

TO: The Engineering Faculty
FROM: The Faculty of the Agricultural and Biological Engineering
RE: Change of Curriculum – Biotechnology Minor

The Faculty of the Agricultural and Biological Engineering Department has approved the following changes to the from the College of Engineering. This action is now submitted to the Engineering Faculty with a recommendation for approval.

TITLE:

Biotechnology Minor

DESCRIPTION:

The following modifications are being proposed:

1. Replace current ABE 51100 or ABE 51200 course requirement with Biotechnology selective List
2. Replace Lab Science Selective (6 credits) with Microbiology Selective (4 credits) and Biochemistry Selective (3 credits) requirements
3. Increase total required credit hours from 16 to 17

RATIONALE:

- 1 ABE 51100 and ABE 51200 have shifted to CEC courses and while undergrads would be permitted to enroll in the courses, they are designed with current professionals in mind and require additional fees for enrollment. The University offers a plethora of courses that provide advance understanding of the biotechnology field. Shifting to a selective list provides greater opportunities for students to take a course that aligns with their academic and career goals.
- 2 ABE 32700, which is required for the minor (was updated from ABE 22700 Fall 2024), now requires pre-requisites of Microbiology and Biochemistry. Because students cannot enroll in ABE 32700 without these pre-requisites and due to the role of Microbiology and Biochemistry in Biotechnology, advanced coursework, beyond introductory chemistry and biology is recommended.
- 3 The previous Lab Science requirement which was six credits is being replaced by four credits in Microbiology and three credits in Biochemistry resulting in an additional credit to complete the minor.



Nate Mosier, Head/Director of the Agricultural and Biological Engineering

Link to Curriculog entry:

N/A

Supporting Documents

Biotechnology Minor

About the Minor

Biotechnology refers to harnessing the properties of a living organism to develop and manufacture products that benefit human life. With this minor, you will gain the basic knowledge and understanding of life science-based products, processes, and product quality to prepare you for employment opportunities in the area of biotechnology and biotech-manufacturing.

Requirements for the Minor (~~16~~ 17 credits)

Required Courses (~~7-credits~~) (4 credits)

- [ABE 22600 - Biotechnology Laboratory I](#)
- [ABE 32700 - Biotechnology Laboratory II](#)

Biochemistry Selective (3 credits)

- [BCHM 22100 Analytical Biochemistry](#)
- [BCHM 30700 Biochemistry](#)
- [CHM 43300 Biochemistry](#)
- [CHM 33900 Biochemistry: A Molecular Approach](#)
- [PHSC 20800 Biochemistry for Pharmaceutical Sciences](#)

Biotechnology Selective (3 credits)

- ~~[ABE 51100 - Drug Development](#)~~ or
- ~~[ABE 51200 - Good Regulatory Practices](#)~~
- [ABE 58000 - Process Engineering Of Renewable Resources](#)
- [BCHM 52100 Comparative Genomics](#)
- [BCHM 53601 Biological and Structural Aspects of Drug Design and Action](#)
- [BME 56100 - Preclinical And Clinical Study Design](#)
- [CHE 55100 - Principles Of Pharmaceutical Engineering](#)
- [CHE 52500 - Biochemical Engineering](#)
- [CHE 55300 - Pharmaceutical Process, Development And Design](#)
- [IMPH 56200 - Introduction To Pharmaceutical Manufacturing Processes](#)
- [PHSC 46100 - Drug Discovery And Development II](#)

Microbiology Lab Selectives (4 credits)

- [BIOL 22100 Introduction to Microbiology](#)
- [BIOL 43800 General Microbiology and BIOL 43900 General Microbiology Lab](#)
- [FS 36200 Food Microbiology and FS 36300 Food Microbiology Laboratory](#)

~~Lab Sciences Selective (6 credits)~~

- ~~[BIOL 11000 - Fundamentals Of Biology I](#)~~
- ~~[BIOL 11100 - Fundamentals Of Biology II](#)~~
- ~~[BIOL 13500 - First Year Biology Laboratory](#)~~
- ~~[BIOL 23200 - Laboratory In Biology III: Cell Structure And Function](#)~~
- ~~[BIOL 24200 - Laboratory In Biology IV: Genetics And Molecular Biology](#)~~

- [CHM 11100 – General Chemistry](#)
- [CHM 11200 – General Chemistry](#)
- [CHM 11500 – General Chemistry](#)
- [CHM 11600 – General Chemistry](#)
- [CHM 12901 – General Chemistry With A Biological Focus](#)

Statistics Selective (3 credits)

- [CHE 32000 - Statistical Modeling And Quality Enhancement](#)
- [IET 31600 - Statistical Quality Control](#)
- [STAT 22500 - Introduction To Probability Models](#)
- [STAT 30100 - Elementary Statistical Methods](#)
- [STAT 35000 - Introduction To Statistics](#)
- [STAT 35500 - Statistics For Data Science](#)
- [STAT 50300 - Statistical Methods For Biology](#)
- [STAT 51100 - Statistical Methods](#)

Notes

- All courses must have a grade of a “C-” or higher.

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.