

# B.S. in Pilot Operations

The Bachelor of Science in Pilot Operations is designed for undergraduate students with an interest in aeronautical science who are already licensed pilots. The program supports preparation for roles in aviation operations and leadership and includes instruction from faculty with industry experience.

At the **Worldwide & Online Campus**, the Bachelor of Science in Pilot Operations is delivered in an online format that allows students to complete coursework remotely. The program may be completed in approximately two years, depending on prior coursework and enrollment. Students who hold a multi-engine Airline Transport Pilot (ATP) certificate or are commercial/instrument rated with additional ratings, such as multi-engine, flight dispatcher, flight engineer or jet type ratings, may transfer up to 45 credits toward the 120-credit degree. *Graduates from the Worldwide Bachelor of Science in Pilot Operations are not eligible to apply for a restricted privileges airline transport pilot (R-ATP) certificate.*

## Program-Level Student Learning Outcomes

### Students will:

- Apply scientific principles and programs related to aviation safety as they correlate with aircraft operations.
- Exhibit foundational managerial 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.
- Demonstrate knowledge of the essential operating systems of aircraft as they relate to fundamental pilot operations.

## Worldwide Program Requirements

|                                |            |
|--------------------------------|------------|
| General Education Requirements | 36         |
| Core Requirements              | 72         |
| Electives                      | 12         |
| <b>Total Credits</b>           | <b>120</b> |

## Program Details

The Bachelor of Science in Pilot Operations requires successful completion of a minimum of 120 credit hours. Students enrolled in the Worldwide Undergraduate Online program may complete the degree in 20 terms, or approximately four years, assuming full-time enrollment and continuous progress. Students pursuing this undergraduate degree must earn a minimum cumulative grade point average (CGPA) of 2.00 for all work completed at the University. The courses required 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 satisfied prior to enrollment in advanced coursework. The suggested plan of study is provided as a guide. A student's actual plan of study may vary based on term of admission, course availability, transfer credit, and other academic considerations. Students should consult with their academic advisor to develop an individualized plan of study.

The curriculum integrates coursework in pilot operations, aviation maintenance, aviation safety, air traffic management, meteorology, and aviation management to prepare students for professional aviation careers. Students should work closely with their academic advisor to ensure prerequisite requirements are met and courses are completed in the recommended sequence.

## General Education Requirements

|                                   |   |
|-----------------------------------|---|
| Communication                     | 9 |
| Any Communication above COMM 106  |   |
| Humanities - Lower or Upper Level | 3 |

|                                           |           |
|-------------------------------------------|-----------|
| Social Sciences - Lower or Upper Level    | 6         |
| Humanities/Social Sciences - Upper Level  | 3         |
| Computer Science/Information Technology   | 3         |
| Mathematics                               | 6         |
| Any College Algebra or Higher Math Series |           |
| Physical/Life Sciences                    | 6         |
| Physical Sciences/Physics                 |           |
| <b>Total Credits</b>                      | <b>36</b> |

## Core Requirements

|                      |                                                       |           |
|----------------------|-------------------------------------------------------|-----------|
| ASCI 121W            | Private Pilot Operations                              | 5         |
| ASCI 121L            | Airman Knowledge Test Preparation                     | 1         |
| ASCI 221             | Instrument Pilot Operations                           | 3         |
| ASCI 321W            | Commercial Pilot Operations                           | 3         |
| ASCI 254             | Aviation Legislation                                  | 3         |
| ASCI 257             | Flight Physiology                                     | 3         |
| ASCI 301             | Introduction to Air Traffic Control                   | 3         |
| ASCI 309             | Aerodynamics                                          | 3         |
| ASCI 412             | Corporate and Business Aviation                       | 3         |
| ASCI 426             | Airport Management in Air Traffic Management          | 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         |
| AVSF 320             | Human Factors in Aviation Safety                      | 3         |
| AVSF 330             | Aircraft Accident Investigation                       | 3         |
| AVSF 335             | Mechanical and Structural Factors in Aviation Safety  | 3         |
| AVSF 345             | Aviation Safety Program Management                    | 3         |
| AVSF 409             | Aviation Safety                                       | 3         |
| MGMT 201             | Principles of Management                              | 3         |
| WEAX 201             | Introduction to Meteorology                           | 3         |
| WEAX 301             | Aviation Weather                                      | 3         |
| <b>Total Credits</b> |                                                       | <b>72</b> |

## Electives

|                      |           |
|----------------------|-----------|
| Open Electives       | 12        |
| <b>Total Credits</b> | <b>12</b> |

