

# MS Biological Engineering

Effective Fall Semester 2017 – Fall Semester 2018

*The MS in Biological Engineering is oriented toward executing engineering solutions for feed, food and fiber production and/or post harvest processing problems having an intensive biological/microbiological dimension.*

## 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 Biological 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)
  - BIOE 8490 Advanced Biomaterials (3 credit hours)
  - Choose 1 from the following (3 credit hours):
    - BCHE 8150: Heterogeneous Reactor Design and Bio/Catalysis (3)
    - CVLE/MCHE 8160: Advanced Fluid Mechanics (3)
    - ENGR 8170: Advanced Heat Transfer (3)
    - ECVLE/MCHE 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 ENGR 7000/7010 may be listed on the program of study.
- 3 hours of Master's Thesis (ENGR 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.*