

ADVISING TRACK: MICROBIOLOGY

The BIOS B.S. requirements are the same for all BIOS students. However, the courses you take beyond the required courses are flexible and can be chosen to best fit your area of interest. Below are course recommendations for students who are most interested in microbiology. The emphasis name, however, does not show up officially on your transcript.

REQUIRED BIOS COURSEWORK

Non-negotiable coursework: http://catalog.niu.edu/preview_program.php?catoid=43&poid=9701

Course Number	Course Name	Credits	Typical Timing
BIOS 208	Fundamentals of Cellular Biology	3	Fall and Spring
BIOS 210	Fundamentals of Cellular Biology Lab	1	Fall and Spring
BIOS 209	Fundamentals of Organismal Biology	3	Fall and Spring
BIOS 211	Fundamentals of Organismal Biology Lab	1	Fall and Spring
BIOS 308	Genetics	5	Fall and Spring
BIOS 494	Senior Assessment	1	Fall and Spring

Current recommended schedule: <https://www.niu.edu/biology/academics/undergraduate-studies/4-year-plan.shtml>

HIGHLY RECOMMENDED COURSES

Course Number	Course Name	Credits	Typical Timing
BIOS 300	Introduction to the Biology Major	1	Every fall (?)
BIOS 302	Molecular biology	3	Every fall and spring
BIOS 313	Microbiology	4	Every fall and spring
BIOS 410	Food and Industrial Microbiology	3	Fall of even years
BIOS 412	Mycology	4	Every Fall
BIOS 417	Pathogenic Microbiology	4	Every Spring
BIOS 423	Principles of Virology	3	Every other Spring

OTHER SUGGESTED COURSES

Course Number	Course Name	Credits	Typical Timing
BIOS 303	Cell biology	3	Every spring and fall

BIOS 370 (495/499)	Directed Research in Biology (requires bios GPA \geq 3.0)	1 to 9 or 12	2 nd semester junior year until graduation
BIOS 409x	Water quality	4	Every Spring (not in 2023)
BIOS 413	Microbiology physiology	3	
BIOS 419	Microbial Systematics and Diversity	3	Fall of odd years
BIOS 432	Radiation biology	3	Fall of odd years
BIOS 438	Molecular genetics of prokaryotes	3	Fall of odd years
BIOS 468X	Geomicrobiology	3	Spring, every year or every other year
BIOS 470x (471x or 472x /473x)	Biological chemistry/lab	3-6	Every fall (summer) Fall/Spring
BIOS 482	Biology of forensic analysis	4	TBD
BIOS 488	Applied microbial biotechnology	3	Spring, every year or every other year
BIOS 490	Cooperative Education/Internship	1-9	Any semester
BIOS 493	Fungal genetics	3	Spring, every other year