

# Bachelor of Science in Aviation Technology

The Bachelor of Science in Aviation Technology (BSAT) prepares individuals for professional positions within the aviation industry. Related career opportunities are found with airlines, airports, general aviation, government organizations, education and the aerospace industry.

Within the degree there are three emphasis areas: aviation management, professional piloting, and aeronautical studies. Each emphasis has discrete program description and outcomes. The specific interests and career goals of each student determine the emphasis area to pursue. The degree includes university General Education Requirements (GERs), a common set of core courses and courses relative to each individual emphasis.

## Aviation Management Emphasis

The BSAT with the aviation management emphasis is designed to prepare graduates for management positions in all aspects of the aviation industry. The BSAT provides students not only with the organizational, human relations, and managerial skills required in aviation management, but also with the appropriate technical background.

## Professional Piloting Emphasis

Professional pilots need knowledge of aerodynamics, aircraft engine and system operation, aircraft operating limitations and performance, weather and atmospheric processes, as well as navigation and communication methods. This degree program prepares graduates for careers in professional flying and management. The special considerations and academic requirements contained in the Associate of Applied Science in Professional Piloting (<http://catalog.uaa.alaska.edu/undergraduateprograms/ctc/aas-professionalpiloting/>) also apply to this emphasis area. The FAA has authorized UAA to certify its professional piloting graduates as eligible for an Airline Transport Pilot Certificate with reduced aeronautical experience.

## Aeronautical Studies

The BSAT with the aeronautical studies emphasis is designed to help students with some college education complete a bachelor degree and transition into the aviation industry. This degree is designed to have maximum flexibility in course electives.

## Admission Requirements

- Complete the Admission Requirements for Baccalaureate Degrees. (<http://catalog.uaa.alaska.edu/academicpoliciesprocesses/admissions/undergraduate/>)
- Complete any additional admission requirements for the emphasis areas of aviation management and professional piloting described below.

- Complete any certification requirements established by applicable government agencies of applicable emphasis.

## Advising

It is strongly recommended that all students meet with an Aviation Technology Division (ATD) academic advisor each semester to review their academic progress and plan future courses. This is especially true with piloting students, as a number of their courses have Federal Aviation Administration (FAA) requirements as well.

## Special Considerations

Once enrolled in any flight training course (courses where the student is receiving flight training) at UAA, students are required to complete the course requirements within 12 months from the date of registration. Failure to do so will be considered unsatisfactory progress and will result in a failing (F) grade within that registered flight course. If a student receives a failing grade in a flight training course, the course may be repeated.

## Graduation Requirements

- Complete the General University Requirements for Baccalaureate Degrees (<http://catalog.uaa.alaska.edu/undergraduateprograms/baccalaureaterequirements/>).
- Complete the General Education Requirements for Baccalaureate Degrees (<http://catalog.uaa.alaska.edu/undergraduateprograms/baccalaureaterequirements/gers/>).
- Complete requirements from one of the following emphases.
- Complete the following major requirements with a minimum grade of C in all aviation technology courses:

Code	Title	Credits
<b>Core Courses</b>		
AMT A171	Basic Aerodynamics	2
ATA A102	Introduction to Aviation Technology	3
ATA A133	Aviation Law and Regulations	3
ATA A134	Principles of Aviation Administration	3
ATA A233	Aviation Safety	3
ATA A331	Human Factors in Aviation	3
ATA A337	Airline Operations	3
ATA A425	Civil Aviation Security	3
ATA A492	Air Transportation System Seminar	3
ATC A143	ATC Regulations	3
or ATC A147	Air Traffic Communications	
ATP A100	Private Pilot Ground School	3
ATP A235	Elements of Weather	3
ECON A102	Principles of Macroeconomics	3
PHIL A101	Introduction to Logic	3
or PHIL A201	Introduction to Philosophy	
or PHIL A301	Ethics	
or PHIL A305	Professional Ethics	

PHYS A123	College Physics I	3
PHYS A123L	College Physics I Laboratory	1
WRTG A212	Writing and the Professions	3
<b>Total</b>		<b>48</b>

Select one of the following emphasis areas and complete the listed required courses.

### Aviation Management Emphasis

The following applies to those students desiring to pursue an aviation management emphasis:

1. Completion of prerequisite for or test placement into MATH A105 or higher and WRTG A111 or higher. For testing schedule, contact the Testing Center at (907) 786-4500.

Code	Title	Credits
ACCT A201	Principles of Financial Accounting	3
ACCT A202	Principles of Managerial Accounting	3
ATA A335	Airport Operations	3
ATA A336 or ATC A440	Air Service Operations Facility Operation and Administration	3
BA A241	Business Law I	3
BA A300	Organizational Theory and Behavior	3
BA A361	Human Resource Management	3
BA A388	Globalization and Business Environment	3
BA A461	Negotiation and Conflict Management	3
ECON A101	Principles of Microeconomics	3
STAT A200	Elementary Statistics	3
	or any class for which STAT A200 is a prerequisite.	
	Choose a minimum of 18 credits of advisor-approved electives, 12 of which must be upper-division. The following are recommended elective support courses:	18

ATA A490	Advanced Topics in Aviation Technology	
ATC A325	Tools for Weather Briefing	
BA A280	Managerial Communications	
BA A347	International Marketing	
BA A376	Management Information Systems	
BA A381	Consumer Behavior and Relationship Management	
BA A460	Marketing Management	
PER A100	Fitness for Life *	
PER elective *		
PSY A380	Psychology of Stress and Coping	
<b>Total</b>		<b>51</b>

\* Maximum of 2 PER elective credits allowed.

