

Microbiology (Minor)

A minor in Microbiology is available to undergraduates majoring in any field, but may be especially appropriate for students in biological or agricultural sciences, physical sciences or science education. This minor will be useful to students who want to strengthen their understanding of either basic cellular processes or applied areas such as the role of microorganisms in industry, agriculture or health.

Admissions

To be admitted to the program, a student must have a GPA of at least 2.0. Application for admission to any University minor program is now available via MyPack Portal. Admission will be based upon the student's academic record, and in most cases no longer requires departmental review. To apply to Add a Minor, go to: https://go.ncsu.edu/minor_coda (https://go.ncsu.edu/minor_coda/).

Certification

The student's minor advisor will review the student's record and certify that the student has completed the requirements for the minor by signing the "Application for Minor" form. Copies of the signed form will be forwarded to the student's major department and the Dean's office of the college in which the student is completing the requirements for a major. Upon certification, the student's transcript will include the statement "Minor in Microbiology." The minor must be completed no later than the semester in which the student expects to graduate from his or her degree program. Paperwork for certification should be completed no later than during the registration period for the student's final semester at NC State.

Contact Person

Jonathan Olson
Biological Sciences
4544B Thomas Hall
919-515-7860
jwolson@ncsu.edu

Plan Requirements

- A grade of 'C-' or better will be required for all courses taken to fulfill the minor requirements

Code	Title	Hours	Counts towards
Required Courses			8
MB 351	General Microbiology		
MB 352	General Microbiology Laboratory		
or MB 354	Inquiry-Guided Microbiology Lab		
BCH 451	Principles of Biochemistry		
or BCH 351	General Biochemistry		
Elective Courses			7
BBS/FS 426	Upstream Biomanufacturing Laboratory		

BEC/CHE 463	Fermentation of Recombinant Microorganisms		
BEC 480	cGMP Fermentation Operations		
BIT/MB 210	Phage Hunters		
BIT/MB 211	Phage Genomics		
BIT 410	Manipulation of Recombinant DNA		
BIT 466	Animal Cell Culture Techniques		
BSC 493	Research Experience		
BSC 495	Special Topics in Biological Sciences		
MB/FS 405	Food Microbiology		
MB 406/FS 506	Food Microbiology Lab		
MB 411	Medical Microbiology		
MB 412	Medical Microbiology Laboratory		
MB 414	Microbial Metabolic Regulation		
MB 420/520	Fundamentals of Microbial Cell Biotransformation		
MB 441	Immunology		
MB 451	Microbial Diversity		
MB 452	Microbial Diversity Lab		
MB 455	Microbial Biotechnology		
MB 461	Molecular Virology		
MB 492	External Learning Experience ¹		
MB/SSC 532	Soil Microbiology		
Total Hours		15	

¹ These courses require prior approval of the minor advisor: Jonathan Olson, 4544B Thomas Hall, 919-515-7860, jwolson@ncsu.edu.