List of Biotechnology Electives
(revised 4/9/2024)
BSChBE – Biotechnology Option

Three (3) credit hours of biotechnology engineering elective must be chosen as part of the degree requirements for the Biotechnology option. This requirement can be fulfilled either through research (see approval process below) or through courses from the following approved list.

Approved Courses

**ChBE undergraduate courses**:  
CHBE 4757  Biofluid Mechanics  
CHBE 4710/6710  Microfluidics & Bio-Applications  
CHBE 4760/6760  Biocatalysis  
CHBE 4762/6762  Protein Engineering  
CHBE 4765/6765  Drug Design, Development, and Delivery  
CHBE 4782  Biosystems Analysis  
CHBE 4803/8803  Renewable Biochemistry  
CHBE 4803/8803  Biosurfaces  
CHBE 4803/8803  Biomolecular Systems Engineering

**ChBE graduate courses** (*require instructor permit and level permit, which is issued by Registrar*):  
CHBE 6777  Advanced Biomaterials

**BMED courses** (*major-restricted; permit from BME required for ChBE students*):  
BMED 3520  Biomedical Systems and Modeling  
BMED 4751  Introduction to Biomaterials (*prereq BMED 3100; BMED 2110 can be waved based on CHBE 2100*)  
BMED 4477  Bio Networks and Genomics (*prereq BMED 3520 + BMED 2400/ISYE 3770*)  
BMED 4783  Intro Medical Image Processing (*prereq ECE 2026 + BMED 2400/ISYE 3770*)  
BMED 4784  Engineering Electrophysiology (*prereq BMED 3520*)

No two courses will be allowed towards satisfying degree requirements if there is a more than 20% overlap in their course content.

**Research as Biotechnology Elective**

Research for credit at 4000-level (XXXX 4699) can be used to fulfill the Biotechnology elective requirement, but the *project must be approved by the Associate Chair for Undergraduate Studies. It is very wise to seek this approval before the start of the semester to prevent surprises*; research projects must be focused on biotechnology-related topics.

To seek research approval, please submit a one-page abstract that includes the following information:  
1. Research project title  
2. Student name and GT-ID#  
3. Term of the for-credit research (incl. number of credit hours)  
4. Name of the supervising professor/faculty  
5. Abstract (100-200 words)  
6. Signature of the supervising professor/faculty