

CHEMICAL ENGINEERING, M.S.

results are presented orally before an audience that includes the advisory committee. Other requirements pertaining to the final submission of the thesis conform to the general regulations of The Graduate School.

Note: No foreign language is required for any graduate degree in chemical engineering. Additional requirements follow.

Learning Outcomes

- Graduates of the MS program will acquire and demonstrate expertise in the core subject areas of chemical engineering, which are chemical process analysis, thermodynamics, fluid flow analysis and mass transfer.
- Graduates of the MS program will acquire a working knowledge of various areas of chemical science and technology and in allied fields, including other engineering disciplines, business, the sciences, and/or mathematics. They will successfully complete three elective courses - these courses will be approved by their advisors and the Graduate Director.
- Graduates of the MS program will be made aware, through attendance at seminars and conferences, of advances at the frontiers of knowledge in chemical science and technology.
- Graduates of the MS program will acquire the ability to identify pertinent research problems, to formulate and execute a research plan, to generate and analyze original research results, and to communicate those results through oral presentations and written publications submitted to refereed archival journals.
- Graduates of the MS program will acquire the basic skills needed for life-long learning and professional development.

Degree Requirements (30 Hours)

Core Courses (12 Hours)

Course	Title	Credits
ECHE 700	Chemical Process Analysis	3
ECHE 710	Advanced Chemical Engineering Thermodynamics	3
ECHE 720	Advanced Fluid Flow Analysis	3
ECHE 722	Advanced Mass Transfer	3
Total Credit Hours		12

Four Additional Lecture Courses (12 Hours)

Two of the additional four courses (6 hours) must be from chemical engineering, and the other two (6 hours) may be from chemistry, engineering, or mathematics. The student's research advisor specifies these courses after discussion with the student. Independent study (ECHE 797) cannot be used in place of lecture courses for the M.S. degree.

Thesis Preparation (6 Hours)

Course	Title	Credits
ECHE 799	Thesis Preparation	6
Total Credit Hours		6

Additional Requirements

Each M.S. student must select a research advisor during the first semester after admission. In addition, an advisory committee of no less than three members will be selected. The committee, which must include the department chair, conducts the comprehensive examination and reviews the student's thesis. Prior to graduation, each M.S. student must submit at least one paper for publication in a peer-reviewed technical journal. For the comprehensive examination, the M.S. student's research