UNIVERSITY OF SAINT MARY FOUR-YEAR ACADEMIC PLAN

BIOLOGY WITH SECONDARY EDUCATION LICENSURE

This four-year plan is valid according to the USM Undergraduate Catalog and is subject to change. This guide is merely a recommendation. Your actual program may vary. Other factors may impact your time to degree and course sequencing. See the current USM Undergraduate Catalog at **http://www.stmary.edu/catalog** for more information, including USM academic policies, curriculum, pre-requisites, and course information.

Sample Four Year Plan for a Biology Major with Secondary Education Licensure

Note: Students should consult the Biology Program Director early on in their education so that a plan can be specifically tailored for the student.

This will allow the Biology Program Director to take account of:

- The mathematical competency of the student, which will determine if certain courses can be taken in the students' freshman year
- Any AP courses, dual credit or college credit, courses taken already which will allow certain courses in the sample plan to be omitted

It should be noted that many science courses have pre-requisites. Additionally, some are taught only every two years. A student's individual interests can be catered to with specific elective courses, and such interests are best discussed with the Biology Program Director.

It is the desire of the Biology Program Director to allow the student to complete all requirements for the major in 4 years, while also avoiding overload charges (the maximum number of credit hours allowed per semester is 18). Depending on the mathematical competency of the student initially, as well as their course history prior to beginning their studies at USM, this may not always be possible. In such cases, the Biology Program Director will suggest best options for the student, either studying for one more semester or taking some courses over the summers.

For students entering in an EVEN year:

Freshman Year	
Fall Even	**Spring Odd**
BI 115 Ecology (3)	BI 212 Diversity of Plants and Animals (3)
CH 121 General Chemistry I (4)	CH 122 General Chemistry II (4)
GE 114 First Year Experience I (3)	GE 115 First Year Experience II (3)
EN 111 English Composition I (3)	EN 112 English Composition II (3)
MA 210 College Algebra (3)	Gen Ed elective, Theology course (3)

Sophomore Year	
Fall Odd	**Spring Even**
BI 220 Cell Biology (4)	PY 290 Childhood and Adolescent Psychology (3)
CH 330 Organic Chemistry I (4)	BI 445 Developmental Biology (4)* OR BI 265 Basic Microbiology (4)
BI 258 Human Anatomy & Physiology I (5)	BI 259 Human Anatomy & Physiology II (5)
SCA 242, Lifetime Wellness (3)	Gen Ed elective, Theology course (3)
	Gen Ed elective, Philosophy course (3)

Junior Year	
Fall Even	**Spring Odd**
PHY 215 Physics I (4)	BI 445 Genetics (4)
BI 595 Biology Seminar (1)	BICH 461 Biochemistry Lecture (3)* OR BI 265 Basic Microbiology (4)
ED 402 Foundations of Education: Social, Cultural, Philosophical and Historical (4)	PHY 216 Physics II (4)
(25 hours of field experience required)	BI 596 Seminar in Ecology & Evolution (1)
ED 428 Pscyhological Foundations (3)	ED 576 Teaching Reading in the Content Areas (3)
BI 265 Basic Microbiology (4)	(25 hours of field experience required)
	ED 430 Educating Exceptional Children and Youth

Senior Year	
Fall Odd	**Spring Even**
NS 588 Practical Applications of Teaching Science (1)	ED 590 Seminar III: Professional Collaborations (1)
NS 597 Science and Society Seminar (2)	ED 594 Classroom Management and Student Motivation (3)
ED 522 Methods of Teaching Diverse Learners (3)	ED 596 Student Teaching (8)
ED 589 Secondary Methods (3) (30 hours of field experience required)	
Gen Ed elective, Literature course (3)	
Gen Ed elective, Fine Arts course (3)	
Gen Ed elective, History course (3)	

PY 320, Human Sexuality is strongly recommended.

***Only one of these courses – Developmental Biology and Biochemistry Lecture is required for the biology major.**

Of the 8 Gen Ed electives, 3 must be Idea Seminars
(ED 402, Foundations of Education: Social, Cultural, Philosophical and Historical is an IS and a CS)

For students entering in an ODD year:

Freshman Year	
Fall Odd	**Spring Even**
BI 115 Ecology (3)	BI 212 Diversity of Plants and Animals (3)
CH 121 General Chemistry I (4)	CH 122 General Chemistry II (4)
GE 114 First Year Experience I (3)	GE 115 First Year Experience II (3)
EN 111 English Composition I (3)	EN 112 English Composition II (3)
MA 210 College Algebra (3)	Gen Ed elective, Theology course (3)

Sophomore Year	
Fall Even	**Spring Odd**
BI 220 Cell Biology (4)	PY 290 Childhood and Adolescent Psychology (3)
CH 330 Organic Chemistry I (4)	BI 445 Developmental Biology (4)*
BI 258 Human Anatomy & Physiology I (5)	BICH 461 Biochemistry Lecture (4) or BI 265 Basic Microbiology (4)
Gen Ed elective, Social Science course (3)	BI 259 Human Anatomy & Physiology II (5)
SCA 242, Lifetime Wellness (3)	Gen Ed elective, Theology course (3)

Junior Year	
Fall Odd	**Spring Even**
PHY 215 Physics I (4)	BI 445 Genetics (4)
BI 595 Biology Seminar (1)	BICH 461 Biochemistry Lecture (3)* OR BI 265 Basic Microbiology (4)
ED 402 Foundations of Education: Social, Cultural, Philosophical and Historical (4)	PHY 216 Physics II (4)
(25 hours of field experience required)	BI 596 Seminar in Ecology & Evolution (1)
ED 428 Pscyhological Foundations (3)	ED 576 Teaching Reading in the Content Areas (3)
	ED 430 Educating Exceptional Children and Youth (3)
	Gen Ed elective, Philosophy course (3)

Senior Year	
Fall Even	**Spring Odd**
NS 588 Practical Applications of Teaching Science (1)	ED 590 Seminar III: Professional Collaborations (1)
NS 597 Science and Society Seminar (2)	ED 594 Classroom Management and Student Motivation (3)
ED 522 Methods of Teaching Diverse Learners (3)	ED 596 Student Teaching (8)
ED 589 Secondary Methods (3) (30 hours of field experience required)	
Gen Ed elective, Literature course (3)	
Gen Ed elective, Fine Arts course (3)	
Gen Ed elective, History course (3)	

PY 320, Human Sexuality is strongly recommended.

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