INSTITUTE FOR AIR SCIENCE

BAYLOR UNIVERSITY

THE DEGREE

The Bachelor of Science in Aviation Sciences (B.S.A.) is a four-year undergraduate program with multiple options so you can serve on the ground or take to the skies. While at Baylor, you will have exposure to all the energizing student life activities you’d expect from a Big 12 University, with a faith-based community that fosters personal and professional growth. Baylor prepares you for a full throttle career in the aeronautics industry.

MAJORS

Aviation Administration

In partnership with Baylor's Hankamer School of Business, the Aviation Administration major is for students who wish to pursue a career on the business side of the industry. You will take a variety of courses in Aviation Science, Business, and Communication, merging the individual concepts into a strong foundation that prepares you for key operational and executive positions within the aviation community.

Aviation Sciences

This major is offered for those aviation enthusiasts with the dream of never working a day in their lives because their career is simply what they love to do. There are three possible concentrations under the Aviation Sciences major and while the majority of the required courses are the same for everyone, other courses are concentration-specific and define the specialty. Those courses are offered primarily through our partner school, Texas State Technical College (TSTC), also located in Waco, TX.

CONCENTRATIONS - AVIATION SCIENCE MAJOR

Professional Pilot

Our Professional Pilot concentration propels you into the flight crew atmosphere as you attend classes thousands of feet off the ground! You will earn Commercial Pilot level qualifications, with Instrument and Multi-Engine ratings, and a Certified Flight Instructor (CFI) certificate by the time you graduate. Graduates may be eligible for a 500-hour reduction in the amount of flight hours required for the Restricted Air Transport Pilot license (required to fly for the airlines). Qualified students in the program may also enjoy the perks of an Envoy Pilot Pipeline Program that could lead to employment at American Airlines in as little as 2 years.

Aircraft Dispatch

The Aircraft Dispatch concentration is for those who want to play a vital role in daily aviation operations without ever flying a plane. Often called a “pilot on the ground”, dispatchers are responsible for planning every detail of a flight, from weather and routes, to fuel consumption and load distribution; ensuring safe and efficient functionality within the aviation industry. Dispatch students will complete all of the necessary requirements to take the FAA Aircraft Dispatch Written Exam and the Oral Practical Exam.

Air Traffic Control

In the Air Traffic Control concentration, you will learn to control aircraft from the moment they push off the gate to the second they successfully reach their final destination. You will train on state-of-the-art equipment, learning all of the necessary skills to prepare you for the rewarding yet high-stakes career as an FAA Air Traffic Controller.

OTHER OPTIONS

Secondary Major in Aviation Science

If your heart is committed to a major in another academic field, but you are still drawn to aviation, you can enroll in our Aviation Sciences Secondary Major! It requires fewer hours than the major, and you can still obtain your Private Pilot's license.

Minor in Aviation Science

Requiring 18 hours of aviation courses, the minor creates an extremely versatile education paired with your selected major of choice. It is available for students interested in learning more about the dynamic aviation industry but requires no flight training.

Possible Career Paths

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<th>Corporate Pilot</th>
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<td>Military Pilot</td>
<td>Aerial Firefighter</td>
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<td>Aviation Analyst</td>
<td>FBO Management</td>
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<td>Flight Instructor</td>
<td>Cargo Pilot</td>
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<td>Airport Management</td>
<td>Missionary Pilot</td>
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<tr>
<td>Space Exploration/Astronaut</td>
<td>Aerial Search &amp; Rescue</td>
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<tr>
<td>Weather Researcher</td>
<td>Aviation Analyst</td>
</tr>
<tr>
<td>Test Pilot</td>
<td>Simulator Instructor</td>
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</table>

Distinctive Aspects of the Baylor Aviation Science Degree

- FAA CERTIFIED PILOT TRAINING within a top quality education
- Get to the AIRLINES FASTER with our FAA approved curriculum to reduce 500 flight hours
- FLEXIBLE CHOICE of flight training providers
- Personal attention of HIGHLY QUALIFIED FACULTY
- Nationally ranked, Carnegie-classified *HIGH RESEARCH ACTIVITY* university
- Career starting opportunities with our ENVOY PIPELINE PROGRAM
- CHRISTIAN PERSPECTIVE valued and encouraged
- OLDEST continually operating university in Texas

Faculty

The faculty and staff provide an outstanding support system throughout your Baylor experience. Our students are our top priority! Small class sizes mirror the unique companionship of pilots and create an engaging learning environment offering first-name, personal relationships with professors.

