

CHEMICAL ENGINEERING, MS

Admission Requirements

Applicants for the master of science program must hold a bachelor's degree from a program that is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology at the time of graduation, or provide evidence of an equivalent academic background to the Dean of the College of Engineering and Polymer Science and the appropriate department chair.

Applicants must submit a completed Graduate School application, official undergraduate transcripts, undergraduate grade point average, three letters of recommendation, resume, and a statement of purpose. Personal statements or descriptions of post-baccalaureate experience that provide a rationale for proposed graduate study may also be submitted.

Applicants with a bachelor's degree must have an overall grade point average of 2.75 or better or 3.00 for the last two years (64 semester credits or equivalent).

Applicants whose native language is not English must have a TOEFL score of at least 79 on the internet-based TOEFL or an IELTS score of at least 6.5.

Degree Requirements

The University's Academic Requirements (See Academic Requirements in this Graduate Bulletin), the following college requirements and the department's academic requirements must all be satisfied for the master of science degrees in the College of Engineering and Polymer Science.

- Identify a three-member Advisory Committee including a major advisor before completion of 9 credit hours of coursework.
- Complete a formal Plan of Study that is acceptable to the Advisory Committee with a minimum of 24 credit hours of coursework of which no more than 6 credits are special topics courses. The formal Plan of Study may be revised upon approval of the Advisory Committee.
- Successfully (no "fail" votes) defend the thesis before the Advisory Committee, or have the Engineering Report approved by the Advisory Committee, or successfully complete the appropriate department's nonthesis option requirements.

Applicants with a bachelor's degree in a discipline other than engineering shall have completed coursework in calculus, differential equations, have one year of classical physics, and must complete:

Code	Title	Hours
CHEE 200	Material & Energy Balances	4
CHEE 225	Equilibrium Thermodynamics	4
CHEE 321	Transport Phenomena	3
CHEE 330	Chemical Reaction Engineering	3

An overall GPA of 3.0 must be maintained for these courses. These undergraduate engineering courses may be taken prior to graduate admission, or concurrently if the student has Full Admission or Provisional Admission and is enrolled for at least 9 graduate credits.

Thesis Option

Code	Title	Hours
CHEE 600	Transport Phenomena	3
CHEE 605	Chemical Reaction Engineering	3

CHEE 610	Classical Thermodynamics	3
CHEE 631	Chemical Engineering Analysis ¹	3
Select six credits of Chemical Engineering Electives ²		6
Select six credits of Approved Electives		6
Master's Thesis		6
Total Hours		30

¹ Chemical Engineering Analysis is considered as a 3-credit Approved Mathematics course.

² Students without a BS in Chemical Engineering or Corrosion Engineering are required to take CHEE 535 Process Analysis & Control, CHEE 541 Process Design I

³ Chemical Engineering students in both MS degree options are expected to attend and to participate in the department's seminars.

Nonthesis Option

Code	Title	Hours
CHEE 600	Transport Phenomena	3
CHEE 605	Chemical Reaction Engineering	3
CHEE 610	Classical Thermodynamics	3
CHEE 631	Chemical Engineering Analysis ¹	3
CHEE 697	Chemical Engineering Report ²	3
Select six credits of Chemical Engineering Electives ³		6
Select 9 credits of Approved Electives		9
Total Hours		30

¹ Chemical Engineering Analysis is considered as a 3-credit Approved Mathematics course.

² Non-thesis MS students are required to give a oral research presentation for their Chemical Engineering Report.

³ Students without a BS in Chemical Engineering or Corrosion Engineering are required to take CHEE 535 Process Analysis & Control, CHEE 541 Process Design I

⁴ Chemical Engineering students in both MS degree options are expected to attend and to participate in the department's seminars.

Five Year BS/MS Chemical Engineering Program

The five year BS/MS program in Chemical Engineering provides superior undergraduate students with the opportunity to complete an M.S. in Chemical Engineering with one additional year of study beyond their B.S. Chemical Engineering degree at The University of Akron. The program is only available to B.S. Chemical Engineering students at The University of Akron. Applications are accepted in the Spring of the junior year.