

CHEMICAL ENGINEERING (MS) Program Requirements

Master of Science in Chemical Engineering

Unit: Speed School of Engineering (<https://engineering.louisville.edu>) (GS)

Department: Chemical Engineering (<https://engineering.louisville.edu/academics/departments/chemical/>)

Program Website (<https://engineering.louisville.edu/academics/departments/chemical/>)

Academic Plan Code(s): CHE_MS

Program Information

General Information

The Master of Science (MS) in Chemical Engineering program is intended for persons having an accredited baccalaureate degree in chemical engineering, but also is available to those with other backgrounds.

Applicants with other backgrounds should plan on taking additional undergraduate background coursework.

Students interested in the MS degree program should consult the Director of Graduate Studies in the Department of Chemical Engineering.

Degree Requirements

The program of study must be completed with a 3.00 GPA or better for all graduate courses used to satisfy degree requirements. Additionally, the program of study must be completed with a 3.00 GPA or better for all academic work attempted in graduate studies.

The requirements for the Master of Science degree are discussed in more detail in the Degree Requirements (<https://catalog.louisville.edu/graduate/general-policies-procedures-requirements/degree-requirements/>) section of this catalog.

Admission Standards

The admission standards for the Master of Science program in Chemical Engineering are as follows:

- All admission applications for the program shall include:
 - A completed graduate application (<http://louisville.edu/graduate/futurestudents/apply-materials/application/>) for the Graduate School,
 - An application fee,
 - At least two letters of recommendation, and
 - Official transcript(s) for all previous post-secondary coursework. All transcripts not in English must be certified as authentic and translated verbatim into English.
- The minimum requirement for admission is the baccalaureate degree or its equivalent from an accredited institution.
- The successful applicant will typically have an undergraduate grade point average of 3.0 or above (on a 4.00 scale).
- International students whose primary language is not English must show English language proficiency by either TOEFL/IELTS/Duolingo score or demonstration of a degree awarded from an acceptable English language institution. The successful applicant will typically have a TOEFL score of 79 or higher or overall IELTS score of 6.5 or higher or a Duolingo score of 105 or higher.

The minimum curricular requirements for the Master of Science degree program are shown in the table below. For those applicants who, in the opinion of the faculty, do not have a sufficient background, remedial work may be specified.

Code	Title	Hours
CHE 610	Advanced Thermodynamics	3
CHE 620	Transport Phenomena I	3
CHE 641	Advanced Reactor Design	3
CHE 686	Chemical Engineering Analysis	3
CHE 695	Chemical Engineering Seminar	1
Technical Electives ^{1,2,3}		12
Select one of the following:		6
Thesis Option		
CHE 690	Master of Science Thesis in Chemical Engineering ⁴	
Non-Thesis Option		
Technical Electives ^{1,2,3}		
Minimum Total Hours		31

¹ Electives must be chosen so that at least one-half of the credits counted toward the degree, exclusive of thesis, are 600 level. At least fifteen (15) credit hours of coursework must be in Chemical Engineering/CHE.

² Technical electives can be CHE or non-CHE. Technical Electives must be approved by the department.

³ At least three (3) credit hours of Technical Electives must be from non-CHE courses, and the student's research advisor or academic advisor must approve non-CHE courses.

⁴ For the thesis option, a student is required to select both an approved MS thesis topic and the director and members of the thesis committee during the first term of Graduate Studies. The thesis director must give approval for enrollment in CHE 690.

The Master of Science degree must be completed with a 3.00 GPA or better for all graduate courses used to satisfy degree requirements. Additionally, the master of science degree must be completed with a 3.00 GPA or better for all academic work attempted in graduate studies.