Arizona State University (Tempe campus)

Aerospace Engineering (Autonomous Vehicle Systems), BSE

Study details

Course type: Bachelor's degree
Degree: Aerospace Engineering (Autonomous Vehicle Systems), BSE ESAEAVSBSE
Study mode: Full time
Duration: 48 Month

Cost of study

Cost : 35 430 USD
Reg. fee : 85 USD
Scolarship :
Insurance : 2 765 USD

Intake/s

Jan, May, Aug

Requirements

Academic requirements

First-year students must:

- Have a 3.00 grade point average (GPA) (a "B" or better where "A"=4.00) from a secondary school. Some ASU programs may have higher admission or English proficiency requirements and may consider a minimum ACT or SAT score.
- Must have three years of high school coursework. (If you are currently in high school, ASU needs to see 9–11 grade coursework. If you have completed high school, ASU needs to see 10–12 grade coursework.)
- Must have and present a completed high school diploma or certificate.

Conditional admission

ASU may offer conditional undergraduate admission to international applicants to an on-campus program who meet the academic (aptitude) requirements but who are not proficient in English. This offer of conditional admission will give you time to improve your English proficiency before you start classes at ASU. Your conditional admission offer is good for up to three semesters, during which time you must meet one of these requirements to begin your ASU experience.

Competency requirements

International students who completed high school outside the U.S. are required to meet the following competency requirements:

- Math: four years (algebra I, geometry, algebra II and one course requiring algebra II as a prerequisite).
- Laboratory science: three years total (one year each from any of the following areas are accepted: biology, chemistry, earth science, integrated sciences and physics).

Provide evidence of English language proficiency (TOEFL IBT score of 79, a minimum IELTS score of 6.5, a minimum PTE score of 58, a minimum Duolingo English score of 105, or a minimum Cambridge English exam score of 176).

Accommodation

Provided by partner agencies

Speciality

STEM-OPT for international students on F-1 visas

This program may be eligible for an Optional Practical Training extension for up to 24 months. This OPT work authorization period may help international students gain skills and experience in the U.S. Those interested in an OPT extension should review ASU degrees that qualify for the STEM-OPT extension at ASU's International Students and Scholars Center website.

The OPT extension only applies to students on an F-1 visa and does not apply to students completing a degree through ASU Online.

Additional information
Program description

Emerging emphasis on autonomous aircraft technology and operations in military and civilian sectors signals a new era within the aeronautical community that is focused on autonomous vehicles and systems.

The BSE program in aerospace engineering with a concentration in autonomous vehicle systems provides graduates with knowledge and skills required for any career in aerospace engineering, plus those specific to unmanned aerial vehicles and systems.

The curriculum is structured to give students general exposure to the engineering of autonomous aircrafts.

Students in the aerospace engineering program are expected to attain the following outcomes:

- an ability to identify, formulate and solve complex engineering problems by applying principles of engineering, science and mathematics
- an ability to apply engineering design to produce solutions that meet specified needs, with consideration of public health, safety and welfare, as well as global, cultural, social, environmental and economic factors
- an ability to communicate effectively with a variety of audiences
- an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental and societal contexts

- an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks and meet objectives
- an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
- an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

All paths through this concentration satisfy accreditation criteria for aerospace engineering.

Concurrent program options

Students pursuing concurrent degrees (also known as a “double major”) earn two distinct degrees and receive two diplomas. Working with their academic advisors, students can create their own concurrent degree combination. Some combinations are not possible due to high levels of overlap in curriculum.

Accelerated program options

This program allows students to obtain both a bachelor's and master's degree in as little as five years. It is offered as an accelerated bachelor's plus master's degree with:

- Aerospace Engineering, MS
- Astrophysics and Astronomy, MS
- Exploration Systems Design (Instrumentation), MS
- Exploration Systems Design (Sensor Networks), MS
- Exploration Systems Design (Systems Engineering), MS
- Exploration Systems Design, MS
- Mechanical Engineering, MS
- Robotics and Autonomous Systems (Mechanical and Aerospace Engineering), MS

Acceptance to the graduate program requires a separate application. Students typically receive approval to pursue the accelerated master’s during the junior year of their bachelor's degree program.

Global opportunities

Global experience

With more than 300 Global Education program opportunities available to them, aerospace engineering students are able to tailor their experience to their unique interests and skill sets. Whether in a foreign country, in the U.S. or online, students build communication skills, learn to adapt and persevere, and are exposed to research and internships across the world, increasing their professional network.

The Ira A. Fulton Schools of Engineering recommends these programs for students majoring in aerospace engineering.

Career opportunities

Graduates with a degree in this concentration are prepared for a career in the aerospace industry, focusing on unmanned vehicles.

The aerospace engineering program has the following program educational objectives:

Through activities such as volunteering, entrepreneurial endeavors, community service, and employment, graduates of the aerospace engineering program demonstrate commitment to the Sun Devil ideals of global engagement, social embeddedness, social transformation and sustainability.

Graduates of the aerospace engineering program should have attained one or more of the following objectives within a few years after completing their degrees:

- employment in aerospace or other field in a position that capitalizes on the skills and abilities gained through the degree in aerospace engineering, leading to positions of increasing responsibility and leadership within the organization
- admission to a graduate degree program in aerospace engineering or other technical field
- admission to a professional degree program, such as law or business, in accordance with the specific interests and abilities of the graduate