and military integration in airspace, air traffic control; development, operations and applications. Structural and mechanical factors, avionics, navigation, flight controls, remote sensing, guidance control, propulsion systems, and logistical support.

Prerequisite(s): None

## Course Goals

Provide an understanding of Uncrewed Aircraft Systems, their supportability issues and their role in the aviation industry, as well as an increased awareness of the importance of Uncrewed Aircraft Systems in modern commercial and military operations.

## Student Learning Outcomes

1. Describe the evolution of Uncrewed Aircraft Systems as it applies to current and future operations.
2. Explain how Uncrewed Aircraft Systems operations are integrated within air traffic control operations.
3. Summarize the need for ground crew qualifications and certifications, including vehicle operators, maintenance personnel, and logistical support personnel.
4. Describe the fundamental Uncrewed Aircraft Systems configurations, systems, and components required for operations.
5. Discuss the development of current military and civil uses of Uncrewed Aircraft Systems to include the economic, social, and regulatory environment.
6. Identify structural and mechanical factors unique to the uncrewed aerial vehicle element of the system.
7. Describe advanced guidance and control systems and requirements.
8. Discuss potential future applications, including military and civil applications.
9. Demonstrate appropriate selection and application of a research method and statistical analysis (where required), specific to the course subject matter.

## Grading

Scale	Grade
90 - 100	A (Superior)
80 - 89	B (Above Average)
70 - 79	C (Average)
60 - 69	D (Below Average)
Below 60	F (Failure)

## Evaluation Items & Weights

### Percentage

SIMNET Labs 60%  
DRONE STAT Project 20%  
Discussions 20%  
Completing/Incomplete %  
**Total 100%**

## Disability and Special Needs

### Disability Services Support

ERAU-WW is committed to the success of all students. It is a University policy to provide reasonable accommodations to students with disabilities, who qualify for services. If you would like to request accommodations due to a physical, mental or learning disability, please visit the [Student Accessibility Services page](#) or contact our office at 386-226-7334 or via email at [wwsas@erau.edu](mailto:wwsas@erau.edu). ALL DISCUSSIONS ARE CONFIDENTIAL.

### Mental Well-Being Statement

ERAU recognizes that life stressors, such as depression, anxiety, alcohol/drug problems, relationship problems and various other experiences can hinder the learning process. All ERAU students have access to free, confidential counseling through TELUS Health. You can access a counselor 24/7 via phone, computer or chat in the Student Support app. Please download the app or add the link to your computer and consider using this valuable resource during your educational journey at ERAU. More information on TELUS can be found on the [WW Dean of Students ERNIE page](#).

## Additional Information

**Please note that you may be able to see the course content up to 4 (four) days prior to the official term start date. However, you will not be able to actively participate in the course (e.g., submit assignments, participate in discussions, receive credit for an activity, etc.) until 12am on the official day of term start.**

### APA Format

It is required for all submitted papers (research, case studies, essays, etc.) that

students follow the **most current** APA format according to the [American Psychological Association Publication Manual](#).

For all graded activities *other than papers* that require APA elements, students must include APA-formatted in-text citations and associated reference sources according to the [APA Manual](#).

For more information regarding the the *American Psychological Association Publication Manual* formatting, reference the the [APA website](#).

### **Library**

Embry-Riddle Aeronautical University has one of the most complete library collections of aviation-related resources in the world. The Hunt Library is the library for all Worldwide students regardless of location. For help finding resources for your assignment, project, or topic, or to learn more about the library services available to you, please contact our librarians using the following information:

- [Hunt Library Worldwide: Information, Services, Help](#)
  - [Library Basic Training](#)
  - [Ask-a-Librarian](#)
  - [Library Hours](#)
- Contact Information
  - Email: [library@erau.edu](mailto:library@erau.edu)

### **TITLE IX**

The Title IX Office oversees compliance of Title IX Sexual Harassment in accordance with Federal Regulations, as well as incidents falling under the University Sexual Misconduct policy. Policy violations can include sex discrimination, sexual harassment, or sexual violence, such as rape, sexual assault, relationship / dating violence, sexual misconduct, and stalking.

