

## Biological Sciences Major Requirements: **BIOCHEMISTRY**

This checklist serves as an advising tool for foundation and concentration requirements. It does not include CALS/Arts 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
<b>Introductory Biology Cluster</b> (Take <b>TWO</b> of the three following courses). *AP credit for biology does not count towards the major.						
BIOMG	1350	Principles of Cell & Developmental Biology	3			*Recommended for BioChem 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)			
<b>Investigative Laboratory</b>						
BIOG	1500	Biology Laboratory (*Also offered as summer course at Shoals Marine Lab)	2			
<b>Evolutionary Biology and Diversity</b>						
BIOEE	1780 or 1781	Evolutionary Biology & Diversity Introduction to Evolution and Diversity (*Also offered as summer course at Shoals Marine Lab)	4 4			
<b>General Chemistry</b> (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			
<b>College Mathematics</b> The Biochemistry Concentration requires the following math requirements due to pre-requisites for concentration coursework. <i>Consult Courses of Study.</i>						
MATH	1110	Calculus I	4			
MATH	1120	Calculus II	3-4			
<b>Organic Chemistry</b> (CHEM 3570 & 3580 OR CHEM 3590 & 3600 OR CHEM 3530) *CHEM 1570 not an option for Biochemistry Concentration.						
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			
<b>Organic Chemistry Laboratory</b> (CHEM 2510 OR CHEM 3010) *Required for Biochemistry Concentration						
CHEM	2510	Intro to Experimental Organic Chemistry	2			
CHEM	3010	Honors Experimental Chemistry I	4			
<b>Physics</b> (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			
<b>Genetics and Genomics</b> (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			
<b>Biochemistry and Molecular Biology</b> (BIOMG 3310 & 3320 OR BIOMG 3300 & 3340. *Biochemistry concentrators require a 5-credit option.						
BIOMG	3310	Proteins and Metabolism	3			
	3320	Molecular Biology	2			
BIOMG	3300	Individualized Instruction	4			
	3340	Computer Graphics & Molecular Biology	1			

CONCENTRATION REQUIREMENTS: Biochemistry						
*Students are expected to consult with their faculty advisor when choosing courses towards concentration requirements.						
Course Subject	Course No.	Course Title	Credit Hours	Semester Taken	✓ when done	Notes
<b>Required Courses</b> (Requires 5 credits of biochemistry, Survey of Cell Biology, 1 laboratory course in molecular biology, and 1 one-year sequence of physical chemistry)						
BIOMG	4320	Survey of Cell Biology	3			
BIOMG	4400	Lab in Biochemistry & Molecular Biology	4			
CHEM	2870	Introductory Physical Chemistry I & II	3			
	2880		3			
CHEM	3890	Honors Physical Chemistry I & II	4			
	3900		4			
<b>Additional Courses</b> (At least one additional course with a biochemical or biophysical orientation. 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 <sup>st</sup> Year			
2 <sup>nd</sup> Year			
3 <sup>rd</sup> Year			
4 <sup>th</sup> Year			