Bioscience Technology (BSC)

Bioscience Technology (BSC)

Bioscience technicians perform procedures in chemical and biotechnology laboratories, pharmaceutical manufacturing facilities, and research laboratories. Advanced skills in biology and chemistry, microbiology, and laboratory skills are important for a successful career in bioscience or biotechnology.

Students who successfully complete the Bioscience Technology program at Cincinnati State earn an Associate of Applied Science degree. The curriculum prepares graduates for entry-level employment in bioscience or biotechnology, or for transfer to a four-year institution to pursue a bachelor's degree in biological science or related fields. Students entering the program should have a strong background in or aptitude for the sciences, a willingness to follow structured methods, ability to explore molecules and cells, and a desire to help people and enhance the world through the use of biotechnology.

Bioscience Certificate (BSCC)

The Bioscience Certificate is designed for someone with a desire to learn the basics of the biotechnology field, either as an add-on to another degree or as a new career path. The certificate curriculum contains less rigorous biology and chemistry requirements than the degree program, but has most of the same laboratory courses. Students learn genetic engineering, DNA forensics, aseptic technology and microbiology basics, protein isolation techniques, protein and DNA electrophoresis, PCR technology, and more.

Bioscience employees are expected to pay attention to cleanliness, detail, and protocol; have background in biology and science concepts; and have good communication skills. Graduates may be hired as laboratory assistants using equipment specific to the biotechnology field, or as technicians in biomanufacturing industries.

Bioscience Technology (BSC)

All degree-seeking students must complete a First Year Experience (FYE) course as part of the first 12 credit hours taken at Cincinnati State.

Program Prerequisite: IM 111 Computer Applications 1 or appropriate computer literacy placement test score

Semester 1		Credits
ENG 101	English Composition	3
BSC 105	Laboratory Skills for Bioscience	3
BSC 110	Biomanufacturing Workplace Regulations	3
BIO XXX Biology		4
Sequence Elective 1		
Semester 2		
BSC 115	Bioscience Laboratory Methods	3
MAT 151	College Algebra	4
BIO XXX Biology		4
Sequence Elective 2		4
CHE XXX Chemistry Elective		4
Semester 3		
COMM 110	Public Speaking	3
XXX XXX Bioscience		2
Elective		L
ENG XXX English		3
Composition Elective		
XXX XXX Humanities		3
Social Sciences		
Elective 1		
Semester 4		
IM 120	Electronic Spreadsheets: Microsoft Excel	3
BSC 150	Scientific Literacy for Bioscience	2
BSC 205	Molecular Genetics Laboratory	5

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or SOC 105 Introduction to Sociology	or PSY 110	Introduction to Psychology			
	SOC 100	Survey of Social Issues	3		
Organic Chemistry Elective	or SOC 105	Introduction to Sociology			
	Organic Chemistry E	Elective			

Select one of the following:

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CHE 111	Bio-Organic Chemistry	
CHE 201 & CHE 211 & CHE 202 & CHE 212	Organic Chemistry 1 and Organic Chemistry 1 Lab and Organic Chemistry 2 and Organic Chemistry 2 Lab 1	
Mathematics Elective		
MAT 131	Statistics 1	3
or MAT 153	Pre-Calculus	
Advanced Biology Elective		
BIO 115	Human Genetics	3
BIO 250	Cell Biology	5
BIO 260	Genetics	5
BIO 270	Ecology	5
BIO 275	Animal Behavior	5
Bioscience Experiential Lea	arning Elective	
BSC 280	Bioscience Capstone Project	2
BSC 191	Part-Time Cooperative Education 1: Bioscience	1
BSC 291	Full-Time Cooperative Education 1: Bioscience	2
BSC 294	Internship 1: Bioscience	2

recommended for students planning to continue in a bachelor's degree science program

Bioscience Certificate

All certificate-seeking students must complete a First Year Experience (FYE) course as part of the first 12 credit hours taken at Cincinnati State.

Program Prerequisites: MAT 150 Intermediate Algebra (minimum grade C) or appropriate placement test score, and IM 111 Computer Applications 1 or appropriate computer literacy placement test score.

Semester 1		Credits
BSC 105	Laboratory Skills for Bioscience	3
BSC 110	Biomanufacturing Workplace Regulations	3
BIO 111	Biology: Unity of Life	4
IM 120	Electronic Spreadsheets: Microsoft Excel	3
MAT 151	College Algebra	4
Semester 2		
CHE 110	Fundamentals of Chemistry	4
COMM 110	Public Speaking	3
BSC 115	Bioscience Laboratory Methods	3
BSC 280	Bioscience Capstone Project	2
Total Credits:		29

Advanced Health Careers Preparatory Certificate (AHPC)

The Advanced Health Careers Preparatory Certificate is designed for students who already hold a degree and need to complete courses in biology, chemistry, or other fields in order to meet entrance requirements for advanced programs in health-related fields. Students work closely with an advisor to select courses that fulfill requirements for a specific institution.

Advanced Health Careers Preparatory Certificate

Program Prerequisite: A bachelor's degree from an accredited institution of higher education, or Program Advisor consent, is required to enroll in this program.

Semester 1 Credits
XXX XXX AHPC 4

Elective 1

Bioscience Technology (BSC)

XXX XXX AHPC Elective 2	3
Semester 2	
XXX XXX AHPC	4
Elective 3	
XXX XXX AHPC	3
Elective 4	
Total Credits:	14

Electives

4

AHPC Electives

Complete at least 14 credits from courses listed below, with a minimum grade of C for all courses. Students should consult with the Program Advisor before registering for courses.

Biology		
BIO 115	Human Genetics	3
BIO 131	Biology 1	5
BIO 132	Biology 2	5
BIO 151	Anatomy and Physiology 1	4
BIO 152	Anatomy and Physiology 2	4
BIO 220	Microbiology	3
BIO 230	Pharmacology	3
BIO 240	Pathophysiology	3
Chemistry		
CHE 110	Fundamentals of Chemistry	4
CHE 111	Bio-Organic Chemistry	4
CHE 121	General Chemistry 1 ¹	4
CHE 122	General Chemistry 2 ²	4
CHE 201	Organic Chemistry 1 ³	3
CHE 202	Organic Chemistry 2 ⁴	3
Other Electives		
DT 120	NUTRITION FOR A HEALTHY LIFESTYLE	3
PSY 225	Lifespan Development	3

- must co-register for CHE 131 General Chemistry 1 Lab
- 2 must co-register for CHE 132 General Chemistry 2 Lab
- 3 must co-register for CHE 211 Organic Chemistry 1 Lab
- 4 must co-register for CHE 212 Organic Chemistry 2 Lab