

B.S. in Air Traffic Management

The Bachelor of Science in Air Traffic Management is offered at the Daytona Beach, Florida, campus and the Prescott, Arizona, campus of Embry-Riddle Aeronautical University. Students learn air traffic procedures, safety protocols and communication skills in aviation-focused environments supported by faculty and training resources.

At the **Daytona Beach Campus**, the Bachelor of Science in Air Traffic Management is housed in the Department of Applied Aviation Sciences in the College of Aviation. The program participates in the FAA's Enhanced Air Traffic Collegiate Training Initiative (AT-CTI). Graduates may enter FAA facilities for controller training if they pass the Air Traffic Skills Assessment (ATSA) exam and meet medical and security requirements. Training includes use of an interactive air traffic control lab. Courses take place in the College of Aviation building, which includes simulation labs, a weather center and meteorology labs. The campus is located adjacent to an international airport and maintains aircraft and flight simulation devices. The Air Traffic Management program is accredited by the Aviation Accreditation Board International (AABI).

At the **Prescott Campus**, the Bachelor of Science in Air Traffic Management is housed in the Department of Aeronautical Science in the College of Aviation. Students complete coursework that incorporates computer-based simulation training in areas of air traffic control, including uncrewed aircraft. The program participates in the Enhanced Air Traffic-Collegiate Training Initiative (AT-CTI), with coursework aligned with FAA training standards. Graduates of Enhanced AT-CTI programs may be placed in FAA facilities for localized training. The program includes exposure to procedures and operations consistent with those used in FAA air traffic control facilities. The campus maintains aircraft and flight simulation devices used for training.

Program-Level Student Learning Outcomes

Students will:

- Apply accepted practices in air traffic management to analyze a cumulative knowledge of collaborative air traffic management, traffic flow management, and advanced air traffic management procedures.
- Conduct operations in the en route air traffic control environment related to non-radar separation and procedures.
- Conduct operations using high-fidelity simulation in the en route air traffic control environment related to radar separation and procedures.
- Recall basic air traffic control information, including its history, mission, and duty priority.
- Conduct operations using high-fidelity simulation in a high volume, complex terminal radar environment related to radar separation and procedures.
- Conduct operations using high-fidelity simulation in a low volume terminal radar environment related to radar separation and procedures.
- Conduct operations using high-fidelity simulation in the airport terminal environment related to VFR Control Tower operations.

Daytona Beach Program Requirements

General Education Requirements	36
Core Requirements	31
Program Support Courses	12
Aviation Related Minor or Breadth Area	15
Electives	26
Total Credits	120

General Education Requirements

Communication	9
Humanities - Lower Level	3
Social Sciences - Lower Level	3
Humanities/Social Sciences - Lower or Upper Level	3
Humanities/Social Sciences - Upper Level	3
Computer Science/Information Technology	3
Mathematics	6
MATH 111	Pre-calculus for Aviation
MATH 112	Applied Calculus for Aviation
Physical/Life Sciences	6
WEAX 201	Introduction to Meteorology
Total Credits	36

Core Requirements

ATMG 101	Air Traffic Student Success Seminar	1
ATMG 202	Introduction to Air Traffic Management	3
ATMG 305	Introduction to Terminal Radar Operations	3
ATMG 306	Safety in Air Traffic Management	3
ATMG 307	Global Harmonization in Air Traffic Management	3
ATMG 315	Introduction to Air Traffic Control Tower	3
ATMG 401	Advanced Terminal Radar Operations	3
ATMG 404	Introduction to En Route Operations	3
ATMG 405	Advanced En Route Operations	3
ATMG 415	Advanced Air Traffic Control Tower	3
ATMG 425	Collaborative Air Traffic Management	3
Total Credits		31

Program Support Courses

AVMG 408	Airport Management	3
AVSF 210	Introduction to Aerospace Safety	3
MGMT 201	Principles of Management	3
WEAX 301	Aviation Weather	3
Total Credits		12