William B. (Trey) Cade III, Ph.D.
Director, Baylor Institute for Air Science
Ph.D. in Physics, Utah State University, 2002
B.S. in Meteorology, Texas A&M University, 1988

Timothy J. Compton, M.Sc.
Assistant Director, Baylor Institute of Air Science
B.S. in Aeronautical Science, Saint Louis University, 2000

Contact Information

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254-710-3563
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www.baylor.edu/aviation

Baylor Institute for Air Science is a member of the Aviation Accreditation International Board, the National Business Aviation Association, Women in Aviation, International, and the University Aviation Association, a professional association that fosters excellence in collegiate aviation education.
Baylor Bachelor of Science in Aviation Sciences (BSA) Degree
2016 – 2017 Cost Estimate

Baylor Undergraduate Tuition

- Baylor’s Semester Tuition Costs (full time students) $18,998
- Semester General Student Fee (full time students) $2005

Estimated Baylor Tuition for 4-Year BSA degree $168,024

TSTC Flight Courses

- Private Pilot (66 hours) $16,500
- Instrument (54 hours) $15,400
- Intermediate (55 hours) $11,000
- Commercial (50 hours) $19,100
- Multiengine (30 hours) $12,200
- Certified Flight Instructor (19 hours) $11,500

Total Flight Training Average Costs $85,700

BSA Degree Total – Baylor tuition/fees with TSTC flight courses $253,724

Baylor Room and Board

- Residence Hall Room - 8 semesters at $3,200 per semester (rates vary) $25,600
- The Everyday All Access Meal Plan - 8 Semesters at $2,677 per semester $21,416
- Parking Pass - 4 years at $350 per year $1,400

Total Residency Expenses $48,416

Bachelor of Science in Aviation Science Degree Total (with Room/Board) $302,140

Flight costs are considered when determining a student’s financial need at Baylor. Approximately 90% of students attending Baylor receive some type of financial aid - eligible students may qualify for merit-based scholarships, need-based scholarships, grants, part-time student employment and/or student loans. Additional aviation related scholarships and grants are available, many of which renew annually, and are listed on our website at www.Baylor.edu/aviation.

*Additional costs and fees may apply.
**Posted flight course costs are estimates based on the number of hours posted next to the course and includes plane, fuel, instructor time, written exam fees, required check rides, unlimited flight simulator use, and FAA examiner fees plus a 5% cushion amount.
***All unused flight account funds are reimbursed.
****Costs may vary depending on student's individual progress and type of plane used.
Bachelor of Science in Aviation Sciences – Professional Pilot Concentration

The Professional Pilot concentration of the Bachelor of Science in Aviation Science degree is for students wanting a career as a pilot. Each student graduating with a Professional Pilot Concentration of the Bachelor of Science in Aviation Sciences degree will have flying qualifications to the Commercial Pilot level (including an instrument rating), along with a Certified Flight Instructor (CFI) certificate. This program is offered in conjunction with Texas State Technical College (TSTC) in Waco.

Bachelor of Science in Aviation Sciences - Professional Pilot Concentration........................................126 hrs total

I. Basic Requirements..................................................................................................................46 to 51 hrs

A. English Requirements (ENG) - 12 hrs

- ENG 1302 Thinking & Writing or FAS 1302 Freshman Academic Seminar
- ENG 3300 Technical and Professional Writing (Prereq: ENG/FAS 1302)
- ENG 2301 British Literature (Prereq: ENG/FAS 1302 and ENG 1304/3300)
- ENG 2306 World Literature (or 3 hours of “2000” level or above Great Texts (GTX)) (Prereq: ENG/FAS 1302 and ENG 1304/3300)

B. Foreign Language - 3 to 8 hrs

- Any foreign language through two semesters or above. A placement test may be taken to place out of one semester, with only the second 4 hr course needing to be taken OR a proficiency exam may be taken for a fee to place out of both semesters. The proficiency exam will count as a 3 hr credit.

C. Political Science (PSC) - 3 hrs

- PSC 2302 American Constitutional Development

D. Religion (REL) - 6 hrs

- REL 1310 Christian Scriptures
- REL 1350 Christian Heritage or FAS 1308 Freshman Academic Seminar: Religion
  OR
- REL 1211, 1221, and 1231 Exploring Christian Narratives I - III

E. Psychology (PSY) or Sociology (SOC) - 3 hrs

- PSY 1305 Introductory Psychology
  OR
- SOC 1305 Introduction to Sociology
F. History (HIS) - 6 hrs (Choose 2 courses)

- HIS 1305 World History to 1500
- HIS 1307 World History since 1500
- HIS 2365 History of the United States to 1877
- HIS 2366 History of the United States since 1877

G. Communication Studies (CSS) - 3 hrs

- CSS 1301 Public Communication
  OR
- CSS 1302 Speech for Business/Professional Students

H. Human Performance (HP) - 4 hrs

- Any four activity courses

I. Chapel (CHA)

- Two semesters of CHA 1088 (required, but worth no credits)

