

**BS degree in Molecular Biology and
Biochemistry
4-year plan**

FALL			SPRING		
Freshman					
Chem 111	Principles of Chemistry I	4	Bio 115	Cells and the Evolution of Life	4
Math 143	Pre-calculus Algebra & Analytic Geometry (Math 108 Intermediate Algebra (3 cr) may be required first)	3	Chem 112	Principles of Chemistry II	5
			Math 170	Analytic Geometry & Calculus I	4
Eng 102	College Writing & Rhetoric	3	Core 153-199	Core Discovery (part 2 Spring)	3
Core 103-149	Core Discovery (part 1 Fall)	4			
Elective	XXX	3			
Total		17			16
Sophomore					
Chem 253	Quantitative Analysis	5	Core	University Core Class (1 st in cluster)	3
MMBB 250	General Microbiology	3	Phys 112 or	General Physics II (with lab) or	4
Chem 277	Organic Chemistry I	3	Phys 212	Engineering Physics (with lab)	
Chem 278	Organic Chemistry Lab I	1	MMBB 255	Gen. Microbiology lab	2
Phys 111 or	General Physics I (with lab) or	4	Chem 372	Organic Chemistry II	3
Phys 211	Engineering Physics (with lab)		Chem 376	Organic Chemistry II Lab	2
Total		16			14
Junior					
MMBB 380	Introductory Biochemistry	4	MMBB/Bio	MBB course list ¹	3
MMBB 382	Introductory Biochemistry Lab	2	Eng 207 or	Persuasive Writing	3
Core	University Core Class (2 nd in cluster)	3	Eng 208 or	Personal and Exploratory Writing	
Stat 251	Principles of Statistics	3	Eng 209 or	Inquiry-Based Writing	
Bio 210 or	Genetics (4 cr) (fall) or General	4	Eng 317	Technical Writing	
Gene 314	Genetics (3 cr) (spring)		Core	University Core Class (3rd in cluster)	3
			MMBB442	Advanced Biochemistry II	3
			XXX	Elective	3
Total		16			15
Senior					
MMBB 400	Seminar	1	MMBB 440 or	Advanced Lab Techniques (Sp only)	4
MMBB 488	Genetic Engineering	3	MMBB401	Undergraduate research in MMBB	
MMBB/Bio	MMBB course list ¹	3	XXX	Science elective	3
MMBB/Bio	MMBB course list ¹	3	MMBB	MMBB course list ¹	6
XXX	Science elective	3	MMBB 476	Biophysical Chemistry	3
			XXX	General International course	3
Total		13			16

Total for degree= 128 (16 Cr per semester average)

¹**MMBB course list:** Bio 311 Plant Phys, MMBB 409 Immunology, MMBB 412 Pathogenic Microbiology, MMBB 422 Cellular and Molecular Basis of Disease, MMBB 432 Virology, MMBB 450 Mol Mech in Micro, MMBB 460 Micro Physiol, MMBB 465 Molecular Parasitology; MMBB 470 Advanced Pathogenesis: Host-pathogen Interactions; MMBB 475 Cell Biology, MMBB 482 Protein Structure/Function, MMBB 485 Prokaryotic Mol Biology, MMBB 486 Plant Biochemistry, MMBB 487 Eukaryotic Mol Genetics
Molecular Biology and Biochemistry students also are encouraged to participate in undergraduate research (MMBB401).

Eng 102 is required of all students. English placement is based on SAT/ACT scores. Depending on scores, students may be required to take English 101 as a prerequisite.

Math 160 or 170 is required of all students. Math placement is determined by SAT/ACT scores.

Depending on scores, students may be required to take Math 108 and/or Math 143 as a prerequisite.

Chem 111 is required of all students. Chemistry placement is based on SAT/ACT scores or a Chemistry placement test. Depending on scores, students may be required to take Chem 050 as a prerequisite.

*Social Science/Humanities credits must have a minimum of 6 credits in each area. (This includes Core 101/102 and Clusters/International courses)

*The Health and Wellness Cluster is recommended since it includes MMBB 154.