Cell & Molecular Biology Microbiology Option EL_CMBI_BS

120 Earned Credits Total

Student:	HE UNIVERSITY OF RHODE ISLAND
Student ID:	
Advisor:	

ABOUT Cell & Molecular Biology - Microbiology Option:

Microbiology is the study of microscopic organisms including bacteria, viruses, archaea, fungi, and protists. These are the most successful organisms on the planet and colonize all environments where liquid water exists. Activities of microorganisms drive the biogeochemistry of the earth. Microbes also affect our health and well being from birth in a number of ways including activating and training our immune system and causing or preventing disease. Students choosing to specialize in microbiology within the Cell and Molecular Biology major will become knowledgeable in all aspects of microbiology including microbial physiology, molecular biology and genetics, pathogenics, microbial ecology, immunology, and virology.

Step 1: REVIEW YOUR PROGRAM REQUIREMENTS

Cell & Molecular Biology (CMB) - Microbiology			37-38	Credits
Concentration Courses (25 Credits)				
Course Name	Course #	Semester	Credits	Grade
Introductory Microbiology	*CMB 211		4	
Introductory Biochemistry	CMB 311		3	
Immunology and Serology	CMB 333		3	
General Genetics	CMB (BIO) 352		4	
Advanced Microbiology Lecture I	CMB 413		3	
Advanced Microbiology Laboratory I	CMB 415		2	
Advanced Microbiology Lecture II	CMB 414		3	
Advanced Microbiology Laboratory II	CMB 416		2	
Seminar in Cell and Molecular Biology	CMB 495		1	
Professional Electives			(12-13	Credits)
Select one course from the following: CMB 332, 412,	432, 435, 450, 576		(3-4	credits)
Course Name	Course #	Semester	Credits	Grade
Select an additional 9 credits from any Any 300 level	or higher CMB course; Blo	O 341 or 43	7 (9	Credits)
	Course #	Semester	Crodits	Grade
Course Name			Credits	

Minimum 2.0 cumulative GPA	required in
major and overrall for gradua	tion.
Major GPA =	
Overall GPA =	

^{*}Course fulfills general education and a major requirement

Step 1: REVIEW YOUR PROGRAM REQUIREMENTS CONTINUED:

Introduction Require		(1 credit)	
Course	Semester	Credits	Grade
URI 101		1	

BIOLOGY			(8 credits)
Course	Semester	Credits	Grade
*BIO 101		3	
*BIO 103		1	
*BIO 102		3	
*BIO 104		1	

CHEMISTRY Requirement:		(16-	18 credits)
Course	Semester	Credits	Grade
*CHM 101		3	
CHM 102		1	

OR

CHM 191		5	
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AND

Course	Semester	Credits	Grade
CHM 112		3	
CHM 114		1	
OR			
CHM 192		5	

AND

Course	Semester	Credits	Grade
CHM 227		3	
CHM 228		3	
CHM 226		2	

MATH Requirement:		(6-8 cre	dits)	
Course	Semester	Credits	Grade	
*MTH 131		3		
OR				
*MTH 141				
Preferred		4		

AND 1 OF THE FOLLOWING: MTH *111, 132, *142; *CSC 201; STA 307, 308, or 409

Course	Semester	Credits	Grade

PHYSICS Requirement:		(8	credits)
Course	Semester	Credits	Grade
*PHY 111		3	
*PHY 185		1	
OR			
*PHY 203			
Preferred		3	
*PHY 273 Preferred		1	

AND

Course	Semester	Credits	Grade
*PHY 112		3	
*PHY 186		1	
OR			
*PHY 204		2	
Preferred		3	
*PHY 274		1	
Preferred		Δ.	

