

Sample Curriculum Plan: Chemistry B.S. + M.S. Science Education

Freshman Year

FIRST SEMESTER (Fall)			SECOND SEMESTER (Spring)		
Course Title	Catalog Number	REQ	Course Title	Catalog Number	REQ
Fundamentals of Chemistry I (4 cr)	CHE 111	X	Fundamentals of Chemistry II (3 cr /1 cr laboratory)	CHE 112/114	X
Calculus I (5 cr)	MAT 161/163	X	Calculus II (5 cr)	MAT 162/164	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 : 18			Total Credits : 18		

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
Organic Chemistry I	CHE 201	X	Organic Chemistry II	CHE 202	X
Organic Chemistry I Lab (1 cr)	CHE 203	X	Organic Chemistry II Lab (1 cr)	CHE 204	X
University Physics I (5 cr)	PHY111	X	University Physics II (5 cr)	PHY112	
Calculus III (5 cr)	MAT 263/264	X	Analytical Chemistry (4 cr)	CHE 301	X
<i>IF: American History</i>		X	<i>IF: Diversity ‡ Nature/Needs of Individuals who are Exceptional</i>	EXE 100	X
Total Credits : 17			Total Credits : 16		

Junior Year

FIFTH SEMESTER			SIXTH SEMESTER		
Course Title	Catalog Number	REQ	Course Title	Catalog Number	REQ
Physical Chemistry I	CHE 305	X	Physical Chemistry II	CHE 306	X
Physical Chemistry I Lab (1 cr)	CHE 307W	X	Physical Chemistry II Lab (1 cr)	CHE 308W	X
Literature of Chemistry (1 cr)	CHE 310	X	<i>IF: Non-Western Civilizations</i>		X
Intro to Inorganic Chem (3 cr)	CHE 360	X	<i>IF: Western Civilizations</i>		X
<i>‡ Educational Psychology: Middle and Secondary Education</i>	SPF 303	X	All college elective		
<i>IF: Social Science</i>		X	All college elective		
Total Credits : 14			Total Credits : 16		

Senior Year

SEVENTH SEMESTER			EIGHTH SEMESTER		
Course Title	Catalog Number	REQ	Course Title	Catalog Number	REQ
Biochemistry I	CHE 470	X	Adv Inorganic Chemistry (3)	CHE 462	X
Biochemical Techniques (2 cr)	CHE 471	X	Graduate Course #2: Teaching Science with Technology	SCI 664	X
Instrumental Analysis (4 cr)	CHE 403	X	All college elective		
Graduate Course #1 : Literacy for Teaching Science	SCI 545	X	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.