

**WILMINGTON UNIVERSITY  
COLLEGE OF ARTS AND SCIENCES  
BASIC COURSE INFORMATION**

**COURSE NUMBER:** BIO 449

**COURSE TITLE:** Biotechnology (With Lab)

**CREDITS:** 4

**PER-REQUISITE:** BIO 251, Biology I (*with lab*)

**FACULTY MEMBER:**

**TERM:**

**METHOD OF CONTACT/OFFICE HOURS:**

**COURSE TIME BREAKDOWN:**

64 Hours of Structured Learning Activities

**TEXTBOOKS:**

\*A list of course textbooks are available on the Wilmington University Bookstore website:

<http://bookstore.wilmu.edu/>

**COURSE DESCRIPTION:**

This course examines the latest content on the science, ethics and regulations of biotechnology. Students will study genomics, microbial, plant and animal biotechnology, forensic analysis, as well as medical biotechnology and ethics. Students will examine biotechnology regulations in the context of emerging and existing technology. In this hands-on course, students will learn how to work safely in a biotechnology lab using key tools of the trade.

**COURSE OBJECTIVES:**

1. Apply the scientific method and critical thinking skills to draw logical conclusions based on the analysis of scientific data.
2. Demonstrate the collection, analysis and reporting of data using the scientific method.
3. Demonstrate the effective use of DNA technology.
4. Summarize key mechanisms involved in expression of genes and genomes.
5. Perform bioinformatics and genetic analyses.
6. Apply the core laboratory techniques essential to biotechnology.
7. Demonstrate effective communication of biotechnology through written and oral communication.
8. Apply the concepts of varying disciplines within biotechnology.
9. Identify biotechnology regulations and ethics.

**Labs Requirements:**

**For face to face course only:** Safety goggles and nitrile gloves will be provided by Wilmington University. All persons in the lab are required to wear closed toed, non-perforated shoes and personal protective equipment. Long hair needs to be tied back. Students who are not dressed appropriately will not be allowed to participate in that day's laboratory activity, will be asked to leave, and will not have the opportunity to make up the experiment. Before any lab work can be performed, students will sign a contract confirming

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