

<h2 style="margin: 0;">Course Requirements for a Minor in Microbiology</h2>	Department of Microbiology, Immunology, and Pathology
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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, Summer	MIP 300 (may be taken concurrently)	2
^	MIP 342	Immunology	Fall, Spring, Summer	(CHEM 245, 341, or 345, may be taken concurrently) and (BZ 350 or LIFE 210 or LIFE 201B or MIP 250); MIP 300	4

Additional Required Courses (6-8 credits)				
Course	Title	Terms Offered	Prerequisites	Credits

Select one:					
^	MIP 351	Medical Microbiology	Spring	MIP 342	3
OR					
^	MIP 420	Medical and Molecular Virology	Fall	(MIP 300) and (BC 351, may be taken concurrently, or BC 401, may be taken concurrently); MIP 300	4
Select one:					
^	MIP 443	Microbial Physiology	Spring	(MIP 300) and (BC 351 or BC 401)	4
OR					
^	MIP 450	Microbial Genetics	Fall	(MIP 300) and (BC 351, may be taken concurrently, or BC 401, may be taken concurrently)	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	CHEM 111 and BZ 110 or LIFE 102	3
^	MIP 315	Human and Animal Disease	Fall, Spring	None	3
^	MIP 334	Food Microbiology	Spring	LIFE 205 or MIP 300	3
*	MIP 335	Food Microbiology Laboratory	Fall--odd years	(LIFE 206 or MIP 302) and (MIP 334, may be taken concurrently)	2
^	MIP 351	Medical Microbiology	Spring	MIP 342	3
^	MIP 420	Medical and Molecular Virology	Fall	(MIP 342) and (BC 351, may be taken concurrently, or BC 401, may be taken concurrently)	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	MIP 300	3
*	MIP 433	Microbial Ecology Lab	Spring--even years	MIP 432, may be taken concurrently	1
^	MIP 443	Microbial Physiology	Spring	(MIP 300) and (BC 351 or BC 401)	4
^	MIP 450	Microbial Genetics	Fall	(MIP 300) and (BC 351, may be taken concurrently, or BC 401, may be taken concurrently)	3
*	MIP 462	Parasitology and Vector Biology	Fall	(BZ 110 or LIFE 103) and (MIP 302 or LIFE 206 or BZ 212)	5
\$	MIP 495	Independent Study	Fall, Spring, Summer	MIP 300	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	MIP 300	3
^	MIP 540	Biosafety	Spring	MIP 300	2
* \$	MIP 550	Microbial and Molecular Genetics Laboratory	Spring	MIP 302 and MIP 450	4
^	MIP 555	Principles and Mechanisms of Disease	Spring	BMS 300	3
^	MIP 563	Biology of Disease Vectors	Spring--odd years	MIP 462 or BSPM 462 or BZ 462	3
^	MIP 577	Computer Analysis in Population Genetics	Spring	MIP 578, may be taken concurrently, or BZ 578	3
^	MIP 578	Genetics of Natural Populations	Fall--odd years	(BZ 350 or LIFE 201A or LIFE 201B or SOCR 330) and (STAT 201 or STAT 301 or STAT 307 or ERHS 307)	4

* This course qualifies for the lab requirement.
 ^ This course is restricted to majors until a certain date.
 \$ Must contact department for registration.