

# Course Requirements for a Minor in Microbiology

Department of Microbiology,  
Immunology, and Pathology

A minimum of **21 credits** are needed for a minor, including 9 (plus 6-8) credits of required courses and 4-6 credits of elective courses. At least **one** formal laboratory course must be taken as an elective.

## Required Courses (9 credits)

Course	Title	Terms Offered	Prerequisites	Credits
MIP 300	General Microbiology	Fall, Spring, Summer	(BZ 110 or BZ 120 or LIFE 102) and (CHEM 245, 341, or CHEM 345, may be taken concurrently)	3
MIP 302	General Microbiology Laboratory	Fall, Spring		2
MIP 342	Immunology	Spring, Summer	(CHEM 245, 341, or 345, may be taken concurrently) and (LIFE 201B or LIFE 210 or MIP 300)	4

## Additional Required Courses (6-8 credits)

Course	Title	Terms Offered	Prerequisites	Credits
<b>Select one:</b>				
MIP 351	Medical Microbiology	Spring		3
<b>OR</b>				
MIP 420	Medical and Molecular Virology	Fall		4
<b>Select one:</b>				
MIP 443	Microbial Physiology	Spring	(MIP 300) and (BC 351 or BC 401)	4
<b>OR</b>				
MIP 450	Microbial Genetics	Fall		3

Select 4-6 credits from the following courses, including at least one Microbiology lab course.

## Elective Courses (must include at least 1 lab course)

Course	Title	Terms Offered	Prerequisites	Credits
MIP 260	The World of Parasites	Spring		3
MIP 315	Human and Animal Disease	Fall, Spring		3
MIP 334	Food Microbiology	Fall		3
* MIP 335	Food Microbiology Laboratory	Fall--odd years	(LIFE 206 or MIP 302) and (MIP 334, may be taken concurrently)	2
* MIP 343	Immunology Laboratory	Spring	MIP 302 and MIP 342, may be taken concurrently	2
MIP 350	Microbial Diversity	Fall		3
MIP 351	Medical Microbiology	Spring		3
* MIP 352	Medical Microbiology Laboratory	Spring	MIP 302 and MIP 351, may be taken concurrently	3
MIP 420	Medical and Molecular Virology	Fall		4
* MIP 425	Virology and Cell Culture Laboratory	Fall	MIP 302 and MIP 420, may be taken concurrently	2
MIP 432	Microbial Ecology	Spring--even years		3
* MIP 433	Microbial Ecology Lab	Spring--even years		1
MIP 443	Microbial Physiology	Spring	(MIP 300) and (BC 351 or BC 401)	4
MIP 450	Microbial Genetics	Fall		3
* MIP 462	Parasitology and Vector Biology	Fall		5
MIP 495	Independent Study	Fall, Spring, Summer		2
MIP 530	Advanced Molecular Virology	Spring--even years	(BC 351 or BC 401) and (BC 463 or MIP 450)	4
MIP 533	Epidemiology of Infectious Diseases/Zoonoses	Spring--even years		3
MIP 540	Biosafety	Spring		2
* MIP 550	Microbial and Molecular Genetics Laboratory	Spring	MIP 302 and MIP 450	4
MIP 555	Principles and Mechanisms of Disease	Spring		3
MIP 563	Biology of Disease Vectors	Spring--odd years		3
MIP 577	Computer Analysis in Population Genetics	Spring		3
MIP 578	Genetics of Natural Populations	Fall--odd years		4

\* This course qualifies for the lab requirement.