J. Advanced Electives (3000 or 400 level classes in any discipline) - 6 hrs

II. Air Pilot and Aviation Science courses

A. Air Pilot (AIRP) courses from TSTC - 11 hrs

- AIRP 1215 Private Pilot Flight
- AIRP 1255 Intermediate Flight
- AIRP 2236 Certified Flight Instructor
- AIRP 2239 Commercial Flight
- AIRP 2151 Multi-engine flight
- AIRP 2250 Instrument Flight

B. Aviation Science (AVS) courses from Baylor - 47 hrs

- Required Courses – 38 hrs
  o AVS 1300 Introduction to Aviation
  o AVS 1313 Introduction to Meteorology
  o AVS 1301 Air Navigation
  o AVS 1417 Private Pilot Ground
  o AVS 1451 Instrument Ground School
  o AVS 2337 Commercial Ground School
  o AVS 2349 Instructor Ground School
  o AVS 3310 Aviation Law
  o AVS 3311 Aircraft Accident Investigation and Prevention
  o AVS 3315 Aviation Meteorology
  o AVS 4314 Advanced Aircraft Systems
  o AVS 4315 Aerodynamics
• Elective Courses – 9 hrs (Choose 3 courses)
  o AVS 3320 Aviation Operations
  o AVS 3350 Introduction to Space Weather
  o AVS 3370 Aviation Leadership
  o AVS 4305 Special Topics in Aviation
  o AVS 4310 Aviation Management
  o AVS 4311 Meteorology (GEOG 4314)
  o AVS 4318 Avionics Systems Design (ELC 4318)
  o AVS 4323 The Environment and Economic Analysis (ENV 4323)
  o AVS 4375 Crew Resource Management
  o AVS 4386 Remote Sensing (GEO 4386)
  o AVS 4390 Internship in Aviation
  o AVS 4485 Introduction to Geographic Information Systems (GEOG 4485)
  o AVS 4487 Advanced GIS Analysis (GEOG 4487)

III. Required courses in other fields.................................................................................17 hrs

• Computer Science (CSI) 3303 Information Technology
• Math (MTH) 1321 Calculus I (prereq: Grade of C or better in MTH 1304 (Pre-calculus) or satisfactory performance on departmental placement exam)
• MTH 1322 Calculus II OR Statistics (STA) 2381 Introductory Statistical Methods (Prereqs: C or better in MTH 1321)
• Physics (PHY) 1408 General Physics for Natural Sciences I (Algebra Based) OR 1420 General Physics I (Calculus-based)
• Choose one of the following:
  o Chemistry (CHE) 1301 Basic Principles of Modern Chemistry and CHE 1101 (Lab) OR
  o Physics (PHY) 1409 General Physics for Natural Sciences II (prereq: PHY 1408 or 1420) OR
  o Physics (PHY) 1430 General Physics II (prereq: PHY 1408 or 1420, MTH 1322)
Bachelor of Science in Aviation Sciences – Aircraft Dispatch Concentration

The Aircraft Dispatch concentration of the Bachelor of Science in Aviation Science degree is for students wanting a career dealing with the safety and control of commercial flight operations. Those students who select the Aircraft Dispatch concentration will complete the necessary requirements to take FAA Dispatch Written Exam and the oral practical exam. Successful completion of these exams leads to FAA Aircraft Dispatcher certification. This program is offered in conjunction with the Texas State Technical College (TSTC) at Waco and requires Baylor students to apply to TSTC.

Bachelor of Science in Aviation Sciences – Aircraft Dispatch Concentration.........127 hrs minimum

I. Basic Requirements............................................................................................46 to 51 hrs

A. English Requirements (ENG) - 12 hrs

- ENG 1302 Thinking & Writing or FAS 1302 Freshman Academic Seminar
- ENG 3300 Technical and Professional Writing (Prereq: ENG/FAS 1302)
- ENG 2301 British Literature (Prereq: ENG/FAS 1302 and ENG 1304/3300)
- ENG 2306 World Literature (or 3 hours of “2000” level or above Great Texts (GTX)) (Prereq: ENG/FAS 1302 and ENG 1304/3300)

B. Foreign Language - 3 to 8 hrs

- Any foreign language through two semesters or above. A placement test may be taken to place out of one semester, with only the second 4 hr course needing to be taken OR a proficiency exam may be taken for a fee to place out of both semesters. The proficiency exam will count as a 3 hr credit.

