Arizona State University (Tempe campus)

Chemical Engineering, BSE

Study details

Course type: Bachelor's degree
Degree: Chemical Engineering, BSE ESCHEBSE
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).

Additional requirements:

The admission standards for majors in the Ira A. Fulton Schools of Engineering, shown below, are higher than minimum university admission standards. International students must meet the same admission standards, with the possible additional requirement of a minimum English language proficiency test score. If the university requires an English proficiency test score from the applicant, then admission to engineering requires a minimum TOEFL iBT score of 79 (internet-based test, taken in a testing center), 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.

First-year admission:

1. minimum 1210 SAT combined evidence-based reading and writing plus math score or minimum 24 ACT combined score, or a minimum high school cumulative GPA of 3.00 in ASU competency courses, or class ranking in top 25% of high school class, and
2. no high school math or science competency deficiencies

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.

Transfer admission requirements:

Transfer students with fewer than 24 transferable college credit hours:

1. minimum transfer GPA of 3.00 for fewer than 24 transfer hours, and
2. no high school math or science competency deficiencies, and
3. minimum 1210 SAT combined evidence-based reading and writing plus math score (or 1140 if taken prior to March 5, 2016) or minimum 24 ACT combined score, or a minimum high school cumulative GPA of 3.00 in ASU competency courses, or class ranking in top 25% of high school class

Transfer students with 24 or more transferable college credit hours must meet either the primary or the secondary criteria (not both):

Primary criteria

1. minimum transfer GPA of 3.00 for 24 or more transfer credit hours, and
2. no high school math or science competency deficiencies (if ASU Admission Services requires submission of a high school transcript)

Secondary criteria

1. minimum transfer GPA of 2.75 for 24 or more transfer credit hours, and
2. minimum GPA of 2.75 in all critical courses for Terms 1 and 2 (students should refer to the major map for critical courses)

Additional information

Program description

Chemical engineering deals with the application of chemistry, physics and mathematics to the process of converting raw materials or chemicals into more useful or valuable forms. Chemical engineering also involves the design of valuable new materials and chemical products. The modern discipline of chemical engineering is intertwined with biology and biomedical engineering.

The BSE program offered in chemical engineering builds on a broad base of knowledge within the basic and mathematical sciences and 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:

- Chemical Engineering, MS
- Materials Science and 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

Global Education programs provide students an important opportunity to develop valuable skills and have experiences that help to grow their self-confidence and enable them to develop their communication skills, giving them an advantage.

Students learn intercultural applications of design and technology skills through hands-on learning and cultural engagement opportunities in an international setting. Participation in a Global Education program exposes students to unique environments and cultures, challenges them to adapt and persevere, helps them increase their professional and educational networks, and enhances their portfolio of experience through the kinds of hands-on research and community-based opportunities they will need to compete and succeed in today's challenging and quickly changing STEM fields.

Career opportunities

Graduates are prepared for excellent career opportunities. Chemical engineers are engaged in the development and production of a diverse range of products, including high-performance materials needed for aerospace, automotive, biomedical, electronic and environmental applications. They have traditionally played a key role in industries as varied as:

- artificial fibers
- biotechnology
- ceramics
- food
- glass
- petrochemicals
- petroleum
- plastics
- primary metals
- semiconductors
- specialty chemicals

Chemical engineering graduates are also in great demand in many newer fields, such as biomedical engineering, modern materials science (composites, superconductors) and the solution of environmental problems.