

BIOTECHNOLOGY  
LABORATORY ASSISTANT -  
ACADEMIC CERTIFICATE (AC)

- **Program Code:** BTEC.AC
- **Program Type:** Academic Transfer
- **Available Fully Online:** No
- **Eligible for Federal Financial Aid:** No

NOTE: Courses required for this program *may* have an additional fee; more information can be found on the [Special Course Fees](#) web page.

Certificate Quick Facts

- **Instructional School:** Science, Technology, and Math
- **Department:** Physical Sciences

Certificate Requirements

Course	Course Title	Min Credits
<b>Biology Options</b>		
Select one of the following MMBS options:		4
Option 1:		
MMBS 250	General Microbiology	
MMBS 250L	General Microbiology Lab	
Option 2:		
MMBS 260	Introduction to Cell Biology	
MMBS 260L	Introduction to Cell Biology Lab	
Option 3:		
MMBS 280	Genetics	
MMBS 280L	Genetics Lab	
<b>Chemistry Options</b>		
Select one of the following CHEM options:		5
Option 1:		
CHEM 253	Quantitative Analysis	
CHEM 253L	Quantitative Analysis Lab	
Option 2:		
CHEM 299	Organic Chemistry II	
CHEM 299L	Organic Chemistry II Lab	
<b>Internship</b>		
Complete three credits from the following internship course:		3
BTEC 293	Biotechnology Internship	
<b>Minimum Credit Hours Required</b>		<b>12</b>

NOTE: This certificate is not currently eligible for federal financial aid.

Certificate Plan

<b>First Year</b>	
<b>Fall</b>	<b>Credit Hours</b>
Select one of the following MMBS options: <sup>1</sup>	4
Option 1:	
MMBS 250 General Microbiology	
MMBS 250L General Microbiology Lab	
Option 2:	
MMBS 260 Introduction to Cell Biology	
MMBS 260L Introduction to Cell Biology Lab	
Option 3:	
MMBS 280 Genetics	

MMBS 280L Genetics Lab	
Select one of the following CHEM options: <sup>1</sup>	5
Option 1:	
CHEM 253 Quantitative Analysis	
CHEM 253L Quantitative Analysis Lab	
Option 2:	
CHEM 299 Organic Chemistry II	
CHEM 299L Organic Chemistry II Lab	
Complete three credits from the following internship course:	3
BTEC 293 Biotechnology Internship	
<b>Total Semester Credit Hours</b>	<b>12</b>
<b>Minimum Credit Hours Required</b>	<b>12</b>

<sup>1</sup> The science course options available all have prerequisites that must be met prior to enrollment. Although this academic certificate is only 12 credits, students will need to complete additional courses in order to enroll in the MMBS and CHEM courses that are required for certificate completion.

### **Additional Advising Note:**

The requirements for the Academic Certificate in Biotechnology Laboratory Assistant can be completed in whatever order works best for you, as long as the prerequisites for your selected courses have been met. This certificate is intended to be completed as part of an associate-level program, ideally in either Chemistry or Biology. Please speak with your advisor if you need assistance with academic planning.

## **Program Learning Outcomes**

**Upon successful completion of this program, students will be able to:**

- Recognize the knowledge and skills that will allow for success in further pursuits within the biotechnology/biomedical research or industry laboratory.
- Obtain laboratory bench experience in an industry or research setting and appreciate the role of science in society.
- Describe the scientific method and apply it within a controlled environment.
- Evaluate their experimental results and determine appropriate conclusions.
- Understand and represent quantitative scientific data in various graphical forms.
- Develop and improve skills of both verbal and written science communication.
- Develop and improve skills in critical thinking and analytical reasoning through quantitative and observational analyses.
- Demonstrate the skills necessary for the handling of analytical equipment currently used in the biotechnology industry.