Chemical Engineering, MS

ESCHEMEMS

Program Description

Degree Awarded: MS Chemical Engineering
The chemical engineering faculty offer a graduate program leading to the MS in chemical engineering.

Areas of research emphasis include atmospheric aerosols, biomolecular engineering, biosensors, chemical therapies for neurodegenerative diseases, electrochemistry, electronic materials processing, engineering education, flexible display technology, fuel cells, inorganic membranes, process design and operations, protein synthesis, transport phenomena in living systems and water purification.

A graduate handbook detailing information on graduate studies in chemical engineering is available on the school website. For additional details, students should contact the Graduate Advising Office in the School for Engineering of Matter, Transport and Energy.

At a Glance

- **College/School:** Ira A. Fulton Schools of Engineering
- **Location:** Tempe campus or Online

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 and master's degree with:

Chemical Engineering, BSE

Acceptance to the graduate program requires a separate application. During their junior year, eligible students are advised by their academic departments to apply.
Degree Requirements

33 credit hours and a thesis, or
33 credit hours including the required applied project course (CHE 593)

Required Core (9 credit hours)
CHE 533 Transport Processes I (3)
CHE 543 Thermodynamics of Chemical Systems (3)
CHE 544 Chemical Reactor Engineering (3)

Technical Electives (15 or 18 credit hours)

Other Requirement (3 credit hours)
CHE 591 Seminar (3)

Culminating Experience (3 or 6 credit hours)
CHE 593 Applied Project (3)
CHE 599 Thesis (6)

Additional Curriculum Information
This degree has two options: a thesis option and a nonthesis option. The nonthesis option requires an applied project. Both options require a faculty advisor. All students are admitted to the nonthesis option until a faculty advisor has been secured and agrees to allow the student to change to the thesis option.

The composition of technical electives depends on the student's final culminating experience. At least one technical elective course of three credit hours must be taken outside of chemical engineering, and the academic unit must approve all elective coursework in order for the credits to be utilized on the plan of study.

Admission Requirements

Applicants must fulfill the requirements of both the Graduate College and the Ira A. Fulton Schools of Engineering.

Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree from a regionally accredited institution.

Applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in the last 60 hours of their first bachelor's degree program, or applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in an applicable master's degree program.

All applicants must submit:

1. graduate admission application and application fee
2. official transcripts  
3. personal statement  
4. resume or curriculum vitae  
5. three letters of recommendation  
6. proof of English proficiency

Additional Application Information  
An applicant whose native language is not English must provide proof of English proficiency via a minimum score of 90 on the internet-based TOEFL, regardless of current residency.

Admission to the 4+1 degree program requires a 3.50 ASU GPA (scale is 4.00 = "A") in degree-applicable courses. All applications are subject to review, and admission is not guaranteed.

Application Deadlines

Fall  
Spring  

Career Opportunities

Professionals with a Master of Science in chemical engineering have strong opportunities at all levels in chemical engineering in research, design and manufacturing at companies of all sizes, national (DOE, DOD, NASA) laboratories, and academics. Analytical skills learned in chemical engineering are also valued for other non-engineering positions.

Career examples include:

- engineer  
- engineering manager or director  
- engineering professor  
- lecturer  
- process engineer  
- research engineer

Contact Information

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