

B.S. in Uncrewed Aircraft Systems

Degree Requirements

The Bachelor of Science in Uncrewed Aircraft Systems may be attained in eight semesters. To earn the degree, successful completion of 120 credit hours is required.

Program Mission Statement

The Uncrewed Aircraft Systems (UNC) degree will provide the essential aeronautical, business, and legal knowledge and skills to obtain a successful career in the UAS industry. Graduates will be prepared for successful careers as Remote Pilots in Command (PICs), observers, payload operators, and/or operational managers of governmental and private sector UAS applications. Experience will be gained in aerial data collection, secure operations, long duration operations, highly detailed operations, and autonomous operations. Graduates will be prepared to meet current industry requirements with an emphasis on future industry developments such as Beyond Visual Line-of-Sight (BVLOS) operations and the use of multiple small UAS at the same time.

Program Requirements

General Education

Embry-Riddle degree programs require students to complete a minimum of 36 hours of General Education coursework. For a full description of Embry-Riddle General Education guidelines, please see the General Education section of this catalog.

Students may choose other classes outside of their requirements, but doing so can result in the student having to complete more than the degree's 120 credit hours. This will result in additional **time and cost** to the student.

Communication Theory and Skills	9
Computer Science/Information Technology	3
Mathematics	6
Physical and Life Sciences (Natural Sciences)	6
Humanities and Social Sciences	12
3 hours of lower-level Humanities	
3 hours of lower-level Social Science	
3 hours of lower-level or upper-level Humanities or Social Science	
3 hours of upper-level Humanities or Social Science	
Total Credits	36

Uncrewed Aircraft Systems Core (101-104 Credits)

The following course of study outlines the quickest and most cost-efficient route for students to earn their B.S. in Uncrewed Aircraft Systems. Students are encouraged to follow the course of study to ensure they complete all program required courses and their prerequisites within four years.

Courses in the core with a # will satisfy your general education requirements.

AS 121	Private Pilot Operations	3-5
or AS 125	Private and UAS Pilot Operations	
AS 220	Uncrewed Aircraft Systems	3
AS 235	Uncrewed Aircraft Systems Operation and Cross-Country Data Entry	3
AS 309	Aerodynamics	3
AS 310	Aircraft Performance	3
AS 322	Operational and Industrial Aspects of UAS	3

AS 323	Crew Resource Management for UAS	3
AS 324	Global Unmanned Aircraft Systems (UAS) Regulations	3
AS 325	Dronealism and Cinematography	3
AS 403	Uncrewed Sensing Systems	3
AS 405	Aviation Law	3
AS 473	Operational Applications in Uncrewed Aircraft Systems	3
AS 475	UAS Mission Execution [^]	3
AS 495W	Advanced UAS Videography	3
AT 200	Air Traffic Basics I	3
BA 201	Principles of Management	3
CI 310	Intelligence, Surveillance and Reconnaissance	3
COM 122	English Composition [#]	3
EC 200	An Economic Survey (OR Lower-Level Social Science) [#]	3
or EC 210	Microeconomics	
or EC 211	Macroeconomics	
General Education - Communications Elective [#]		6
General Education - Lower-Level Humanities [#]		3
GEO 210	Introduction to Geographic Information Systems	3
GEO 310	Advanced Geographic Information Systems	3
IT 109	Introduction to Computers and Applications [#]	3
or CS 118	Fundamentals of Computer Programming	
SF 210	Introduction to Aerospace Safety	3
MA 111	Pre-Calculus for Aviation [#]	3
or MA 120	Quantitative Methods I	
or MA 140	College Algebra	
MA 112	Applied Calculus for Aviation [#]	3
or MA 220	Quantitative Methods II	
or MA 241	Calculus and Analytical Geometry I	
PS 113	Introductory Physics I [#]	3
PSY 222	Introduction to Industrial/Organizational Psychology (OR Lower-level or Upper-level Humanities or Social Science) ^{*#}	3
PSY 326	Occupational Health & Performance (OR Upper-level Humanities or Social Science) ^{**#}	3
or PSY 345	Training and Development	
UNIV 101	College Success	1
WX 201	Survey of Meteorology [#]	3
WX 203L	Survey of Meteorology Laboratory [#]	1
or PS 113L	Introductory Physics I Laboratory	
WX 301	Aviation Weather	3

Specified Electives (12 Credits)

Choose a total of 4 courses from the list of courses below:

AT 305	Introduction to Terminal Radar Operations	3
AT 401	Advanced Terminal Radar Operations	3
BA 308	Public Administration	3
BA 311	Marketing	3
BA 328	Professional Consulting	3
BA 337	Entrepreneurship	3
BA 421	Small Business Management	3
SF 320	Human Factors in Aviation Safety	3
SIS 315	Studies in Global Intelligence I	3
SIS 323	Intelligence and Technology	3

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SIS 420	Aviation Security and Technology	3
SIS 422	Homeland Security and Technology	3
SIS 430	Emergency Management and Contingency Planning	3
WX 270	Weather Information Systems **	3
WX 364		
WX 365	Satellite and Radar Weather Interpretation *	3

Open Electives (4-7)

Open Electives	4-7
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Total Credits	120
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^ The UAS Capstone (AS 475) is intended to be a culminating experience for the Bachelor of Science in Uncrewed Aircraft Systems degree and, therefore, will be the last course taken in the UAS core after completing AS 473 UAS Flight Simulation.

* Offered in Fall Only

** Offered in Spring Only

PS 113L Spring Run Only

General Education Course

All Army ROTC students are required to complete SS 321 - U.S. Military History 1900-Present (3 credits) in order to commission.