

MS Biochemical Engineering

Effective Fall Semester 2017 – Fall Semester 2018

Biochemical Engineering utilizes the governing principles of living systems, properties of biological materials and engineering methodology in the processing of biological materials and in the processes using biological agents such as cells, enzymes and antibodies.

Admissions

- [College of Engineering M.S. admission requirements](#)
- [School of Chemical, Materials and Biomedical Engineering requirements](#)

General requirements

- M.S. students should form their advisory committee comprised of 3 faculty members within 12 months of starting their M.S. program.
- M.S. students should complete their research proposal within 15 months of starting their M.S. program.
- Student must make one oral presentation in the School Seminar.

The research is expected to generate significant scholarship (such as publications, patents, conference presentations).

Program of Study

The M.S. in Biochemical Engineering degree requires a minimum of 33 semester hours, which consist of the following on the student's Program of Study:

- A minimum of 24 semester hours of coursework:
 - ENGR 6910: Foundations for Engineering Research (3 credit hours)
 - BCHE 8970: Bioengineering Seminar (2 semesters, 2 credit hours, 1 credit hour on Program of Study*)
 - ENGR 8103: Computational Engineering (3 credit hours)
 - Choose 2 from the following (6 credit hours):
 - BCHE 8150: Heterogeneous Reactor Design and Bio/Catalysis (3)
 - ENGR 8160: Advanced Fluid Mechanics (3)
 - ENGR 8170: Advanced Heat Transfer (3)
 - ENGR 8180: Advanced Mass Transport (3)
 - Electives (11 credit hours)

- Minimum of 11 additional credit hours of *graduate-level* coursework selected with the approval of the student's Graduate Advisory Committee. At least 3 credits must be from courses open to graduate students only.
- A minimum of 6 hours of master's research (7000) or project-based research (7010). A typical student's research hours will exceed this minimum; however, at most 6 hours of 7000/7010 may be listed on the program of study.
- 3 hours of thesis (7300)

** Only 1 hour of the Bioengineering Seminar may apply on the Program of Study, although the School of CBM requires completion of at least 2 hours.*