C. Political Science (PSC) - 3 hrs

- PSC 2302 American Constitutional Development

D. Religion (REL) - 6 hrs

- REL 1310 Christian Scriptures
- REL 1350 Christian Heritage or FAS 1308 Freshman Academic Seminar: Religion
  OR
- REL 1211, 1221, and 1231 Exploring Christian Narratives I - III

E. Psychology (PSY) or Sociology (SOC) - 3 hrs

- PSY 1305 Introductory Psychology
  OR
- SOC 1305 Introduction to Sociology
F. History (HIS) - 6 hrs (Choose 2 courses)

- HIS 1305 World History to 1500
- HIS 1307 World History since 1500
- HIS 2365 History of the United States to 1877
- HIS 2366 History of the United States since 1877

G. Communication Studies (CSS) - 3 hrs

- CSS 1301 Public Communication
  OR
- CSS 1302 Speech for Business/Professional Students

H. Human Performance (HP) - 4 hrs

- Any four activity courses

I. Chapel (CHA)

- Two semesters of CHA 1088 (required, but worth no credits)

J. Advanced Electives (3000 or 400 level classes in any discipline) - 6 hrs

II. Air Pilot, Aviation Management, and Aviation Science Courses.........................59 hrs

A. Air Pilot (AIRP) & Aviation Management (AVIM) courses from TSTC - 15 hrs

- AVIM 1470 Fundamentals of Air Traffic Control
- AIRP 1372 Dispatch Resource Management
- AIRP 2452 Practical Dispatching I
- AIRP 2453 Practical Dispatching II

B. Aviation Science (AVS) courses from Baylor - 44 hrs

- Required Courses – 35 hrs
  - AVS 1300 Introduction to Aviation
  - AVS 1301 Air Navigation
  - AVS 1313 Introduction to Meteorology
  - AVS 1417 Private Pilot Ground School
  - AVS 1451 Instrument Ground School
  - AVS 2337 Commercial Ground School
  - AVS 3310 Aviation Law
  - AVS 3311 Aircraft Accident Investigation and Prevention
  - AVS 3315 Aviation Meteorology
  - AVS 4314 Advanced Aircraft Systems
  - AVS 4315 Aerodynamics
• Elective Courses – 9 hrs (Choose 3 courses)
  o AVS 3320 Aviation Operations
  o AVS 3350 Introduction to Space Weather
  o AVS 3370 Aviation Leadership
  o AVS 4305 Special Topics in Aviation
  o AVS 4310 Aviation Management
  o AVS 4311 Meteorology (GEOG 4314)
  o AVS 4318 Avionics Systems Design (ELC 4318)
  o AVS 4323 The Environment and Economic Analysis (ENV 4323)
  o AVS 4375 Crew Resource Management
  o AVS 4386 Remote Sensing (GEO 4386)
  o AVS 4390 Internship in Aviation
  o AVS 4485 Introduction to Geographic Information Systems (GEOG 4485)
  o AVS 4487 Advanced GIS Analysis (GEOG 4487)

III. Required courses in other fields..............................................................................17 hrs

• Computer Science (CSI) 3303 Information Technology
• Math (MTH) 1321 Calculus I (prereq: Grade of C or better in MTH 1304 (Pre-calculus) or satisfactory performance on departmental placement exam)
• MTH 1322 Calculus II OR Statistics (STA) 2381 Introductory Statistical Methods (Prereqs: C or better in MTH 1321)
• Physics (PHY) 1408 General Physics for Natural Sciences I (Algebra Based) OR 1420 General Physics I (Calculus-based)
• Choose one of the following:
  o Chemistry (CHE) 1301 Basic Principles of Modern Chemistry and CHE 1101 (Lab) OR
  o Physics (PHY) 1409 General Physics for Natural Sciences II (prereq: PHY 1408 or 1420) OR
  o Physics (PHY) 1430 General Physics II (prereq: PHY 1408 or 1420, MTH 1322)
Bachelor of Science in Aviation Sciences – Air Traffic Control Concentration

The Air Traffic Control concentration of the Bachelor of Science in Aviation Science degree is for students wanting an ATC career. This program is offered in conjunction with Texas State Technical College (TSTC) in Waco and requires Baylor students to apply to TSTC.

Air Traffic Control is selective and highly competitive. If you are considering this major, please take a look at the following criteria:

- All interested students must enroll in the Aircraft Dispatch concentration for the first year. The minimum GPA after the first year is 2.5 in order to qualify for selection.
- Students will compete for ATC concentration slots. Only the top 5 students each year will be guaranteed a position. Any additional students must compete for the remaining TSTC slots.
- Students must be US Citizens - original birth certificate and social security card will be required at registration. Males 18-26 must be registered with the Selective Service; verification will be made at registration.
- A 500 word essay on "Why I Want to Be an Air Traffic Controller" must be submitted by August 1st prior to the first Fall semester.
- Graduates must meet the FAA's medical requirements for hiring eligibility.
- Students must graduate the program by age 29. The FAA does not hire new controllers age 31 or older.

