Microbiology- Bachelor of Arts

For information, contact the Department of Microbiology, 212 Pearson Hall, 513-529-5422.

The Bachelor of Arts degree is designed for students interested in careers in microbiology, life sciences, and environmental sciences, or who plan to pursue advanced degrees in medicine as well as other healthcare-related fields. Students who anticipate graduate study in microbiology should elect the B.S. in Microbiology program.

No course required for the major in microbiology may be taken on a credit/no-credit basis. Of the 100-level courses, only those that satisfy departmental degree requirements can be counted toward the GPA or the 32 hours required for the Bachelor of Arts major in microbiology.

Program Requirements

(32 MBI semester hours plus 19-25 related hours)

Code	Title	Credit Hours
Core courses		
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
MBI 201	General Microbiology	4
MBI 255	Modern Microbiology Applications	4
MBI 365	Molecular and Cell Biology	3
MBI 490	Undergraduate Seminar	1
Focus Courses		**14**
Breadth Requirement- select at least 1 course from each Focus Group		
• Biomedical Focus Group - select at least one of the following:		
MBI 361	Fundamentals of Epidemiology	
MBI 405	Medical Bacteriology [2]	
MBI 415	Immunology Principles and Practice [1]	
or MBI 414	Immunology Principles	
MBI 435	Medical Mycology	
MBI 464	Human Viruses	
• Integrative Focus Group - select at least one of the following:		
MBI 423	Synthetic and Systems Biology	
MBI 465	Bacteriophage Gene Expression Laboratory	
MBI 475	Microbial Ecology: Exploration of the Diverse Roles of Microorganisms in Earth's Ecology [2]	
MBI 485	Bioinformatics Principles	
MBI 495	Bacterial Cellular and Developmental Biology	
• Advanced Core Focus Group - select at least one of the following:		
MBI 425	Microbial Physiology [2]	
MBI 445	Microbial Genetics	
Depth Requirement- select at least 2 four-credit hour lab courses		
Hours Requirement- select sufficient Focus Courses to total at least 14 credit hours		
Elective Courses		**2**
Select from additional Focus Courses, from the Elective Courses (below) or from Biology or Chemistry (at 300 - level or higher) to complete the 32 required hours.		
Related Hours (19-25)		
Select one of the following Chemistry options:		7-10
Chemistry option one:		
CHM 231 & CHM 332	Fundamentals of Organic Chemistry and Outlines of Biochemistry	
Chemistry option two:		
CHM 241 & CHM 242	Organic Chemistry and Organic Chemistry	
CHM 244 & CHM 245	Organic Chemistry Laboratory and Organic Chemistry Laboratory	
Select one of the following Mathematics/Statistics courses:		4
MTH 151	Calculus I	
or STA 261	Statistics	
Select one of the following Physics options:		8-10
Physics option one:		
PHY 161 & PHY 162	Physics for the Life Sciences with Laboratory I and Physics for the Life Sciences with Laboratory II	
Physics option two (calculus-based):		
PHY 191 & PHY 192	General Physics with Laboratory I and General Physics with Laboratory II	
Total Credit Hours		**51-56**

[1] Credit not given for both MBI 414 and MBI 415.
[2] Counts as a 4-credit hour lab course

Elective Courses

Select from additional Focus Courses, from the following Elective Courses (Microbiology at 200 - level or higher) or from Biology or Chemistry (at 300 - level or higher) to complete the 32 required hours.

Code	Title	Credit Hours
BIO/MBI 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	4
MBI 224	Bacteriophage Genomics	1
MBI 223	Bacteriophage Biology	1
MBI 350		1-6
or MBI 450	Topics in Microbiology	
MBI 256	Introduction to Programming for the Life Sciences	3
MBI 410	Senior Internship	2
MBI 440	Research Problems [1]	1-4
MBI 466	Bioinformatics Computing Skills	3
MBI 477	Independent Studies [1]	0-5

MBI 480	Departmental Honors [1]	1-6
GLG 402	Geomicrobiology	3

[1] MBI 440, MBI 477, and MBI 480 have a maximum of four credit hours that can receive a standard grade.

Students seeking the Bachelor of Arts in Microbiology meet the College of Arts and Science writing in the major requirement by completing the following course: MBI 255.