Anyone **may** report suspected or known violations to the Title IX Office and may be able to receive supportive measures. Please see the Title IX website for additional information.

### **WW Title IX Office**

Email: [wwtitle9@erau.edu](mailto:wwtitle9@erau.edu)

Website: <https://worldwide.erau.edu/administration/title-ix-compliance>

[Online Complaint Form](#)

## Course Policies

1. **Plagiarism:** Presenting as one's own the ideas, words, or products of another. Plagiarism includes use of any source to complete academic assignments without proper acknowledgment of the source. All papers submitted for grading in this course will be submitted to Turnitin where the text of the paper is compared against information contained in the Turnitin database. Papers submitted will be included in the Turnitin database and become the source documents for the purpose of detecting plagiarism.

2. **Cheating:** A broad term that includes the following:

- Giving or receiving help from unauthorized persons or materials during examinations.
- The unauthorized communication of examination questions prior to, during, or following administration of the examination.
- Collaboration on examinations or assignments expected to be individual work.
- Fraud and deceit, that include knowingly furnishing false or misleading information or failing to furnish appropriate information when requested, such as when applying for admission to the University.

3. The most current **APA Edition** format is the ERAU Worldwide standard for all research projects

4. Course-specific Policies:

- **Blended Learning Policy:** This course is offered in blended format; 70% of the required course will be conducted in-class and 30% will take place online in Canvas. Class meetings will be composed of lectures, audio-visual presentations, discussions, exercises (also in small groups), student presentations and other course activities. Online activities will include discussion with classmates, posting of your work, reviewing classmates' work, and feedback from the instructor on your work. During the first face-to-face session, we will thoroughly review the online Blended Course Activities.

**Late assignments:**

Except for verifiable emergencies, students will earn zero points for late Discussion Board postings. For all other graded assignments (e.g., quizzes, exams, papers), students submitting an assignment 1-60 minutes late will receive a 5% penalty. Students submitting an assignment 61 minutes-24 hours late will receive a 15% penalty. Students submitting an assignment more than 24 hours but within 48 hours of its due date & time will receive a 30% penalty. Students submitting an assignment more than 48 hours after its due date & time will receive zero points.

Incomplete assignments will be issued only in rare instances and will be handled in accordance with the stated University policy. Course extensions will be offered only as a last resort and when the student can demonstrate unavoidable conflict outside of his/her control.

You can expect to receive a grading of your assignments latest one week after submission.

With the course syllabus you will receive all utilized rubrics for assignments. It will assure total transparency in the evaluation process, and to ensure that you will be aware of the expectations for the assignment.

Embry-Riddle is committed to maintaining and upholding intellectual integrity. All students, faculty, and staff have obligations to prevent violations of academic integrity and take corrective action when they occur. The adjudication process will include the sanction imposed on students who commit the following academic violations, which may include a failing grade on the assignment, a failing grade for the course, suspension, or dismissal from the University:

**Plagiarism:**

Students who engage in the dishonest activity of plagiarism will be dealt with on a case-by-case basis. A student found responsible for academic dishonesty will face the possibility of immediate failure of the entire course in addition to possible actions brought upon in accordance with university policies.

### What is Plagiarism?

Presenting ideas, words, or products of other authors, writers and students as one's own. **This also includes self-plagiarism.** Plagiarism includes use of any source to complete academic assignments without proper acknowledgement of the source. All papers submitted for grading in this course will be submitted to <http://www.turnitin.com/Links to an external site>, where the text of the paper is compared against information contained in the turnitin.com database. Papers submitted will be included in the turnitin.com database and become source documents for the purpose of detecting plagiarism.

