



## **Biological Laboratory Techniques C.C.**

Career Community: Science and Mathematics

Curriculum Code: 1608

Effective: Fall 2025 – Summer 2030

### **Purpose of the Major**

The Biological Laboratory Techniques certificate is a laboratory-intensive curriculum which emphasizes the wide-ranging applications of recombinant DNA technology (genetic engineering) including the preparation of purified DNA, Polymerase Chain Reaction, and DNA "fingerprinting". Graduates are prepared to work in many areas of biotechnology, such as human genetic disease research, improvement of disease-resistance in plants, enhanced crop production, pharmaceutical research, biological cleanup of environmental pollution, forensic science, or genome sequencing projects. If you plan to transfer to a four-year school, please see an academic advisor before enrolling. Not all courses in this program transfer to all colleges as equivalent courses. Students planning to transfer should see an academic advisor before enrolling in any course. This certificate program is designed for students interested in molecular biology, biochemistry, genetics, biotechnology, and forensic technologies, and is used to supplement and strengthen S.T.E.M. laboratory skills in other degree programs. Completing this program prepares students to sit for the industry recognized credentials of BCSI (Bioscience Core Skills Institute evaluation) and BACE (Biotechnology Aptitude and Competency Exam).

### **Milestone**

Completion of BIOL 127, CHEM 151, and CHEM 161 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

### **Additional Information**

A student must earn a minimum grade of 2.0 in all courses.

BIOL 275 is only offered during Fall semester. BIOL 276 and ISCI 245 are only offered during Spring semester.

### **Contact Information**

For further information, including career options, course substitutions and waivers, etc., contact the Science Department, Arts and Sciences Building, Room 3203, telephone number 517-483-1092, or the Academic Advising Center, Gannon Building – StarZone, telephone number 517-483-1904.

## Major Required Courses

Course Code	Course Title	Credit / Billing Hours
BIOL 127	Cell Biology	4 / 6
BIOL 203	Microbiology	3 / 3
BIOL 204	Microbiology Laboratory	1 / 3
BIOL 275	Molecular Biology I	4 / 6
BIOL 276	Molecular Biology II	4 / 6
CHEM 151	General Chemistry Lecture I	4 / 4
CHEM 161	General Chemistry Lab I	1 / 3
ISCI 245	S.T.E.M. Workplace Practices	4 / 6

## Minimum Total Credit Hours

25 credits / 37 billing hours

## Recommended Course Sequence

Semester I
BIOL 127 – Milestone course
CHEM 151 – Milestone course
CHEM 161 – Milestone course

Semester II (Fall)
BIOL 203
BIOL 204
BIOL 275

Semester III (Spring)
BIOL 276
ISCI 245

*LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree titles, and make course changes as needed, without prior notice. The College also reserves the right to discontinue programs when warranted.*