

B.S. Molecular Biology & Biotechnology Four-Year Sample Curriculum 2020-2021

Requirements subject to change. See UI Catalog for complete degree requirements and additional information. Updated 2/24/20.

1 st Year – Fall Semester			1 st Year – Spring Semester		
BIOL 114	Organisms and Environments minimum 'C' required to graduate	4	BIOL 115/115L	Cells & the Evolution of Life & Lab Prereq: CHEM 101/101L or CHEM 111/111L minimum 'C' required to graduate	4
CHEM 111/111L	Principles of Chemistry I & Lab Prereq: math test or min 'C' in CHEM 101, MATH 143 or 170	4	CHEM 112/112L	Principles of Chemistry II & Lab Prereq: Chem 111/111L	5
MATH 170	Analytic Geometry and Calculus I Prereq: math test or min 'C' in MATH 143 and MATH 144 (co-req possible).	4	STAT 251 or STAT 301*	Statistical Methods or Probability & Statistics Prereq: MATH 108, 137, 143, 160, or 170 or math test (SM); ^MATH 175 (P & S)	3
ENGL 102	College Writing and Rhetoric Prereq: ENGL 101 or test scores	3		General Education Course/Elective	3
	Total Credits	15		Total Credits	15
2 nd Year – Fall Semester			2 nd Year – Spring Semester		
BIOL 250/255 (250 Fall only)	General Microbiology & Lab Prereq: BIOL 115/115L and CHEM 101/101L or 111/111L	5		General Education Course/Elective	3
CHEM 277/278	Organic Chemistry I & Lab Prereq: CHEM 112/112L	4	CHEM 372 (Spring only)	Organic Chemistry II Prereq: CHEM 277	3
PHYS 111/111L or PHYS 211/211L	General Physics I & Lab or Engineering Physics I & Lab Prereq: MATH 143 (GP); MATH 170 (EP)	4	PHYS 112/112L (Spring only) or PHYS 212/212L*	General Physics II & Lab or Eng. Physics II & Lab Prereq: PHYS 111/111L (GP); PHYS 211/211L and ^MATH 175 (EP)	4
	General Education Course/Elective	3		General Education Course/Elective	3
				General Education Course/Elective	3
	Total Credits	16		Total Credits	16
3 rd Year – Fall Semester			3 rd Year – Spring Semester		
BIOL 310/315 (Fall only)	Genetics & Lab Prereq: BIOL 115/115L or BIOL 250	4	BIOL 312/313 (Spring only)	Molecular and Cellular Biology & Lab Prereq: BIOL 115/115L	4
BIOL 380/382 (Fall only)	Biochemistry I Prereq: CHEM 112/112L and CHEM 277	6	BIOL 454 (Spring only)	Biochemistry II Prereq: CHEM 372; BIOL 380 or CHEM 302 or 306	3
ENGL 317 or 207 or 208	Writing Course Prereq: ENGL 102 (all); Junior stand. (317)	3	BIOL 485 (Spring only) or *see below	Prokaryotic Molecular Biology or MBB Elective (if BIOL 487 not taken) Prereq: BIOL 250 and BIOL 380	3
	General Education Course/Elective	3		General Education Course/Elective	3
	Total Credits	16		Total Credits	13
4 th Year – Fall Semester			4 th Year – Spring Semester		
PLSC 488 (Fall only)	Genetic Engineering Prereq: BIOL 310 or GENE 314	3	BIOL 401	Seminar	1
BIOL 487 (Fall only) or *see below	Eukaryotic Molecular Genetics or MBB Elective (if BIOL 485 not taken) Prereq: BIOL 380 & BIOL 310 or GENE 314	3	Senior Experience	BIOL 401 or BIOL 405 or BIOL 408 (Fall or Spring) or BIOL 411 (Spring only)	2
*see below	MBB Elective	3	BIOL 301 or 401 or 499 or PLSC 440 (440 Spring only)	Undergraduate Research or Directed Study or Advanced Laboratory Techniques Prereq: Sr. and permission (UR); BIOL 250 (ALT)	4
	General Education Course/Elective	3	*see below	MBB Elective	3
	General Education Course/Elective	3		General Education Course/Elective	3
	Total Credits	15		Total Credits	13

***MBB Electives:** Immunology, Pathogenic Microbiology, Genomics, Virology, Neurobiology, Principles of Developmental Biology, Protein Structure and Function, Prokaryotic Molecular Biology, Eukaryotic Molecular Genetics, Food Microbiology, Food Microbiology Lab, Instrumental Analysis, Cell Biology

Additional classes can be substituted with prior approval from advisor and chairperson.