*Course fulfills general education and a major requirement

			FREE EI	ECTIVES
Course	Semester	Credits	Grade	

Course	Semester	Credits	Grade

Cell & Mol	ecular Bi	ology - B.	s. THE UN	IIVERS	ITY OF	RHODE ISLAND Student	t:	
Microbiolo	gy Option	า				Student ID):	
120 Total E						Advisor	r:	
							-	
<u>General E</u>	ducation	Guideli	nes:					
General ed	ucation is	s 40 credi	ts. Each of th	e twelve	outcom	es (A1-D1) must be met by at least 3 cr	edits. A single	e course
=						ounted towards the 40 credit total. At		
			-			s can have the same course code. Gen	eral educatio	n
courses ma	ay also be	used to	meet require	ments of	the maj	or or minor when appropriate.		
LIST COUR	SES THAT	MEET GE	NERAL EDUC	ATION:				
	Genera	al Educati	ion Credit Cou	unt		LIST COURSE AS EACH OUTCOME IS	S MET:	
At		•	more than 1			General Education Outcome	_	
	with	the same	e course code				Course	Grade
Course	Credits	Grade	Course	Credits	Grade	KNOWLEDGE		
						A1. STEM		
						A2. Social & Behavioral Sciences		
						A3. Humanities		
						A4. Arts & Design		
						COMPETENCIES		
						B1. Write effectively		
						B2. Communicate effectively		
						B3. Mathematical, statistical, or		
						computational strategies		
	1					B4. Information literacy		
						RESPONSIBILITIES	_	_
			Total			C1. Civic knowledge &		
			Credits			responsibilities		
						C2. Global responsibilities		
NOTE: BECA	USE MOST	COURSES	MEET MORE	THAN ONE		C3. Diversity & Inclusion		
			DIT MIGHT BE			INTEGRATE & APPLY		
			REDITS. HOWE\ GENERAL EDU		MUST	D1. Ability to synthesize		
						GRAND CHALLENGE	_	_
*course ful	fills gene	ral educa	tion and a ma	ajor requ	irement	G. A t least one course of your 40		
						credits is an approved "G" course		
							<u> </u>	
-					-	College for Academic Success is:		
		ts and a	minimum cu	ımulativ	e gpa of	2.0 or better.		
Advising I	Notes:							

Effective: 2024-2025

B.S. Cell & Molecular Biology-Microbiology Option Sample 4 Year Plan - Effective Fall 2024 College of the Environment & Life Sciences

Freshman Year Fall Semester

Freshman Year Spring Semester

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Course Code	Description	Cr
URI 101	Planning for Academic Success	1
*BIO 101/103	Principles of Biology I/Lab	4
*MTH	Precalculus, Applied Calculus I, or Introductory Calculus	3-4
*CHM 101/102	General Chemistry I/Lab	4
	*General Education	3-4
		15-17

Course Code	Description	Cr
*BIO 102/104	Principles of Biology II/Lab	4
*CHM 112/114	General Chemistry II/Lab	4
	2nd required CSC, MTH, or STA course	3-4
	*General Education	3-4
	*General Education	3-4
		15-17

Year 1 Milestones: Complete BIO 101, 103, 102, 104, CHM 101, 102, 112, 114, MTH 131 or 141. Earn 30 credits with a cumulative GPA of 2.0 or higher.

Sophmore Year Fall Semester

Sophmore Year Spring Semester

Course Code	Description	Cr
CHM 227	Organic Chemistry Lecture I	3
*CMB 211	Introductory Microbiology	4
*PHY	General Physics I Lecture/Lab	4
	*General Education	3-4
	*General Education	3-4
		15-17

Course Code	Description	Cr
CHM 228	Organic Chemistry Lecture II	3
CMB 311	Introductory Biochemistry Lecture	3
*PHY	General Physics II Lecture/Lab	4
	Professional Elective	3
	*General Education	3-4
		15-17

Year 2 Milestones: Complete CMB 211, and 311. Begin Organic Chemistry sequence. Begin Physics sequence. Meet with a CMB Faculty advisor to discuss research opportunities and plan year 3 and 4 courses. Earn 60 total credits with a cumulative GPA of 2.0 or higher.

Junior Year Fall Semester

Junior Year Spring Semester

Course Code	Description	Cr
CHM 226	Organic Chemistry Lab	2
CMB 333	Immunology and Serology	3
	Professional Elective	3-4
	Professional Elective	3-4
	*General Education/Free Elective	3-4
		15-17

Course Code	Description	Cr
CMB 352	General Genetics	4
	Professional Elective	3-4
	Professional Elective	3-4
	*General Education/Free Elective	3-4
	*General Education/Free Elective	3-4
		15-17

Year 3 Milestones: Complete CMB 333, & 352. Complete Organic Chemistry sequence. Meet with a CMB Faculty advisor to plan year 3 and 4 courses. Earn 90 total credits with a cumulative GPA of 2.0 or higher. Prepare intent to graduate with faculty advisor for Fall submission.

Senior Year Fall Semester

Senior Year Spring Semester

Course Code	Description	Cr
CMB 495	Seminar in Cell & Molecular Biology	1
CMB 413	Advanced Microbiology Lecture I	3
CMB 414	Advanced Microbiology Laboratory I	2
	*General Education/Free Elective	3-4
	*General Education/Free Elective	3-4
•	·	15-17

Course Code	Description	Cr
CMB 415	Advanced Microbiology Lecture II	3
CMB 416	Advanced Microbiology Laboratory II	2
	*General Education/Free Elective	3-4
	*General Education/Free Elective	3-4
	Professional Elective	3-4
		15-17

Year 4 Milestones: Complete **CMB** remaining microbiology concentration courses Earn total 120 credits with a cumulative GPA of 2.0 or higher. Minimum 2.0 cumulative gpa in CMB concentration courses.