**Cheating:** A broad term that includes the following:

1. Giving or receiving help from unauthorized persons or materials during examinations.
2. The unauthorized communication of examination questions prior to, during, or following administration of the examination.
3. Collaboration on examinations or assignments expected to be individual work.
4. Fraud and deceit, that include knowingly furnishing false or misleading information or failing to furnish appropriate information when requested, such as when applying for admission to the University

## EagleVision Web-Conferencing and Technology

EagleVision courses utilize Zoom, web conferencing software that enables students and instructors to connect in real-time through the use of web cameras,

microphones, file sharing, chat and more. Students are expected to participate using audio and/or video when requested by the instructor. Review the [Computer Requirements for Worldwide Courses](#) and run the [ERAU Computer Check](#) to verify your computer meets the technical specifications and system requirements prior to your first class.

Visit the [EagleVision](#) ERNIE page for details on using the application, to join a test meeting, and to confirm that your equipment meets the requirements.

***Students not in compliance with equipment requirements can be withdrawn at the second class meeting.***

It is in your best interest to become familiar with the application ahead of the first class, so you know how to interact with your instructor and classmates. Attend class in an area where there are no distractions (TV, kids, phones, etc.) to impede your learning, the instructor's teaching, or your classmates' attention.

## Course Schedule

### Module 1 Introduction to Unmanned Aircraft Systems (UAS)

- [Module 1 Overview and Objectives](#)  
Discussion Topic [Module 1 Instructor's Corner](#)  
  
[1.1 Discussion: Video Introduction](#)  
  
[1.2 Readings and Resources](#)  
[1.3 Discussion: Database Familiarization](#)  
[1.4 Assignment: SIMNET Introductory Lab](#)  
[Module 1 Wrap-Up](#)

### Module 2 UAS Elements

- [Module 2 Overview and Objectives](#)  
  
[Module 2 Instructor's Corner](#)  
  
[2.1 Readings and Resources](#)

[2.2 Discussion: The "S" in UAS](#)

[2.3 Assignment: SIMNET Lab #2 - UAS Elements](#)

[Module 2 Wrap-Up](#)

### Module 3 UAS Regulations

- [Module 3 Overview and Objectives](#)

[Module 3 Instructor's Corner](#)

[3.0 SIMNET Lab Practice: UAS Elements](#)

[3.1 Readings and Resources](#)

[3.2 Assignment: Recreational UAS Safety Test \(TRUST\)](#)

[3.3 Discussion: Find Your Regulations](#)

[3.4 DroneSTAT Project Description](#)

[Module 3 Wrap-Up](#)

### Module 4 UAS Operations

- [Module 4 Overview and Objectives](#)

[Module 4 Instructor's Corner](#)

[4.1 Readings and Resources](#)

[4.2 Assignment: SIMNET Lab #3 - Mission Planning](#)

[4.3 Discussion: SIMNET Mission Recap](#)

[4.4 Assignment: DroneSTAT Project - Planning](#)

[Module 4 Wrap-Up](#)

## Module 5 UAS Applications and Automation

[Module 5 Overview and Objectives](#)

[Module 5 Instructor's Corner](#)

[5.1 Readings and Resources](#)

[5.2 Discussion: Application of Autonomous sUAS in the Geospatial Field](#)

[5.3 Discussion: DroneSTAT Project](#)

[Module 5 Wrap-Up](#)

## Module 6 Safety and Human Factors in UAS

[Module 6 Overview and Objectives](#)

[Module 6 Instructor's Corner](#)

[6.0 SIMNET Lab Practice: Safety and Human Factors in UAS](#)

[6.1 Readings and Resources](#)

[6.2 Discussion: UAS Human Factors](#)

[6.3 Assignment: DroneSTAT Project - Data Analysis and Reporting \(PLG1\)](#)

[Module 6 Wrap-Up](#)

## Module 7 Unmanned Aerial Vehicle Unique Systems Considerations

- [Module 7 Overview and Objectives](#)

[Module 7 Instructor's Corner](#)

[7.1 Readings and Resources](#)

