

MAJOR IN MEDICAL MICROBIOLOGY AND INFECTIOUS DISEASE

Major Completion Map

Distinctive Requirements for Degree Program:

To Declare Major: competitive entry controls required and capped enrollment in place. Please contact Director of Student Success in the CVMBS Student Success Center for more information.

To prepare for first semester: The curriculum for the Medical Microbiology and Infectious Disease major assumes students enter college prepared to take MATH 124. Entering students who are not prepared to take MATH 124 will need to prerequisite requirements in the first semester. Those requirements are listed as benchmark courses in Freshman Semester 1 below. LIFE 102 requires high school chemistry as a prerequisite; CHEM 111 requires Algebra II as a prerequisite (this prerequisite is met by having Algebra II by test credit, transfer credit, or placement out of MATH 117 and MATH 118 on Math Placement Exam).

Freshman

Semester 1		Critical	Recommended	AUCC	Credits
CHEM 111	General Chemistry I (GT-SC2)	X		3A	4
CHEM 112	General Chemistry Lab I (GT-SC1)	X		3A	1
CO 150	College Composition (GT-CO2)			1A	3
VMBS 100	Introduction to Biomedical Sciences Major				2
Select a minimum of 3 credits from the following:					3
MATH 118	College Algebra in Context II (GT-MA1)			1B	
MATH 124	Logarithmic and Exponential Functions (GT-MA1)		X	1B	
MATH 125	Numerical Trigonometry (GT-MA1)			1B	
MATH 126	Analytic Trigonometry (GT-MA1)			1B	
MATH 155	Calculus for Biological Scientists I (GT-MA1)			1B	
MATH 160	Calculus for Physical Scientists I (GT-MA1)			1B	
1C (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#aucc)				1C	3
MATH 124 must be completed by the end of Semester 1, if necessary.		X			

Total Credits

16

Semester 2		Critical	Recommended	AUCC	Credits
CHEM 113	General Chemistry II	X			3
CHEM 114	General Chemistry Lab II	X			1
LIFE 102	Attributes of Living Systems (GT-SC1)	X		3A	4
MIP 260	The World of Parasites	X			3
Elective					3
3 credits of AUCC 3B must be completed by the end of semester 2.		X			

Total Credits

14

Sophomore

Semester 3		Critical	Recommended	AUCC	Credits
MIP 250	Eukaryotic Microbiology	X			3
MIP 300	General Microbiology	X			3
MIP 302	General Microbiology Laboratory	X			2
Select one group from the following:					3-5
Group A: (5 credits)					
CHEM 245	Fundamentals of Organic Chemistry	X			
CHEM 246	Fundamentals of Organic Chemistry Laboratory	X			
Group B: (3 credits)					
CHEM 341	Modern Organic Chemistry I				
Social and Behavioral Sciences (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#social-behavioral-sciences)				3C	3

Total Credits

14-16

Semester 4		Critical	Recommended	AUCC	Credits
BC 351	Principles of Biochemistry		X		4
MIP 342	Immunology	X			4
Select the same Group (A or B) as selected Semester 3:					3-5
Group A: (3 credits)					
Concentration Electives (See list on Requirements Tab)					
Group B: (5 credits)					
CHEM 343	Modern Organic Chemistry II				
CHEM 344	Modern Organic Chemistry Laboratory				
Select one course from the following:					1-2
MIP 292	Early Career Preparation in Microbiology	X			
MIP 372	Graduate School Preparation for Microbiology				
Historical Perspectives (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#historical-perspectives)				3D	3
Select MIP 292 in semester 4 if MIP 372 is not taken in semester 5					
Total Credits					15-18
Junior					
Semester 5		Critical	Recommended	AUCC	Credits
MIP 450	Microbial Genetics		X		3
Select one course from the following:					5
PH 121	General Physics I (GT-SC1)		X	3A	
PH 141	Physics for Scientists and Engineers I (GT-SC1)			3A	
Concentration Electives (See list on Requirements Tab)					5
Select MIP 372 in semester 5 if MIP 292 is not taken in Semester 4					
Total Credits					13
Semester 6		Critical	Recommended	AUCC	Credits
MIP 443	Microbial Physiology				3
Select one course from the following:					4
BMS 300	Principles of Human Physiology				
BMS 360	Fundamentals of Physiology				
Advanced Writing (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#advanced-writing)				2	3
Arts and Humanities (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities)				3B	3
Elective					3
Total Credits					16
Senior					
Semester 7		Critical	Recommended	AUCC	Credits
MIP 420	Medical and Molecular Virology	X		4A	4
Select one AUCC 4C course from the following:					2
MIP 400A	Capstone in Microbiology: Medical Microbiology	X		4C	
MIP 400B	Capstone in Microbiology: Biotechnology			4C	
MIP 400C	Capstone in Microbiology: Immunology			4C	
MIP 498	Research			4C	
Select one from the following:					3
STAT 301	Introduction to Applied Statistical Methods				
STAT 307	Introduction to Biostatistics				
Concentration Elective (See list on Requirements Tab)					3
Arts and Humanities (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities)				3B	3
Total Credits					15
Semester 8		Critical	Recommended	AUCC	Credits
MIP 351	Medical Bacteriology	X		4B	3

Concentration Electives (See list on Requirements Tab)	X	6
Electives	X	5-6
The benchmark courses for the 8th semester are the remaining courses in the entire program of study.	X	
Total Credits		14-15
Program Total Credits:		120