

Saint Francis University Education Department  
Paradigm for Catalog Year 2023-2024

## BIOLOGY/SECONDARY EDUCATION CONCENTRATION

### Biology 7-12

#### Suggested Course Sequence – 128 Total Credits Needed for Graduation

FIRST YEAR FALL			CREDITS	FIRST YEAR SPRING			CREDITS
CORE 103	Fall Community Enrichment Series	0		CORE 104	Spring Community Enrichment Series	0	
BIOL 131	Biology First Year Seminar	0		CORE 113	Gen Ed 1st Year Seminar	3	
BIOL 110	Evolution, Ecol, & Plant Biol.	4		BIOL 111	Molecules, Cells, & Anim. Phys (SCI Requirement)	4	
CHEM 121	Chemistry Principles I	4		CHEM 122	Chemistry Principles II	4	
WRIT 102	Research Writing	3		FTAE 105	Franciscan Goals for Today	3	
HIST xxx	History Elective	3		EDUC 150	Educational Psychology (SOC SCI 3/3)	3	
PSYC 101	Introduction to Psychology (SOC SCI 1/3)	3					
<b>TOTAL</b>		<b>17</b>		<b>TOTAL</b>		<b>17</b>	
SECOND YEAR FALL			CREDITS	SECOND YEAR SPRING			CREDITS
BIOL 105 or BIOL 205	Human Biology Human Anatomy & Physiology I	3-4		BIOL xxx	Cell Biology or Physiology Course Option	4	
CHEM 221	Organic Chemistry I	4		BIOL xxx	Biology Elective at 200, 300, or 400- level	4	
*LIT 104	Intro to Literature (or LIT 201,202,204,207,270)	3		BIOL 231	Biology Sophomore Seminar	0	
EDUC 205	Intro to Special Education	3		MATH 112	Calculus (moved from 3 <sup>rd</sup> yr fall)	3	
EDUC 261	Linguistic Diversity in the Classroom (Diversity Req)	3		PHIL 205	Reason and Responsibility	3	
				EDUC 240	The Diverse Learner in Sec Settings	3	
<b>TOTAL</b>		<b>16-17</b>		<b>TOTAL</b>		<b>17</b>	
THIRD YEAR FALL			CREDITS	THIRD YEAR SPRING			CREDITS
EXAM 301	Writing Competency Exam (Completing ENGL 199 with a grade of C or better can also satisfy this requirement)	0		LANG	Foreign Lang. (102 or higher)	3	
BIOL 203	Ecology	4		BIOL 301	Genetics	4	
BIOL 331	Biology Junior Seminar	0		BIOL 402	Evolution	3	
PHYS 104	Intro to Physics	4		PHYS 101 or PHYS 102	Physical Sciences or Descriptive Astronomy	3	
Statistics	Statistics Course (see note)	3		BIOL 431	Biology Senior Seminar	1	
SOSC	SOC SCI Elective (2/3)	3		EXAM 401	Dept. Comp. Exam	0	
EDUC 333	Reading in the Content Area	3		EDUC 429	Middle/Secondary Methods I	3	
<b>TOTAL</b>		<b>17</b>		<b>TOTAL</b>		<b>17</b>	
FOURTH YEAR FALL			CREDITS	FOURTH YEAR SPRING			CREDITS
BIOL xxx	Biological Diversity Course Option	4		EDUC 450	Student Teaching	12	
PHIL 319	Philosophy, Ethics & Education (PHIL requirement)	3		EDUC 407	Teacher as Reflective Practitioner (for Education Majors)	3	
EDUC 430	Methods II	3					
FNAR	Fine Art Elective	3					
<b>TOTAL</b>		<b>13</b>		<b>TOTAL</b>		<b>15</b>	

Six credits of Math and six credits of English are Pennsylvania Department of Education program Requirements

\*\*\*Course sequence may be altered with advisor consent

# students may want to take summer courses to lighten the load

\*ENGL 104-Completing any of the following 200-level literature courses (ENGL 201, 202, 204,207,274, and 270) can also satisfy this requirement. Any course taken for the fulfillment of this general education requirement may not count for other general education requirements or for a course within any major.

### **Cell Biology or Physiology Course Options**

BIOL 206 – Human Anatomy & Physiology II, 4 cr (spring)

BIOL 214 - Clinical Microbiology, 4 cr (spring)

BIOL 320 - General Microbiology, 4 cr (fall)

BIOL 345 – Environmental Animal Physiology, 4 cr (spring)

BIOL 401 - Cell and Molecular Biology, 4 cr (spring)

BIOL 406 - Vertebrate Physiology, 4 cr (fall)

### **Biological Diversity Course Options**

BIOL 204 - Invertebrate Zoology, 4 cr (fall)

BIOL 218 - Marine Biology, 4 cr (fall)

BIOL 320 - Vertebrate Zoology, 4 cr (spring)

BIOL 403 - Advanced Botany, 4 cr (fall)

### **Statistics Course Options**

BIOL 315 - Biostatistics, 4 cr (spring)

MATH 215 - Introductory Statistics, 3 cr

STAT 205 - Essentials of Statistics, 3 cr