

Sample Curriculum Plan: Biology B.A. Integrative Concentration + M.S. Science Education

Freshman Year

FIRST SEMESTER (Fall)			SECOND SEMESTER (Spring)		
Course Title	Catalog Number	REQ	Course Title	Catalog Number	REQ
Principles of Biology (4 cr)	BIO 111	X	Introductory Biology Series (4 cr)	BIO 212 or 213	X
Fundamentals of Chemistry I (4 cr)	CHE 111	X	Fundamentals of Chemistry II (3 cr /1 cr laboratory)	CHE 112/114	X
<i>IF: College Writing I</i>	<i>CWP 101</i>	X	<i>IF: College Writing II</i>	<i>CWP 102</i>	X
<i>IF: Global Engagement – Language option</i>		X	<i>IF: Global Engagement – Language option</i>		X
<i>IF: Humanities</i>		X	<i>IF: Arts</i>		X
Total Credits : 17			Total Credits : 17		

Freshmen should satisfy the following IF 14 requirements as soon as possible: CWP 101 and 102; for the Global Engagement requirement students applying to the MSED program must demonstrate foreign language competency to the 102 level.

Sophomore Year

THIRD SEMESTER			FOURTH SEMESTER		
Course Title	Catalog Number	REQ	Course Title	Catalog Number	REQ
Introductory Biology Series (4 cr)	BIO 212 or 213	X	Introduction to Cell Biology (4 cr)	BIO 214	X
<i>IF: Mathematics</i> <i>Recommended: MAT 126 Applied Calculus I (4cr) or</i> <i>Appropriate MAT by advisement</i>		X	<i>Recommended: PHY 108 General Physics II (4 cr) or</i> <i>PHY112 University Physics II (5 cr)</i>		
<i>Recommended: PHY 107 General Physics I (4 cr) or</i> <i>PHY111 University Physics I (5 cr)</i>		X	<i>IF: Western Civilizations</i>		X
<i>IF: American History</i>		X	<i>IF: Diversity</i> <i>‡ Nature/Needs of Individuals who are Exceptional</i>	EXE 100	X
			<i>IF: Social Science</i>		X
Total Credits : 15 - 16			Total Credits : 17 – 18		

Junior Year

FIFTH SEMESTER			SIXTH SEMESTER		
Course Title	Catalog Number	REQ	Course Title	Catalog Number	REQ
Genetics (4 cr) offered in rotation	CHE 305	X	BIO Elective (see catalog for list of options) (3 – 4 cr)		X
BIO Elective (see catalog for list of options) (3 – 4 cr)		X	BIO Elective (see catalog for list of options) (3 – 4 cr)		X
‡ Educational Psychology: Middle and Secondary Education	SPF 303	X	<i>IF: Non-Western Civilizations</i>		X
					X
All college elective			All college elective		
All college elective			All college elective		
Total Credits : 16 - 17			Total Credits : 15 - 17		

Senior Year

SEVENTH SEMESTER			EIGHTH SEMESTER		
Course Title	Catalog Number	REQ	Course Title	Catalog Number	REQ
BIO Elective (see catalog for list of options) (3 – 4 cr)		X	Organic Evolution	BIO 405	X
Graduate Course #1 : Literacy for Teaching Science	SCI 545	X	Graduate Course #2: Teaching Science with Technology	SCI 664	X
All college elective			All college elective		
All college elective			All college elective		
All college elective			All college elective		
Total Credits : Minimum 12 undergraduate credits 3 graduate credits			Total Credits : Minimum 12 undergraduate credits 3 graduate credits		

Graduate Year

SEVENTH SEMESTER			EIGHTH SEMESTER		
Course Title	Catalog Number	REQ	Course Title	Catalog Number	REQ
Secondary Science Education Teaching: Theory, Content and Pedagogy	SCI 502	X	Initial Middle School Science Teaching Experience (6 cr)	SCI 677	X
Curricular Research Topics in Science	SCI 650	X	Initial High School Science Teaching Experience (6 cr)	SCI 678	X
Literacy Instruction in the Upper Grades	EDU 609	X	Seminar in Science Education (1 cr)	SCI 679	X
Master's Project (3 cr) (will not finish until after completion of student teaching placement)	SCI 690	X			
Total Credits : 12			Total Credits : 13		

* 33 credits worth of upper division coursework (courses at the 300 and 400 level) is required for all SUNY Buffalo State degrees. At least two all college electives must be upper-division to satisfy college graduation requirements.

‡ Courses that should be taken by students interested in pursuing a Master of Science in Science Education (M.S.Ed.) degree.

† All students are strongly encouraged to pursue undergraduate research.