## Suggested Plan of Study

### Year One

| Requirements                          | Credits  |
|---------------------------------------|----------|
| Communication above COMM 106          | 3        |
| College Algebra or Higher Math Series | 3        |
| <b>Semester Hours</b>                 | <b>6</b> |

| Requirements                          | Credits  |
|---------------------------------------|----------|
| Communication above COMM 106          | 3        |
| College Algebra or Higher Math Series | 3        |
| <b>Semester Hours</b>                 | <b>6</b> |

| Requirements                 | Credits  |
|------------------------------|----------|
| Communication above COMM 106 | 3        |
| Computer Science             | 3        |
| <b>Semester Hours</b>        | <b>6</b> |

| Requirements                                 | Credits  |
|----------------------------------------------|----------|
| Humanities - Lower Level or Upper Level      | 3        |
| Social Sciences - Lower Level or Upper Level | 3        |
| <b>Semester Hours</b>                        | <b>6</b> |

| Requirements                                 | Credits  |
|----------------------------------------------|----------|
| Social Sciences - Lower Level or Upper Level | 3        |
| Open Elective                                | 3        |
| <b>Semester Hours</b>                        | <b>6</b> |

### Total Credits

Total Hours for All Requirements: 30

### Year Two

| Requirements              | Credits  |
|---------------------------|----------|
| Physical Sciences/Physics | 3        |
| Physical Sciences/Physics | 3        |
| <b>Semester Hours</b>     | <b>6</b> |

| Requirements                                  | Credits  |
|-----------------------------------------------|----------|
| ASCI 121W - Private Pilot Operations          | 5        |
| ASCI 121L - Airman Knowledge Test Preparation | 1        |
| <b>Semester Hours</b>                         | <b>6</b> |

| Requirements                           | Credits  |
|----------------------------------------|----------|
| ASCI 221 - Instrument Pilot Operations | 3        |
| ASCI 254 - Aviation Legislation        | 3        |
| <b>Semester Hours</b>                  | <b>6</b> |

| Requirements                                  | Credits  |
|-----------------------------------------------|----------|
| AMNT 260 - Aircraft Electrical Systems Theory | 3        |
| AMNT 271 - Airframe Systems and Applications  | 3        |
| <b>Semester Hours</b>                         | <b>6</b> |

| Requirements                                      | Credits  |
|---------------------------------------------------|----------|
| AMNT 272 - Fundamentals of Aircraft Avionics      | 3        |
| AMNT 281 - Turbine Engine Theory and Applications | 3        |
| <b>Semester Hours</b>                             | <b>6</b> |

### Total Credits

Total Hours for All Requirements: 30

### Year Three

| Requirements                        | Credits |
|-------------------------------------|---------|
| MGMT 201 - Principles of Management | 3       |

|                                        |   |
|----------------------------------------|---|
| WEAX 201 - Introduction to Meteorology | 3 |
|----------------------------------------|---|

|                       |          |
|-----------------------|----------|
| <b>Semester Hours</b> | <b>6</b> |
|-----------------------|----------|

| Requirements                             | Credits  |
|------------------------------------------|----------|
| Humanities/Social Sciences - Upper Level | 3        |
| ASCI 321W - Commercial Pilot Operations  | 3        |
| <b>Semester Hours</b>                    | <b>6</b> |

| Requirements                                   | Credits  |
|------------------------------------------------|----------|
| ASCI 301 - Introduction to Air Traffic Control | 3        |
| ASCI 309 - Aerodynamics                        | 3        |
| <b>Semester Hours</b>                          | <b>6</b> |

| Requirements                                | Credits  |
|---------------------------------------------|----------|
| AVSF 320 - Human Factors in Aviation Safety | 3        |
| AVSF 330 - Aircraft Accident Investigation  | 3        |
| <b>Semester Hours</b>                       | <b>6</b> |

| Requirements                                                    | Credits  |
|-----------------------------------------------------------------|----------|
| AVSF 335 - Mechanical and Structural Factors in Aviation Safety | 3        |
| Open Elective                                                   | 3        |
| <b>Semester Hours</b>                                           | <b>6</b> |

### Total Credits

Total Hours for All Requirements: 30

### Year Four

| Requirements                               | Credits  |
|--------------------------------------------|----------|
| ASCI 257 - Flight Physiology               | 3        |
| ASCI 412 - Corporate and Business Aviation | 3        |
| <b>Semester Hours</b>                      | <b>6</b> |

| Requirements                                                     | Credits  |
|------------------------------------------------------------------|----------|
| AMNT 416 - Aviation Maintenance Management: A Global Perspective | 3        |
| AVSF 345 - Aviation Safety Program Management                    | 3        |
| <b>Semester Hours</b>                                            | <b>6</b> |

| Requirements                | Credits  |
|-----------------------------|----------|
| AVSF 409 - Aviation Safety  | 3        |
| WEAX 301 - Aviation Weather | 3        |
| <b>Semester Hours</b>       | <b>6</b> |

| Requirements                                            | Credits  |
|---------------------------------------------------------|----------|
| ASCI 426 - Airport Management in Air Traffic Management | 3        |
| Open Elective                                           | 3        |
| <b>Semester Hours</b>                                   | <b>6</b> |

| Requirements                                       | Credits  |
|----------------------------------------------------|----------|
| ASCI 491 - Operational Applications in Aeronautics | 3        |
| Open Elective                                      | 3        |
| <b>Semester Hours</b>                              | <b>6</b> |

### **Total Credits**

Total Hours for All Requirements: 30

### **Estimated Cost of Attendance**

Estimated Cost of Attendance: California Student Information (<https://catalog.erau.edu/student-life/student-affairs/california-student/>)