Bachelor of Science in Aviation Sciences – Air Traffic Control Concentration........ 136 hrs total

I. Basic Requirements..............................................................................................................46 to 51 hrs

A. English Requirements (ENG) - 12 hrs

- ENG 1302 Thinking & Writing or FAS 1302 Freshman Academic Seminar
- ENG 3300 Technical and Professional Writing (Prereq: ENG/FAS 1302)
- ENG 2301 British Literature (Prereq: ENG/FAS 1302 and ENG 1304/3300)
- ENG 2306 World Literature (or 3 hours of "2000" level or above Great Texts (GTX)) (Prereq: ENG/FAS 1302 and ENG 1304/3300)

B. Foreign Language - 3 to 8 hrs

- Any foreign language through two semesters or above. A placement test may be taken to place out of one semester, with only the second 4 hr course needing to be taken OR a proficiency exam may be taken for a fee to place out of both semesters. The proficiency exam will count as a 3 hr credit.

C. Political Science (PSC) - 3 hrs

- PSC 2302 American Constitutional Development

D. Religion (REL) - 6 hrs

- REL 1310 Christian Scriptures
- REL 1350 Christian Heritage or FAS 1308 Freshman Academic Seminar: Religion
  OR
- REL 1211, 1221, and 1231 Exploring Christian Narratives I - III
E. Psychology (PSY) or Sociology (SOC) - 3 hrs

- PSY 1305 Introductory Psychology
  OR
- SOC 1305 Introduction to Sociology

F. History (HIS) - 6 hrs (Choose 2 courses)

- HIS 1305 World History to 1500
- HIS 1307 World History since 1500
- HIS 2365 History of the United States to 1877
- HIS 2366 History of the United States since 1877

G. Communication Studies (CSS) - 3 hrs

- CSS 1301 Public Communication
  OR
- CSS 1302 Speech for Business/Professional Students

H. Human Performance (HP) - 4 hrs

- Any four activity courses

I. Chapel (CHA)

- Two semesters of CHA 1088 (required, but worth no credits)

J. Advanced Electives (3000 or 400 level classes in any discipline) - 6 hrs

II. Air Pilot, Aviation Management, and Aviation Science courses.....................................................68 hrs

A. Air Pilot (AIRP) and Aviation Management (AVIM) courses from TSTC - 27 hrs

- AIRP 1372 Dispatch Resource Management
- AVIM 1470 Fundamentals of Air Traffic Control
- AVIM 1371 Control Tower I
- AVIM 2372 Control Tower II
- AVIM 2270 Control Tower Operations
- AVIM 1375 Introduction to Terminal Operations
- AVIM 2373 Advanced Terminal Operations
- AVIM 1377 EnRoute Operations I
- AVIM 1376 EnRoute Operations II

B. Aviation Science (AVS) courses from Baylor - 41 hrs

- Required Courses – 32 hrs
  - AVS 1300 Introduction to Aviation
  - AVS 1313 Introduction to Meteorology
  - AVS 1301 Air Navigation
  - AVS 1417 Private Pilot Ground School
  - AVS 1451 Instrument Ground School
  - AVS 3310 Aviation Law
  - AVS 3311 Aircraft Accident Investigation and Prevention
  - AVS 3315 Aviation Meteorology
  - AVS 4314 Advanced Aircraft Systems
  - AVS 4315 Aerodynamics For Flight
• **Elective Courses - 9 hrs (Choose 3 courses)**
  - AVS 3320 Aviation Operations
  - AVS 3350 Introduction to Space Weather
  - AVS 3370 Aviation Leadership
  - AVS 4305 Special Topics in Aviation
  - AVS 4310 Aviation Management
  - AVS 4311 Meteorology (GEOG 4314)
  - AVS 4318 Avionics Systems Design (ELC 4318)
  - AVS 4323 The Environment and Economic Analysis (ENV 4323)
  - AVS 4375 Crew Resource Management
  - AVS 4386 Remote Sensing (GEO 4386)
  - AVS 4390 Internship in Aviation
  - AVS 4485 Introduction to Geographic Information Systems (GEOG 4485)
  - AVS 4487 Advanced GIS Analysis (GEOG 4487)

III. **Required courses in other fields**.................................................................17 hrs

- Computer Science (CSI) 3303 Information Technology
- Math (MTH) 1321 Calculus I (prereq: Grade of C or better in MTH 1304 (Pre-calculus) or satisfactory performance on departmental placement exam)
- MTH 1322 Calculus II OR Statistics (STA) 2381 Introductory Statistical Methods (Prereqs: C or better in MTH 1321)
- Physics (PHY) 1408 General Physics for Natural Sciences I (Algebra Based) OR 1420 General Physics I (Calculus-based)
- Choose one of the following:
  - Chemistry (CHE) 1301 Basic Principles of Modern Chemistry and CHE 1101 (Lab)
    OR
  - Physics (PHY) 1409 General Physics for Natural Sciences II (prereq: PHY 1408 or 1420)
    OR
  - Physics (PHY) 1430 General Physics II (prereq: PHY 1408 or 1420, MTH 1322)
Bachelor of Science in Aviation Sciences – Aviation Administration

The Aviation Administration major of the Bachelor of Science in Aviation Sciences degree is for students wanting a career in the business aspect of the Aviation Industry.

