

**Biology Major Bachelor of Science (72 credit hours)**

**2018-2019**

**Major Requirements:**

*(BIOL 2230, 3800, and 4700 do not apply toward the major.)*

*(Additional CHEM courses, especially CHEM 2220 and 3100, are strongly recommended.)*

**Biology Core (40 credit hours):**

BIOL 2210 Foundations of Modern Biology I (4 credit hours)

BIOL 2220 Foundations of Modern Biology II (4 credit hours)

BIOL 2240 Cell Biology (4 credit hours)

BIOL 3030 Microbiology (4 credit hours)

BIOL 3510 Bioethics or BIOL 3920 Integration of Faith and Science (2 credit hours)

BIOL 4050 Genetics (4 credit hours)

BIOL 4070 Ecology and Evolutionary Biology (4 credit hours)

BIOL 4910 Science Seminar I (1 credit hour)

BIOL 4920 Science Seminar II (1 credit hour)

12 hours of upper division (3000+) biology electives taken from the following:

BIOL 4120 Mammalian Physiology, 4210 Biochemistry, 4310 Molecular Biochemistry and Genetics, 4650 Independent Study, 3050 Advanced Topics in Microbiology, 3270 Human Gross Anatomy and Histology, or others with approval of the department. NOTE: Completion of both 2410 and 2420, Human Anatomy and Physiology I and Human Anatomy and Physiology II, may be considered 4 hours of upper division credit.

**Chemistry Core (16 hours):**

CHEM 2110 General Chemistry I (4 credit hours)

CHEM 2120 General Chemistry II (4 credit hours)

CHEM 2210 Organic Chemistry I (4 credit hours)

CHEM 2220 Organic Chemistry II (4 credit hours)

**Mathematics and Physics Core (16 hours):**

PHYS 2140 General Physics I (algebra-based, 4 credit hours) or PHYS 2240 General Physics I (calculus-based, 4 credit hours)

PHYS 2150 General Physics II (algebra-based, 4 credit hours) or PHYS 2250 General Physics II (calculus-based, 4 credit hours)

MATH 2120 Introductory Statistics with Applications (4 credit hours) or PSYC 2440 Applied Statistics and Introduction to Research (4 credit hours)

4 more hours of MATH at the 2000 level or above, strongly recommend MATH 2010 Calculus I

**Proposed course sequence:**

Freshman: BIOL 2210, CHEM 2110; BIOL 2220, CHEM 2120, MATH 2XXX

Sophomore: BIOL 3030, CHEM 2210; BIOL 2240, CHEM 2220

Junior: BIOL 4050, PHYS 2140 or 2240; BIOL 4070, PHYS 2150 or 2250; BIOL 3/4XXX

Senior: BIOL 4910, BIOL 3/4XXX, MATH 2120 or PSYC 2440; BIOL 4920, BIOL 3/4XXX; BIOL 3510 or 3920

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Biology Major Suggested Course Sequence

2018-2019

SEMESTER 1		SEMESTER 2	
BIOL 2210	4 Hours	BIOL 2220	4 Hours
CHEM 2110	4 Hours	CHEM 2120	4 Hours
ENGL 1100/ENGL 1110	3-4 Hours	ENGL 1120	3 Hours
LART 1050	1 Hour	LART 1100	2 Hours
Personal Wellness	2-Hours	MATH 2XXX	4 Hours

SEMESTER 3		SEMESTER 4	
BIOL 3030	4 Hours	BIOL 2240	4 Hours
CHEM 2210	4 Hours	CHEM 2220	4 Hours
Global/Intercultural	3 Hours	Social & Behavioral Ways of Knowing	3 Hours
BIBL 2000	3 Hours	Foreign Language	4 Hours

SEMESTER 5		SEMESTER 6	
BIOL 4050	4 Hours	BIOL 4070	4 Hours
Aesthetic	3 Hours	BIOL 3XXX	4 Hours
Christian Ways of Knowing	3 Hours	Civic Ways of Knowing	3 Hours
PHYS 2140 or 2240	4 Hours	PHYS 2150 or 2250	4 Hours

SEMESTER 7		SEMESTER 8	
BIOL 4910	1 Hour	BIOL 4920	1 Hour
BIOL 3/4XXX	4 Hours	BIOL 3/4XXX	4 Hours
BIOL 3510	2 Hours OR	BIOL 3920	2 Hours
MATH 2120 or PSYC 2440	4 Hours	Elective	3 Hours
Elective	3 Hours	Elective	3 Hours

Through the integration of faith and learning, the Department of Biology strives to give students a breadth of foundational knowledge that will serve them, whether they plan to teach or to continue their own education in medical or dental school or other graduate degree programs. The biology department is dedicated to providing students with a well-rounded background in the field of biology. Students can concentrate their studies in various areas of biology by taking courses such as anatomy, physiology, histology, mammalian physiology, molecular biology, plant science, and environmental ecology.