

BIOENGINEERING MASTER OF SCIENCE

Leading to a Master of Science Degree in Bioengineering

The Master of Science in Bioengineering (MSBE) program is designed to train a skilled and credentialed workforce that can meet the needs of a growing bioengineering industry. Students will graduate having received comprehensive skills training, critical core coursework, immersive biotechnological research, and relevant industry experience through mentored internships. Through a practice-oriented education, the student will be able to utilize technological advancements, contribute to innovative design solutions in a collaborative environment, and make appropriate decisions for their respective areas of professional responsibility.

Program Educational Objectives

- Work toward alleviating problems, challenges or risks in application fields related to bioengineering.
- Apply engineering methodology with confidence and humility to develop innovative and effective solutions in a professional and ethical manner.
- Pursue professional development to meet and adapt to emerging and evolving engineering challenges.

Student Outcomes

- Core Knowledge: advanced knowledge in a specialized area consistent with the focus of their graduate program, including critical thinking and problem solving
- Scholarly Communication: advanced proficiency in written and oral communication, appropriate to purpose and audience.
- Professionalism: advanced intellectual and organizational skills of professional practice, including ethical conduct.
- Research Methods and Analysis: quantitative and qualitative skills in the use of data gathering methods and analytical techniques used in typical research that is consistent with the focus of their graduate programs

Students are required to complete eight courses, each worth four credits for a total of 32 credits. Two of these courses are independent research courses. A full-time student is expected to complete the coursework in two semesters (fall and spring) and then participate in a co-op in summer semester. A part-time option is also available for students to complete the program at their own pace. The course requirements to complete the MSBE degree are shown in the curriculum below. Students must complete the course requirements with a cumulative GPA of 3.0 or more following Wentworth graduate school policies.

Course	Title	Credits
BENG5850	BIOMANUFACTURING	4
BENG6000	INDEPENDENT STUDY RESEARCH - PHYSIOLOGICAL	4
BENG6200		4

Course	Title	Credits
BENG5600	INTRODUCTION TO SENSORY CODING	4
BENG5700	ADVANCED MEDICAL DEVICE AND SYSTEM DESIGN	4
BENG5750	CLINICAL AND REGULATORY TRANSLATION	4
BENG5650	SIMULATION AND MODELING IN BIOENGINEERING	4
BENG5800		4