

Biological Sciences Major Requirements: MOLECULAR AND CELL BIOLOGY

This checklist serves as an advising tool for foundation and concentration requirements. It does not include CALS/A&S college requirements. Students are responsible for understanding all degree requirements, appropriate course sequencing and prerequisites and should consult the *Courses of Study* for additional information.

FOUNDATION REQUIREMENTS						
Course Subject	Course No.	Course Title	Credit Hours	Semester Taken	✓ when done	Notes
Introductory Biology Cluster (Take TWO of the three following courses) <i>*AP credit for biology does not count towards the major</i>						
BIOMG	1350	Principles of Cell & Developmental Biology	3			*Recommended for MCB concentration
BIOG	1440 or 1445	Introduction to Comparative Physiology or Individualized Instruction	3 4			
BIOEE	1610	Ecology and the Environment (*Also offered as summer course at Shoals Marine Lab)	3 (*4 cr. WIM option)			
Investigative Laboratory						
BIOG	1500	Biology Laboratory (*Also offered as summer course at Shoals Marine Lab)	2			
Evolutionary Biology and Diversity						
BIOEE	1780 or 1781	Evolutionary Biology & Diversity Introduction to Evolution and Diversity (*Also offered as summer course at Shoals Marine Lab)	4 4			
General Chemistry (CHEM 2070 & 2080 OR CHEM 2150)						
CHEM	2070	General Chemistry I &	4			
	2080	General Chemistry II	4			
CHEM	2150	Honors General and Inorganic Chemistry	4			
College Mathematics (TWO courses are required: one calculus course AND one additional math course. Consult <i>Courses of Study</i> for acceptable math courses.)						
MATH	1106 or 1110	Calculus for the Life and Social Sciences or Calculus I	3 4			
XXXX	####	Math/Calculus II/Statistics	3-4			
Organic Chemistry (CHEM 3570 & 3580 OR CHEM 3590 & 3600 OR CHEM 3530) <i>*CHEM 1570 not an option for MCB concentration</i>						
CHEM	3570	Organic Chemistry for the Life Sciences I &	3			
	3580	Organic Chemistry for the Life Sciences II	3			
CHEM	3590	Honors Organic Chemistry I	4			
	3600	Honors Organic Chemistry II	4			
CHEM	3530	Principles of Organic Chemistry	4			
Organic Chemistry Laboratory (CHEM 2510 OR CHEM 3010)						
CHEM	2510	Intro to Experimental Organic Chemistry	2			
CHEM	3010	Honors Experimental Chemistry I	4			
Physics (PHYS 1101 & 1102 OR PHYS 2207 & 2208 OR PHY 1112 & 2213)						
PHYS	1101	General Physics I &	4			
	1102	General Physics II	4			
PHYS	2207	Fundamentals of Physics I &	4			
	2208	Fundamentals of Physics II	4			
PHYS	1112	Physics I: Mechanics & Heat &	4			
	2213	Physics II: Electromagnetism	4			
Genetics and Genomics (Lecture must be taken either concurrently or before the laboratory)						
BIOMG	2800	Lectures in Genetics and Genomics	3			
	2801	Laboratory in Genetics and Genomics	2			
Biochemistry and Molecular Biology (BIOMG 3310 & 3320 OR BIOMG 3300 & 3340. <i>*MCB concentrators require a 5-credit option.</i>)						
BIOMG	3310	Proteins and Metabolism	3			
	3320	Molecular Biology	2			
BIOMG	3300	Individualized Instruction	4			
	3340	Computer Graphics & Molecular Biology	1			

CONCENTRATION REQUIREMENTS: Molecular and Cell Biology						
*Students are expected to consult with their faculty advisor when choosing courses towards concentration requirements.						
Course Subject	Course No.	Course Title	Credit Hours	✓ when done	Semester Taken	Notes
Required Courses (Requires 5 credits of biochemistry (see front page), Survey of Cell Biology, and one laboratory course in molecular biology)						
BIOMG	4320	Survey of Cell Biology	3			
BIOMG or BIONB	4400 4300	Lab in Biochemistry & Molecular Biology or Experimental Molecular Neurobiology	4 4			
Additional Courses (Requires minimum of 7 additional credits. Consult <i>Courses of Study</i> for list of acceptable courses.)						

Consult the Biological Sciences section in *Courses of Study* for complete details regarding the major and for courses satisfying requirements. Also, consult college sections in *Courses of Study* for information on college requirements for graduation.

LONG-RANGE SCHEDULE PLANNER

	Fall	Spring	(Summer)
1 st Year			
2 nd Year			
3 rd Year			
4 th Year			