

B.S. in Pilot Operations

The Bachelor of Science in Pilot Operations (BSPO) provides graduates of the program the necessary knowledge, skills, and abilities to secure meaningful careers as pilots in the aviation industry.

This degree has been designed specifically to support pilots. As demand for pilots grows in the aviation industry, promotability and leadership in the profession will be decided by those possessing critical advanced knowledge, research skills and industry-related educational accomplishment. The BSPO provides an opportunity for pilot professionals to leverage their experience and credentials in a way that can create a valuable competitive advantage in this dynamic industry.

Enrollment into the BSPO will be limited to students who have a minimum of an FAA Private Pilot's License, an ICAO equivalent rating, or military pilots. Students who are working on their initial license and have not completed and passed their private pilot check ride will not be qualified for the BSPO.

The BSPO awards college credit for current certifications and is offered fully online with additional options for other learning modalities. The BSPO degree takes a balanced approach with integrated and interdisciplinary curriculum rooted in areas of 1) technical understanding, 2) aviation safety, 3) leadership, and 4) Aviation Legislation and Law:

- 1) Technical understanding: The student will demonstrate knowledge and understanding of the essential operating systems of aircraft as they relate to fundamental pilot operations. Topics include aerodynamics, flight physiology, electrical systems, airframe systems, avionics, engine theory, meteorology, and aviation weather.
- 2) Aviation safety: The student will demonstrate an understanding and application of the scientific principles and programs related to aviation safety as they correlate with aircraft operations. Topics include human factors, aircraft accident investigation, and aviation safety program management.
- 3) Leadership: The student will engage to present an understanding and application of basic management concepts to achieve greater leadership opportunities within aviation flight organizations. Topics include airport management, corporate and business aviation, and management principles.
- 4) Aviation Legislation and Law: The student will apply fundamental concepts in National and International Legislation and Law as they pertain to the aviation industry. Topics include Aviation Legislation, regulations and licensure pursuant to Commercial/Private Instrument Pilot Operations and Global Legal constructs.

Estimated Cost of Attendance

Students will:

- Demonstrate knowledge of the essential operating systems of aircraft as they relate to fundamental pilot operations.
- Apply scientific principles and programs related to aviation safety as they correlate with aircraft operations.
- Develop foundational management knowledge and skills needed to achieve greater leadership opportunities within aviation flight organizations.
- Apply fundamental concepts in national and international legislation and law as they pertain to the aviation industry.

DEGREE REQUIREMENTS

General Education

General Education

Embry-Riddle courses in the general education categories of Communication Theory and Skills, Humanities, Social Sciences, Physical and Life Science, Mathematics, and Computer Science may be chosen from as listed, assuming prerequisites are met. Courses from other institutions are acceptable if they fall into these broad categories and are at the level specified.

Communication Theory and Skills

Any Communication Theory and Skills above ENGL 106 9

Humanities

Lower-Level Humanities (Any Lower or Upper Level Humanities) 3

Upper-Level Humanities (Any Upper Level Humanities) 3

Social Sciences

Any Social Science 6

Physical Science

Physical Science 6

Mathematics

Any College Algebra or Higher Math Series 6

Computer Science

Any Computer Science 3

Total Credits 36

Core/Major

BSPO Core

ASCI 121L Airmen Knowledge Test Preparation 1

ASCI 121 Private Pilot Operations 5

ASCI 222 Instrument Pilot Operations 3

ASCI 333 Commercial Pilot Operations 3

ASCI 254 Aviation Legislation 3

ASCI 301 Introduction to Air Traffic Control 3

ASCI 309 Aerodynamics 3

ASCI 357 Flight Physiology 3

ASCI 412 Corporate and Business Aviation 3

ASCI 426 Airport Management in ATM 3

ASCI 491 Operational Applications in Aeronautics 3

AMNT 260 Aircraft Electrical Systems Theory 3

AMNT 271 Airframe Systems and Applications 3

AMNT 272 Fundamentals of Aircraft Avionics 3

AMNT 281 Turbine Engine Theory and Applications 3

AMNT 416 Aviation Maintenance Management: A Global Perspective 3

MGMT 201 Principles of Management 3

BSAS 320 Human Factors in Aviation Safety 3

BSAS 330 Aircraft Accident Investigation 3

BSAS 335 Mechanical and Structural Factors in Aviation Safety 3

BSAS 409 Aviation Safety 3

BSAS 345 Aviation Safety Program Management 3

WEAX 201 Meteorology I 3

WEAX 301 Aviation Weather 3

Total Credits 72

Electives

Open Electives 12

Total Degree Requirements 120

Plan of Study (BSPO)

