

Minor in Biochemical Engineering

Revised: 2010-02-02

A minor in biochemical engineering is open to all students in the University with prerequisite calculus, chemistry, and biology courses. The minor is particularly designed for majors in chemical engineering, biology, chemistry, or health science fields. Students are required to take the courses listed below which includes an interdisciplinary biochemical engineering (capstone) design project. Course work from chemistry and biology is combined with chemical engineering courses as related to biochemical engineering.

For chemical engineering majors, the additional coursework for the biochemical engineering minor are 3 required biology courses (BIOL 1111/2, BIOL 2301/2, BIOL 2323; see *below) and 1 required chemical engineering elective (CHME 5630; see * below). These 4 courses substitute for 3 of the 4 available general electives and for the 1 available chemical engineering elective in the chemical engineering curriculum.

For additional information contact:

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Courses required outside of Chemical Engineering

MATH 1241 or 1341	Calculus I	4 SH
MATH 1242 or 1342	Calculus 2	4 SH
MATH 2341	Differential Equations and Linear Algebra	4 SH
CHEM 2311/2	Organic Chemistry I / Lab	5 SH
CHEM 2313/4	Organic Chemistry II /Lab	5 SH
*BIOL 1111/2	General Biology 1/Lab	5 SH
*BIOL 2301/2	Genetics and Molecular Biology /Lab	5 SH
*BIOL 2323/4	Biochemistry/Lab	5 SH

Biochemical Engineering Minors have a received a waiver on the prerequisite for BIOL 2301 of BIOL 1103/4.

Required Chemical Engineering Courses

CHME 2308	Conservation Principles in Chem. Eng	4 SH
CHME 3310/11	Transport Processes I /Lab	6 SH
CHME 3312/3	Transport Processes II /Lab	6 SH
CHME 5630	Biochemical Engineering	4 SH
CHME 4703	Chemical Process Design II (or BIOL 4701 Biology Capstone with Chemical Engineering faculty)	4 SH

Notes:

- Minor is awarded to students completing the requirements and earning a minimum GPA of 2.0 in their minor coursework.
- Students must file a petition with the CHE Academic Advisor prior to taking any coursework.
- Students should schedule a meeting with the CHE Academic Advisor prior to graduation, to be cleared for the minor.
- If students are unable to take CHME 5630 Biochemical Engineering when it is offered, they are encouraged to contact the faculty member listed above to discuss suitable alternatives (which must then be approved by formal petition).
- The course requirements include CHME 4703 as an interdisciplinary (capstone) design project. This capstone design requirement may be filled through the non-chemical engineering student's major capstone design in coordination with chemical engineering faculty. For example, if a non-chemical engineering student has a major discipline capstone design requirement (like BIOL 4701 Biology Capstone Design), then he/she will sign up for the capstone design in his/her discipline and participate in the interdisciplinary capstone design project coordinated with chemical engineering faculty.
- A student will be given credit toward the minor coursework for a course already taken that has substantial overlap with any CHME course. For example, if a student has taken ME 3475 Fluid Mechanics, he/she will be given credit for CHME 2320 Chemical Engineering Thermodynamics 1. A petition should be filed with the CHE Academic Advisor to request such a course waiver.
- **Courses taken Pass/Fail cannot be counted towards fulfilling minor requirements.**