Aviation Related Minor or Breadth Area

Aviation Related Minor or Breadth Area (Approved by AAS Department)	15
Total Credits	15

Electives

Open Electives - Upper Level	6
Open Electives	20
Total Credits	26

Suggested Plan of Study

Year One

Requirements	Credits
ATMG 101 - Air Traffic Student Success Seminar	1
ATMG 202 - Introduction to Air Traffic Management	3
MATH 111 - Pre-calculus for Aviation	3
WEAX 201 - Introduction to Meteorology	3
Communication	3

Physical/Life Sciences	3
Semester Hours	16
Requirements	Credits
MATH 112 - Applied Calculus for Aviation	3
Communication	3
Computer Science	3
Humanities - Lower Level	3
Open Elective	3
Semester Hours	15

Total Credits

Total Hours for All Requirements: 31

Year Two

Requirements	Credits
ATMG 305 - Introduction to Terminal Radar Operations	3
AVSF 210 - Introduction to Aerospace Safety	3
MGMT 201 - Principles of Management	3
Communication	3
Social Sciences - Lower Level	3
Semester Hours	15

Requirements	Credits
ATMG 306 - Safety in Air Traffic Management	3
AVMG 408 - Airport Management	3
Humanities/Social Sciences - Upper Level	3
Humanities/Social Sciences - Lower or Upper Level	3
Open Elective	3
Semester Hours	15

Total Credits

Total Hours for All Requirements: 30

Year Three

Requirements	Credits
ATMG 315 - Introduction to Air Traffic Control Tower	3
ATMG 401 - Advanced Terminal Radar Operations	3
ATMG 415 - Advanced Air Traffic Control Tower	3
Open Elective - Upper Level	3
Open Elective	3
Semester Hours	15

Requirements	Credits
ATMG 307 - Global Harmonization in Air Traffic Management	3
ATMG 404 - Introduction to En Route Operations	3
WEAX 301 - Aviation Weather	3
Open Elective	2
Open Elective - Upper Level	3
Semester Hours	14

Total Credits

Total Hours for All Requirements: 29

Year Four

Requirements	Credits
ATMG 405 - Advanced En Route Operations	3
ATMG 425 - Collaborative Air Traffic Management	3
Minor or Breadth Area	3
Minor or Breadth Area	3
Minor or Breadth Area	3
Semester Hours	15

Requirements	Credits
Open Elective (Subject to Minor Requirements)	3
Open Elective (Subject to Minor Requirements)	3
Open Elective (Subject to Minor Requirements)	3
Minor or Breadth Area	3
Minor or Breadth Area	3
Semester Hours	15

Total Credits

Total Hours for All Requirements: 30

Prescott Program Requirements

General Education Requirements	36
Core Requirements	31
Program Support Courses	12
Minor	15
Electives	26
Total Credits	120

Program Details

The Bachelor of Science in Air Traffic Management program requires successful completion of a minimum of 120 credit hours, including at least 40 upper-level credit hours. The program may be completed in eight semesters, or four years, assuming appropriate background and full-time enrollment. Students pursuing this undergraduate degree must earn a minimum cumulative grade point average (CGPA) of 2.00 for all work completed at the University. Students must also complete an approved minor field of study. The courses necessary to earn this degree are listed below.

Students should be aware that many courses have prerequisites and/or corequisites. Students are responsible for ensuring that all prerequisite and degree requirements are met prior to enrollment in advanced coursework. Air traffic controllers are required to possess a current FAA Second Class Medical Certificate or higher to receive and exercise the privileges of an FAA Air Traffic Controller certificate; however, a medical certificate is not required for enrollment in the degree program or Air Traffic Management coursework. Prospective air traffic controllers must be able to complete their university education and enter the FAA Air Traffic Control Academy prior to reaching their 31st birthday and must be U.S. citizens.