Year One

Term 1		Credits
	Communication Theory and Skills above ENGL 106	3
	College Algebra or Higher Math Series	3
	Credits Subtotal	6.0
Term 2		
	Communication Theory and Skills above ENGL 106	3
	College Algebra or Higher Math Series	3
	Credits Subtotal	6.0
Term 3		
	Communication Theory and Skills above ENGL 106	3
	Computer Science Elective	3
	Credits Subtotal	6.0
Term 4		
	Humanities LL	3
	Social Science	3
	Credits Subtotal	6.0
Term 5		
	Social Science	3
	Open Elective	3
	Credits Subtotal	6.0
	Credits Total:	30.0

Year Two

Term 1		Credits
	Physical Science/Physics	3
	Physical Science/Physics	3
	Credits Subtotal	6.0
Term 2		
ASCI 121	Private Pilot Operations	5
ASCI 121L	Airmen Knowledge Test Preparation	1
	Credits Subtotal	6.0
Term 3		
ASCI 222	Instrument Pilot Operations	3
ASCI 254	Aviation Legislation	3
	Credits Subtotal	6.0
Term 4		
AMNT 260	Aircraft Electrical Systems Theory	3
AMNT 271	Airframe Systems and Applications	3
	Credits Subtotal	6.0
Term 5		
AMNT 272	Fundamentals of Aircraft Avionics	3
AMNT 281	Turbine Engine Theory and Applications	3
	Credits Subtotal	6.0
	Credits Total:	30.0

Year Three

Term 1		Credits
MGMT 201	Principles of Management	3
WEAX 201	Meteorology I	3
	Credits Subtotal	6.0
Term 2		
	Humanities UL	3

ASCI 333	Commercial Pilot Operations	3
	Credits Subtotal	6.0
Term 3		
ASCI 301	Introduction to Air Traffic Control	3
ASCI 309	Aerodynamics	3
	Credits Subtotal	6.0
Term 4		
BSAS 320	Human Factors in Aviation Safety	3
BSAS 330	Aircraft Accident Investigation	3
	Credits Subtotal	6.0
Term 5		
BSAS 335	Mechanical and Structural Factors in Aviation Safety	3
	Open Elective	3
	Credits Subtotal	6.0
	Credits Total:	30.0

Year Four

Term 1		Credits
ASCI 357	Flight Physiology	3
ASCI 412	Corporate and Business Aviation	3
	Credits Subtotal	6.0
Term 2		
AMNT 416	Aviation Maintenance Management: A Global Perspective	3
BSAS 345	Aviation Safety Program Management	3
	Credits Subtotal	6.0
Term 3		
BSAS 409	Aviation Safety	3
WEAX 301	Aviation Weather	3
	Credits Subtotal	6.0
Term 4		
ASCI 426	Airport Management in ATM	3
	Open Elective	3
	Credits Subtotal	6.0
Term 5		
ASCI 491	Operational Applications in Aeronautics	3
	Open Elective	3
	Credits Subtotal	6.0
	Credits Total:	30.0

Total Degree Requirements 120

BSPO-MSA 4+1 Combined Pathway Program: Accelerated opportunity to earn an MSA

This program is for students who are committed to continuing their education through the Master's degree. This fast-paced program allows qualifying students the opportunity to complete both the Bachelor of Science in Pilot Operations (BSPO) and the Master of Science in Aeronautics (MSA) in five academic years. While a bachelor's degree will afford the student qualifications toward entry-level and management positions in aviation, the addition of a master's degree will enable graduates opportunities for enhanced global leadership and larger income potential.

Students who are accepted in the BSPO-MSA 4+1 combined pathway program must complete a minimum of 75 credit hours toward the BSPO degree; all core courses must be taken. Students must confer with an advisor to ensure that the courses selected are suitable (a grade of B or better must be achieved). Upon completion of the BSPO requirements, students will be enrolled in the MSA and can complete their degree in

one year. In any graduate course taken by an undergraduate student, a grade of B or better must be earned. If a grade of C or F is earned in any of the courses taken in lieu of the elective courses in the BSPO degree, the student will be removed from the program, have credit awarded to the BSPO degree only, and may continue to complete the BSPO degree.

As a minimum, the applicant must have at least a 3.00 GPA. Students initiate program acceptance through their Academic Advisor or Campus Advisor; to help ensure program criteria are met. Student Advisor will complete the request for processing into the 4+1 program.