[7.2 Discussion: Current See, Detect, & Avoid Technologies](#)

[7.3 Assignment: SIMNET Lab #4 - UAS Performance](#)

[Module 7 Wrap-Up](#)

## Module 8 Sensors and Payload

- [Module 8 Overview and Objectives](#)

[Module 8 Instructor's Corner](#)

[8.1 Readings and Resources](#)

[8.2 Design Project Report: SIMNET - The UAS Consultant Part 1](#)

[8.3 Student Collaborative: Sensor Selection](#)

[End of Course Evaluation](#)

[Module 8 Wrap-Up](#)

## Module 9 The Future of UAS

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[Module 9 Overview and Objectives](#)

[Module 9 Instructor's Corner](#)

[9.1 Readings and Resources](#)

[9.2 Discussion: Future of UAS](#)

[9.3 Operational Demonstration: SIMNET - The UAS Consultant Part 2](#)

[Module 9 Wrap-Up](#)

## Summary

The below summary is provided for reference only. It is not considered part of the official Syllabus and is subject to change as assignments are published and unpublished to meet course needs. The links below are provided for quick access to graded activities in Canvas.

Due Date	Name (link)	Event type	Points
	<a href="#">Online Office</a>	Discussion	0
	<a href="#">Student Lounge</a>	Discussion	0
3/29/26	<a href="#">1.3 Discussion: Database Familiarization</a>	Discussion	100
3/29/26	<a href="#">1.1 Discussion: Video Introduction</a>	Discussion	100
3/29/26	<a href="#">1.4 Assignment: SIMNET Introductory Lab</a>	Assignment	100
4/5/26	<a href="#">2.2 Discussion: The "S" in UAS</a>	Discussion	100
4/5/26	<a href="#">2.3 Assignment: SIMNET Lab #2 - UAS Elements</a>	Assignment	100
4/12/26	<a href="#">3.0 SIMNET Lab Practice: UAS Elements</a>	Assignment	
4/12/26	<a href="#">3.2 Assignment: Recreational UAS Safety Test (TRUST)</a>	Assignment	100
4/12/26	<a href="#">3.3 Discussion: Find Your Regulations</a>	Discussion	100

<b>Due Date</b>	<b>Name (link)</b>	<b>Event type</b>	<b>Points</b>
4/19/26	<a href="#">4.2 Assignment: SIMNET Lab #3 - Mission Planning</a>	Assignment	100
4/19/26	<a href="#">4.3 Discussion: SIMNET Mission Recap</a>	Discussion	100
4/19/26	<a href="#">4.4 Assignment: DroneSTAT Project - Planning</a>	Assignment	100
4/26/26	<a href="#">5.2 Discussion: Application of Autonomous sUAS in the Geospatial Field</a>	Discussion	100
4/26/26	<a href="#">5.3 Discussion: DroneSTAT Project</a>	Discussion	100
5/3/26	<a href="#">6.2 Discussion: UAS Human Factors</a>	Discussion	100
5/3/26	<a href="#">6.0 SIMNET Lab Practice: Safety and Human Factors in UAS</a>	Assignment	
5/3/26	<a href="#">6.3 Assignment: DroneSTAT Project - Data Analysis and Reporting (PLG1)</a>	Assignment	100
5/10/26	<a href="#">7.2 Discussion: Current See, Detect, &amp; Avoid Technologies</a>	Discussion	100
5/10/26	<a href="#">7.3 Assignment: SIMNET Lab #4 - UAS Performance</a>	Assignment	100
5/17/26	<a href="#">8.3 Student Collaborative: Sensor Selection</a>	Discussion	100
5/17/26	<a href="#">8.2 Design Project Report: SIMNET - The UAS Consultant Part 1</a>	Assignment	100
5/24/26	<a href="#">9.2 Discussion: Future of UAS</a>	Discussion	100
5/24/26	<a href="#">9.3 Operational Demonstration: SIMNET - The UAS Consultant Part 2</a>	Assignment	100

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