List of Biotechnology Electives
(revised 3/22/2023)
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  Biomaterials
- BMED 4477  Bio Networks and Genomics (prereq ECE 2025 + BMED 3600 + BMED 2400)
- BMED 4783  Intro Medical Image Processing (prereqs ECE 2025 + (BMED 2400 or ISYE 3770))
- BMED 4784  Engineering Electrophysiology (prereqs ECE 3040 or 3510)

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