Microbiology (17MBM)

Description
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.

Requirements

- The minor consists of 15 credit hours including 8 hours of required courses and 7 hours from a group of elective courses
- A grade of ‘C-‘ or better will be required for all courses taken to fulfill the minor requirements

Required Courses (8 hours)

- MB 351 General Microbiology (3 cr.)
- MB 352 General Microbiology Lab (1 cr.) OR MB 354 Inquiry-guided Microbiology Lab (1 cr.)
- BCH 451 Introductory Biochemistry (4 cr.) OR BCH 351 General Biochemistry (4 cr.)

Elective Courses (7 hours)

- 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 Manipulations of Recombinant DNA
- BIT 466 Animal Cell Culture Techniques
- MB (FS) 405/505 Food Microbiology
- MB (FS) 406/506 Food Microbiology Lab
- MB 411 Medical Microbiology
- MB 412 Medical Microbiology Lab
- MB 414 Microbial Metabolic Regulation
- MB 420/520 Fundamentals of Microbial Cell Transformations
- 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*
- MB 493 Special Problems in Microbiology*
- MB 495 Special Topics in Microbiology*
- MB (SSC) 532 Soil Microbiology

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

Any student wishing to pursue this minor should contact Jonathan Olson, who will assign a minor advisor. The advisor will consult with the student on specific course selections. The student must also complete the “Application for Minor” form which is available from Jonathan Olson or from Kim Orlowski in the departmental office in 116 David Clark Labs, 515-6146.

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

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