

Bioscience Technology & Bioscience Certificate (BSC & BSCC)

Bioscience Technology (BSC)

Bioscience technicians perform procedures in chemical and biotechnology laboratories, pharmaceutical manufacturing facilities, and research laboratories. Students who successfully complete the Bioscience Technology program at Cincinnati State earn an Associate of Applied Science degree while developing the skills important to a successful career in bioscience or biotechnology. These skills include advanced knowledge of biology and chemistry, microbiology, and laboratory techniques.

The curriculum prepares graduates for entry-level employment in bioscience or biotechnology, or for transfer to a bachelor's degree program in biological science or related fields.

Students entering the Bioscience Technology 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 students exploring a new career path in the biotechnology industry. The certificate curriculum contains less rigorous biology and chemistry requirements than the Bioscience associate's degree program, but has the same laboratory skills courses.

Students who earn the Bioscience Certificate gain experience in aseptic technique, genetic engineering, DNA forensics, protein isolation, DNA electrophoresis technology, and PCR (polymerase chain reaction).

Employees in biotechnology fields are expected to pay close attention to detail, follow detailed protocols, and have the ability to work in clean environments. Employment opportunities for graduates include working as laboratory assistants or technicians in a wide range of industries such as food and flavor testing, pharmaceutical production, microbiological analysis, water quality analysis, and sample management.

For more information, please contact the Health and Public Safety Division at (513) 569-1670.

To apply for this program at Cincinnati State, visit our Admissions Page (<http://www.cincinnati-state.edu/academics/admission>)

Bioscience Technology (BSC)

Semester 1		Lec	Lab	Credits
ENG 101	English Composition 1 (G)	3	0	3
BSC 108	Bioscience Skills and Regulations (B)	3	3	4
BIO 131	Biology 1 (G)	3	4	5

FYE 1XX	First Year Experience Elective (B)	1	0	1
Semester 2				
BSC 115	Bioscience Laboratory Methods (T)	2	3	3
BIO 132	Biology 2 (B)	3	4	5
ENG 104	English Composition 2: Technical Communication (G)	3	0	3
Semester 3				
MAT 151	College Algebra (G)	4	0	4
CHE 121	General Chemistry 1 (B)	4	0	4
CHE 131	General Chemistry 1 Lab (B)	0	3	1
BSC 150	Scientific Literacy for Bioscience (B)	2	0	2
XXX XXX	Arts/ Humanities Elective or Social/ Behavioral Science Elective (G)	3	0	3
Semester 4				
BSC 205	Molecular Genetics Laboratory (T)	2	6	5
CHE 122	General Chemistry 2 (T)	4	0	4
CHE 132	General Chemistry 2 Lab (T)	0	3	1
BIO XXX	Biology Elective (T)	3	0	3
Semester 5				
BSC 210	Protein Purification and Analysis (T)	2	6	5
XXX XXX	Bioscience Elective (T)	1	2	2
CHE XXX	Organic Chemistry Elective (T)	4	0	4
Semester 6				
BSC XXX	Bioscience Experiential Learning Elective (T)	1	20	1
Total Credits:		48	54	63

Electives

First Year Experience Elective

FYE 100	College Survival Skills	1
FYE 105	College Success Strategies	2
FYE 110	Community College Experience	3

Biology Elective

BIO 220	Microbiology	3
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BIO 230	Pharmacology	3
BIO 240	Pathophysiology	3
BIO 250	Cell Biology	5
BIO 260	Genetics	5
BIO 270	Ecology	5
BIO 275	Animal Behavior	5

Bioscience Elective

BSC 120	Cell Culture	2
BSC 160	Quality and Compliance in Biomanufacturing	3
BSC 230	Introduction to Bioinformatics	3
MET 230	Quality Control and Six Sigma	4
EVT 168	Radiation Safety	2
EVT 170	Water and Wastewater Treatment and Analysis	4

Organic Chemistry Elective

CHE 111	Bio-Organic Chemistry	4
CHE 201 & CHE 211	Organic Chemistry 1 and Organic Chemistry 1 Lab	5

Arts/Humanities Elective or Social/Behavioral Science Elective

CULT 105	Issues in Human Diversity	3
CULT 110	Social Issues in Technology	3
PHI 110	Ethics	3
PSY 100	Applied Psychology: Human Relations	3
PSY 102	Applied Psychology: Stress Management	3
PSY 110	Introduction to Psychology	3
SOC 100	Survey of Social Issues	3
SOC 105	Introduction to Sociology	3

Bioscience Experiential Learning 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

The letters G, B, and T (displayed after course titles or elective descriptions) identify types of courses required by the Ohio Department of Higher Education as part of an associate's degree curriculum.

G = General Education course in this curriculum

B = Basic Skills course in this curriculum

T = Technical course in this curriculum

Bioscience Certificate

Program Prerequisite: AFM 097 (minimum grade C) or appropriate placement test score

Semester 1		Lec	Lab	Credits
BSC 108	Bioscience Skills and Regulations	3	3	4
BIO 111	Biology: Unity of Life	3	2	4
MAT 151	College Algebra	4	0	4
ENG 101	English Composition 1	3	0	3
Semester 2		Lec	Lab	Credits
CHE 110	Fundamentals of Chemistry	3	3	4

BSC 115	Bioscience Laboratory Methods	2	3	3
BIO 115	Human Genetics	3	0	3
BSC 280	Bioscience Capstone Project	0	4	2
COMM 110	Public Speaking	3	0	3
Total Credits:		24	15	30

Faculty**Program Chair/Advisor**

Aaron Greene BS, MS

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