### Professional Piloting Emphasis

The following applies to those students desiring to pursue a professional piloting emphasis:

1. Flight training costs are not included in university tuition and fees. Students must meet with the aviation academic advisor to obtain department approval to register for all flight courses. Flight training costs are based on hourly rates established for each aircraft type flown. Students will be provided with current hourly flight costs and program cost estimates when they meet with the department's academic advisor.
2. Students must pass an Federal Aviation Administration (FAA) Class II medical examination before beginning any flight training.
3. U.S. citizens must present verification of U.S. citizenship before beginning any flight or airplane simulator training. The following three methods are acceptable: an unexpired U.S. passport, an original or raised seal official copy of birth certificate, or an original or raised seal official copy of Certificate of Naturalization. Non-U.S. citizens must register and receive approval from the Transportation Security Agency before beginning any flight or simulator training. Please contact the ATD Office for information.
4. Once formally admitted to the Bachelor of Science in Aviation Technology or registered for aviation classes at UAA, all subsequent required flight training must be completed in residence at UAA. Enrolled students who receive flight training outside UAA under specific curricula will not receive credit for the corresponding UAA courses.
5. All students are required to complete a minimum of the FAA Instrument Airplane Pilot rating, the FAA Commercial Airplane Single-engine Land Pilot certificate, and the FAA Multi-engine Land Rating while in residence at UAA.
6. Military pilots may petition to have appropriate curriculum requirements awarded based on FAA pilot certificates held on a case-by-case basis.
7. Students in the professional piloting emphasis are expected to have an additional focus of study outside of aviation. This focus will include at least three courses in the outside emphasis beyond the General Education Requirements (GERs). A minor is encouraged but not required.
8. Completion of prerequisite for or test placement into MATH A105 or higher and WRTG A111 or higher. For testing schedule, contact Testing Center at (907) 786-4500.

Code	Title	Credits
ATA A415	Crew Resource Management	3
ATC A325	Tools for Weather Briefing	3
ATP A101	Pre-Professional Flying *	2
ATP A116	Instrument Ground School	3
ATP A126	Instrument Flying *	2
ATP A200	Commercial Ground School	3
ATP A218	Commercial Flying I *	1.5

ATP A219	Commercial Flying II *	1.5
ATP A220	Commercial Flying III *	2
ATP A305	Airplane Multiengine Land Rating *	2
ATP A320	Flight Dynamics	3
ATP A332	Transport Aircraft Systems	3
MATH A152	Trigonometry	3
or any class for which MATH A152 is a prerequisite		
Choose a minimum of 19 credits of advisor-approved electives, 10 of which must be upper-division. The following are recommended elective support courses:		19
ATA A134	Principles of Aviation Administration	
ATA A335	Airport Operations	
ATA A336	Air Service Operations	
ATA A490	Advanced Topics in Aviation Technology	
ATP A104	Flying Alaska Bush	
ATP A300	CFI Ground School	
ATP A301	CFI Flying *	
ATP A405	Additional CFI Rating *	
PER A100	Fitness for Life	
PER elective (must be combined with PER A100)		
PSY A380	Psychology of Stress and Coping	
<b>Total</b>		<b>51</b>

\* All flying courses require special documentation and department approval before registration.

## Aeronautical Studies Emphasis

The following applies to those students desiring to pursue an aeronautical studies emphasis:

This curriculum is designed as a flexible option for those with previous college experience and looking to move into the aviation industry.

Code	Title	Credits
ATP A433	Aerospace Physiology	3
ATA A431	Aircraft Accident Investigation	3
BA A166	Entrepreneurship and Small Business Management	3
ENGL A312	Technical Writing and Design	3
MATH A152	Trigonometry	3
or STAT A200	Elementary Statistics	
or any class for which MATH A152 or STAT A200 is a prerequisite		
TECH A302	Organizational Safety and Health	3
33 credits of advisor-approved electives		33
<b>Total</b>		<b>51</b>

**A minimum of 120 credits is required for the degree, 39 of which must be upper-division.** All elective courses must be approved by the academic advisor.

## Program Student Learning Outcomes

### Aviation Management Emphasis

At the completion of this program, students will be able to:

- Demonstrate technical knowledge of aircraft operating limitations and performance.
- Demonstrate knowledge of aviation law and regulations, and of the legal issues affecting the aviation industry.
- Demonstrate knowledge of the issues affecting aviation safety and safety management.
- Demonstrate knowledge of basic business management skills and supervisory techniques.
- Demonstrate a broad knowledge of the aviation industry.
- Demonstrate a broad knowledge of aviation management functions and techniques.

### Professional Piloting Emphasis

At the completion of this program, students will be able to:

- Demonstrate proficiency in instrument pilot, commercial pilot knowledge, and flight skills.
- Demonstrate knowledge of aviation law and regulations, and the legal issues affecting the aviation industry.
- Demonstrate knowledge of the issues affecting aviation safety and safety management.
- Demonstrate knowledge of aviation weather and of aviation weather services.
- Demonstrate a broad knowledge of the aviation industry.

### Aeronautical Studies Emphasis

At the completion of this program, students will be able to:

- Demonstrate technical knowledge of aircraft operating limitations and performance.
- Demonstrate knowledge of aviation law and regulations, and the legal issues affecting the aviation industry.
- Demonstrate knowledge of the issues affecting aviation safety and safety management.
- Demonstrate a broad knowledge of the aviation industry.