Bachelor of Science in Aviation Sciences – Aviation Administration.........................................................124 hrs total

I. Basic Requirements.................................................................................................................................46 to 51 hrs

A. English Requirements (ENG) - 12 hrs

- ENG 1302 Thinking & Writing or FAS 1302 Freshman Academic Seminar
- ENG 3300 Technical and Professional Writing (Prereq: ENG/FAS 1302)
- ENG 2301 British Literature (Prereq: ENG/FAS 1302 and ENG 1304/3300)
- ENG 2306 World Literature or ENG 2304 American Literature (or 3 hours of "2000" level or above Great Texts (GTX)) (Prereq: ENG/FAS 1302 and ENG 1304/3300)

B. Foreign Language - 3 to 8 hrs

- Any foreign language through two semesters or above. A placement test may be taken to place out of one semester, with only the second 4 hr course needing to be taken OR a proficiency exam may be taken for a fee to place out of both semesters. The proficiency exam will count as a 3 hr credit.

C. Political Science (PSC) - 3 hrs

- PSC 2302 American Constitutional Development

D. Religion (REL) - 6 hrs

- REL 1310 Christian Scriptures
- REL 1350 Christian Heritage or FAS 1308 Freshman Academic Seminar: Religion OR
- REL 1211, 1221, and 1231 Exploring Christian Narratives I - III

E. Psychology (PSY) or Sociology (SOC) - 3 hrs

- PSY 1305 Introductory Psychology OR
- SOC 1305 Introduction to Sociology

AVS_1501_B_4/13/16
F. History (HIS) - 6 hrs (Choose 2 courses)

- HIS 1305 World History to 1500
- HIS 1307 World History since 1500
- HIS 2365 History of the United States to 1877
- HIS 2366 History of the United States since 1877

G. Communication Studies (CSS) - 3 hrs

- CSS 1301 Public Communication
  OR
- CSS 1302 Speech for Business/Professional Students

H. Human Performance (HP) - 4 hrs

- Any four activity courses

I. Chapel (CHA)

- Two semesters of CHA 1088 (required, but worth no credits)

J. Electives (Any classes in any discipline) - 6 hrs

II. Aviation Science (AVS) courses

A. Required Courses - 24 hrs

- AVS 1300 Introduction to Aviation
- AVS 1313 Introduction to Meteorology
- AVS 3310 Aviation Law
- AVS 3311 Aircraft Accident Investigation and Prevention
- AVS 3315 Aviation Meteorology
- AVS 3370 Aviation Leadership
- AVS 4310 Aviation Management
- AVS 4375 Crew Resource Management

B. Elective Courses - 9 hrs (Choose 3 courses)

- AVS 3350 Introduction to Space Weather
- AVS 4305 Special Topics in Aviation
- AVS 4314 Advanced Aircraft Systems
- AVS 4318 Avionics Systems Design (ELC 4318)
- AVS 4323 The Environment and Economic Analysis (ENV 4323)
- AVS 4386 Remote Sensing (GEO 4386)
- AVS 4390 Internship in Aviation
- AVS 4315 Aerodynamics
- AVS 4485 Introduction to Geographic Information Systems (GEOG 4485)
- AVS 4487 Advanced GIS Analysis (GEOG 4487)
III. Business Courses........................................................................................................23 hrs

- MIS 1305 Introduction to Information Technology & Processing
- BUS 1201 Business, the Economy, and World Affairs
- ECO 2306 Principles of Microeconomics (Prereq: Cumulative GPA of 2.5)
- ECO 2307 Principles of Macroeconomics (Prereq: C in ECO 2306 and cumulative GPA of 2.5)
- ACC 2301 Survey of Accounting
- MGT 3305 Organizational Behavior
- MGT 4320 Negotiating and Conflict Resolution
- MGT 4305 Principled Leadership

IV. Required courses in other fields......................................................................................17 hrs

- LDS 1301 Introduction to Leadership
- MTH 1321 Calculus I
- STA 1380 Elementary Statistics
- Eight semester hours of laboratory science courses with appropriate labs.
Secondary Major in Aviation Sciences

The Baylor Institute for Air Science offers a Secondary Major in Aviation Sciences. Secondary Majors are for students who wish to supplement their baccalaureate degree with a rich intellectual experience in a second field of specialization outside of their primary degree. This program is offered in conjunction with Texas State Technical College (TSTC) at Waco and requires Baylor students to apply to TSTC.