General Education Requirements

Communication	9
Humanities - Lower Level	3
Social Sciences - Lower Level	3
Humanities/Social Sciences - Lower or Upper Level	3

Humanities/Social Sciences - Upper Level	3
Computer Science/Information Technology	3
Mathematics	6
MATH 111 Pre-calculus for Aviation	
MATH 112 Applied Calculus for Aviation	
Physical/Life Sciences *	6
WEAX 201 Introduction to Meteorology	
Total Credits	36

* Physical and Life Science elective requires a lab.

Core Requirements

ATMG 101	Air Traffic Student Success Seminar	1
ATMG 202	Introduction to Air Traffic Management	3
ATMG 305	Introduction to Terminal Radar Operations	3
ATMG 306	Safety in Air Traffic Management	3
ATMG 307	Global Harmonization in Air Traffic Management	3
ATMG 315	Introduction to Air Traffic Control Tower	3
ATMG 401	Advanced Terminal Radar Operations	3
ATMG 404	Introduction to En Route Operations	3
ATMG 405	Advanced En Route Operations	3
ATMG 415	Advanced Air Traffic Control Tower	3
ATMG 425	Collaborative Air Traffic Management	3
Total Credits		31

Program Support Courses

AVMG 408	Airport Management	3
AVSF 210	Introduction to Aerospace Safety	3
MGMT 201	Principles of Management	3
WEAX 301	Aviation Weather	3
Total Credits		12

Minor

Minor	15
Total Credits	15

Electives

Open Electives - Upper Level	6
Open Electives	20
Total Credits	26

Suggested Plan of Study

Year One

Requirements	Credits
ATMG 101 - Air Traffic Student Success Seminar	1
COMM 122 - English Composition	3
MATH 111 - Pre-calculus for Aviation	3
Computer Science	3
Open Elective	3
Semester Hours	13

Requirements	Credits
ATMG 202 - Introduction to Air Traffic Management	3
MATH 112 - Applied Calculus for Aviation	3

PHYS 113 - Introductory Physics I	3
WEAX 201 - Introduction to Meteorology	3
Minor Course	3
Semester Hours	15

Total Credits

Total Hours for All Requirements: 28

Year Two

Requirements	Credits
ATMG 305 - Introduction to Terminal Radar Operations	3
ATMG 306 - Safety in Air Traffic Management	3
MGMT 201 - Principles of Management	3
Social Sciences - Lower Level	3
Minor Course	3
Semester Hours	15

Requirements	Credits
ATMG 401 - Advanced Terminal Radar Operations	3
AVMG 408 - Airport Management	3
Humanities - Lower Level	3
PSYC 101 or PSYC 222 or Humanities/Social Sciences - Lower or Upper Level	3
Minor Course	3
Semester Hours	15

Total Credits

Total Hours for All Requirements: 30

Year Three

Requirements	Credits
ATMG 307 - Global Harmonization in Air Traffic Management	3
ATMG 315 - Introduction to Air Traffic Control Tower	3
ATMG 404 - Introduction to En Route Operations	3
WEAX 301 - Aviation Weather	3
Open Elective - Upper Level	3
Semester Hours	15

Requirements	Credits
ATMG 405 - Advanced En Route Operations	3
ATMG 408 - En Route Radar Associate (or Minor Course or Open Elective)	3
AVMG 415 - Airline Management (or Minor Course or Open Elective)	3
Humanities/Social Sciences - Upper Level	3
Open Elective	3
Minor Course	3
Semester Hours	18

Total Credits

Total Hours for All Requirements: 33

Year Four

Requirements	Credits
ATMG 325 - Ramp Control (or Open Elective)	3
ATMG 415 - Advanced Air Traffic Control Tower	3
Communication	3
Open Elective	3
Minor Elective	3
Semester Hours	15

Requirements	Credits
ATMG 425 - Collaborative Air Traffic Management	3
AVSF 210 - Introduction to Aerospace Safety	3
Communication	3
Open Elective - Upper Level	3
Open Elective	2
Semester Hours	14

Total Credits

Total Hours for All Requirements: 29