CHEMICAL ENGINEERING (M.S.)

This Master of Science degree is offered under the following options:

Plan A: Thirty credits including a six credit thesis.

Plan C: Thirty credits of coursework.

Both options require the following core courses:

Code	Title	Credits
CHE 7100	Advanced Engineering Mathematics	3
CHE 7200	Advanced Transport Phenomena	3
CHE 7300	Advanced Thermodynamics	3
CHE 7400	Advanced Kinetics and Reactor Design	3

- A maximum of 9 approved credits can be taken from other Departments in Engineering (excluding Engineering Technology), Chemistry, Physics, Mathematics, Biology Departments
- No more than 3 credits can be taken in combination of CHE 7990 (https://wayne-curr.courseleaf.com/search/?P=CHE%207990), CHE 8996 (https://wayne-curr.courseleaf.com/search/?P=CHE%208996), CHE 8510 (https://wayne-curr.courseleaf.com/search/?P=CHE%208510)
- No more than 1 credit per semester of CHE 8510 (https://wayne-curr.courseleaf.com/search/?P=CHE%208510)

All course work must be completed in accordance with the regulations of the Graduate School (https://bulletins.wayne.edu/graduate/general-information/academic-regulations/) and the James and Patricia Anderson (https://bulletins.wayne.edu/graduate/college-engineering/academic-regulations/)College of Engineering (https://bulletins.wayne.edu/graduate/college-engineering/academic-regulations/).

Combined B.S./M.S. for Students with a B.S. in Chemistry

This program is designed for individuals who have earned a baccalaureate in chemistry from an accredited United States institution with a minimum grade point average of 3.0. Students are first admitted into the undergraduate program and are then eligible to earn both the B.S. in Chemical Engineering and, once admitted to the Graduate School, the M.S. degree. Evaluation of prerequisite requirements and applicable transfer credit will be determined by the departmental advisor.

A combined total of sixty-three credits is required: a minimum of thirty-three credits for the second baccalaureate and thirty credits for the master's degree.

Undergraduate Course Requirements

Code	Title	Credits
BE 1500	Introduction to Programming and Computation for Engineers	3
CHE 2800	Material and Energy Balances	4
CHE 3100	Transport Phenomena I	3
CHE 3300	Thermodynamics: Chemical Equilibria	4
CHE 3400	Kinetics and Reactor Design	4
CHE 3600	Transport Phenomena II	3
CHE 3800	Separation Processes	3
CHE 4200	Product and Process Design	3
CHE 4600	Process Dynamics and Simulation	3
CHE 4800	Chemical Process Integration	3
Total Credits		**33**

Graduate Course Requirements

Code	Title	Credits
CHE 5050	Statistics and Design of Experiments	3
CHE 6570	Safety in the Chemical Process Industry	3
CHE 7100	Advanced Engineering Mathematics	3
CHE 7200	Advanced Transport Phenomena	3
CHE 7300	Advanced Thermodynamics	3
CHE 7400	Advanced Kinetics and Reactor Design	3
CHM 5440	Physical Chemistry II	4
Technical Electives (8 credits; maximum 3 transfer credits of 5000 level chemistry)		8

Dual registration required when enrolling in both UG and GR courses simultaneously during any given semester

UG degree can be awarded upon completion of all UG degree requirements and graduate equivalent of UG requirements: CHE 6570, CHE 5050, and CHM 5440.

For additional information regarding specific course requirements, contact the departmental advisor.