**Secondary Major in Aviation Sciences**

I. Air Pilot (AIRP) courses from TSTC - 2 hrs

- AIRP 1215 Private Pilot Flight

II. Aviation Science (AVS) courses from Baylor - 31 hrs

- Required Courses – 22 hrs
  - AVS 1300 Introduction to Aviation
  - AVS 1301 Air Navigation
  - AVS 1417 Private Pilot Ground
  - AVS 3310 Aviation Law
  - AVS 3311 Aircraft Accident Investigation and Prevention
  - AVS 3315 Aviation Meteorology
  - AVS 4310 Aviation Management

- Elective Courses - 9 hrs (*Choose 3 courses*)
  - AVS 3320 Aviation Operations
  - AVS 3350 Introduction to Space Weather
  - AVS 4305 Special Topics in Aviation
  - AVS 4314 Advanced Aircraft Systems
  - AVS 4315 Aerodynamics
  - AVS 4318 Avionics Systems Design (ELC 4318)
  - AVS 4386 Remote Sensing (GEO 4386)
  - AVS 4485 Introduction to Geographic Information Systems (GEOG 4485)
MINOR IN AVIATION SCIENCES

The Aviation Sciences Minor requires 18 credit hours of the following:

The nine credit hours of required Aviation Science core courses:

AVS 1300 – Introduction to Aviation
A survey of aviation with special attention to the history and impact of aviation on society as well as its technological progress.

AVS 3311 – Aircraft Accident Investigation and Prevention
A comprehensive overview of the procedures and methods used and the skills required to investigate an aircraft accident with emphasis placed on accident prevention.

AVS 4310 - Aviation Management
Application of management concepts to the problems involved in airport operations, national air traffic control and air transportation systems.

The remaining nine credit hours of Aviation Science advanced elective courses are chosen from the following topics:

AVS 1313 – Introduction to Meteorology
AVS 3310 – Aviation Law
AVS 3315 – Advanced Aviation Meteorology
AVS 3320 – Aviation Operations
AVS 3350 – Introduction to Space Weather
AVS 3370 – Aviation Leadership
AVS 4305 – Special Topics in Aviation
AVS 4314 – Advanced Aircraft Systems
AVS 4315 – Aerodynamics
AVS 4375 – Crew Resource Management
BACHELOR OF SCIENCE IN AVIATION SCIENCE

“What can I do with my degree?”
# Flight Deck Careers

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<th>STRATEGIES</th>
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<td>Airline Pilot</td>
<td>Regional and Major Airlines</td>
<td>Seek out internships, build flight experience</td>
</tr>
<tr>
<td>Corporate Pilot</td>
<td>Individual aircraft owners, businesses, and corporations</td>
<td>Networking, internships, build flight experience</td>
</tr>
<tr>
<td>Military</td>
<td>USAF, USMC, USN, USCG, USA</td>
<td>ROTC, OCS/OTS, Warrant Officer</td>
</tr>
<tr>
<td>Missionary Pilot</td>
<td>Churches, Missionary Organizations</td>
<td>Extensive flight time, variety of ratings/endorsements and flight time (instrument, high-performance, etc.); may need mechanic skills or additional religious training</td>
</tr>
<tr>
<td>Law Enforcement</td>
<td>Federal, State, and local law enforcement agencies</td>
<td>Law enforcement certification</td>
</tr>
<tr>
<td>Test Pilot</td>
<td>NASA, airlines, military, general aviation</td>
<td>Extensive flight experience, graduate military or civilian test pilot school</td>
</tr>
<tr>
<td>Sight Seeing</td>
<td>Tourism companies or depts.</td>
<td>Letter of authorization from FSDO, may need 500+ flight hours for insurance purposes</td>
</tr>
<tr>
<td>Search and Rescue</td>
<td>Military, law enforcement, fire/rescue agencies</td>
<td>Civil Air Patrol, law enforcement certification, ...</td>
</tr>
<tr>
<td>Aerial Firefighting</td>
<td>Fire/rescue agencies, ...</td>
<td>Extensive flight time (jet, high-performance, or multi-engine may be required), extensive single-engine time a big plus</td>
</tr>
<tr>
<td>Flight Instructor</td>
<td>Part 61 and 141 schools</td>
<td>Display professionalism, competence as pilot and instructor, desire to teach</td>
</tr>
<tr>
<td>Personal Pilot</td>
<td>Individuals</td>
<td>Network</td>
</tr>
<tr>
<td>Cargo Pilot</td>
<td>FedEx, UPS, DHL, Atlas, and other airlines, USPS</td>
<td>(see airline pilot), night experience a plus</td>
</tr>
<tr>
<td>Agriculture Pilot</td>
<td>Farms, Dept. of Agriculture</td>
<td>Extensive flight experience</td>
</tr>
<tr>
<td>Simulator Instructor</td>
<td>Part 61 and 141 flight schools, type-rating schools, corporate, and airlines</td>
<td>Instruction experience in aircraft type being simulated</td>
</tr>
</tbody>
</table>
## Aviation Logistics Careers

<table>
<thead>
<tr>
<th>AREAS</th>
<th>EMPLOYERS</th>
<th>STRATEGIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Factors</td>
<td>Airlines</td>
<td></td>
</tr>
<tr>
<td>Aircraft Design</td>
<td>Aircraft Manufacturers</td>
<td>Engineering degree</td>
</tr>
<tr>
<td>Safety Manager</td>
<td>Corporations, airlines, FBO’s</td>
<td>Supervisory experience, health and safety experience</td>
</tr>
<tr>
<td>Aviation Analyst</td>
<td>AOPA, NTSB, FAA, NOAA</td>
<td>Statistical, analytic, or forensic training/education</td>
</tr>
<tr>
<td>Security Officer</td>
<td>TSA, municipal, regional, and international airports</td>
<td>Criminal justice classes or law-enforcement experience may help</td>
</tr>
<tr>
<td>Airport Management</td>
<td>Municipal, Regional, and International airports</td>
<td>Networking, business/management experience and/or degree</td>
</tr>
<tr>
<td>FBO Management</td>
<td>FBO’s</td>
<td>Work at an FBO as a line service technician and work your way up, business classes or degree</td>
</tr>
</tbody>
</table>

## SPACE

<table>
<thead>
<tr>
<th>AREAS</th>
<th>EMPLOYERS</th>
<th>STRATEGIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rocketry and rocket fuels</td>
<td></td>
<td>Intern, rocket clubs, engineering degrees</td>
</tr>
<tr>
<td>Space Exploration</td>
<td>NASA and private-sector commercial space companies</td>
<td>Additional education, astronaut training</td>
</tr>
<tr>
<td>Satellites</td>
<td></td>
<td>Engineering degree</td>
</tr>
<tr>
<td>Astronaut (pilot)</td>
<td></td>
<td>Additional education, astronaut training, extensive flight experience, CLEAN RECORD</td>
</tr>
<tr>
<td>High Altitude Flight Exploration and Research</td>
<td></td>
<td>High-altitude endorsement, extensive flight experience</td>
</tr>
</tbody>
</table>
RESEARCH

<table>
<thead>
<tr>
<th>AREAS</th>
<th>EMPLOYERS</th>
<th>STRATEGIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative Fuels</td>
<td>Government agencies, environmental groups, colleges and universities</td>
<td>Internships, higher education (engineering, chemistry, physics, meteorology, etc.) under-studies, A&amp;P and/or avionics certification</td>
</tr>
<tr>
<td>Pollution Transport and Diffusion</td>
<td>Government agencies, environmental groups, colleges and universities</td>
<td>Internships, higher education (engineering, chemistry, physics, meteorology, etc.) under-studies, A&amp;P and/or avionics certification</td>
</tr>
<tr>
<td>Weather Studies</td>
<td>NOAA, NASA</td>
<td>Internships, higher education (engineering, chemistry, physics, meteorology, etc.) under-studies, A&amp;P and/or avionics certification</td>
</tr>
<tr>
<td>Aerodynamics</td>
<td>Aircraft manufacturers, aircraft avionics/systems producers</td>
<td>Internships, higher education (engineering, chemistry, physics, meteorology, etc.) under-studies, A&amp;P and/or avionics certification</td>
</tr>
<tr>
<td>Navigation and Approach Systems</td>
<td>Aircraft manufacturers, aircraft avionics/systems producers</td>
<td>Internships, higher education (engineering, chemistry, physics, meteorology, etc.) under-studies, A&amp;P and/or avionics certification</td>
</tr>
<tr>
<td>Aircraft Systems</td>
<td>NOAA, environmental groups, universities and colleges</td>
<td>Internships, higher education (engineering, chemistry, physics, meteorology, etc.) under-studies, A&amp;P and/or avionics certification</td>
</tr>
<tr>
<td>Climate Change Projects</td>
<td>NOAA, environmental groups, universities and colleges</td>
<td>Internships, higher education (engineering, chemistry, physics, meteorology, etc.) under-studies, A&amp;P and/or avionics certification</td>
</tr>
</tbody>
</table>

GENERAL STRATEGIES

- Internships
- Fly as much as possible, and earn a variety of endorsements and ratings – potential employers want to see versatility, competency, and flight hours. Airlines require at least 1,500 hours just to apply.
- Volunteer
- Display confidence, good judgment and sensibility, strong work ethic, adaptability, and enthusiasm.
- Don’t let any aviation job be “beneath you”. Consider low-level entry positions at FBO’s, manufacturers, etc. to gain experience
- Network. As with any profession, it’s all about who you know. Aviation is a small, tight-knit community – so don’t burn any bridges.