

Bachelor of Science: Chemistry Education - Grades 9-12

Course	Title	Credits	Sem.
LEP/MNTC Courses Required for Admission to Teacher Preparation Program			
COMM XXX	Any Goal 1 COMM with COMM Prefix <i>(Minimum grade of C or better for admission to TPP)</i>	3	B
ENG 151 or ENG 251	Academic Writing or Writing in Professions <i>(Minimum grade of C or better for admission to TPP)</i>	4	B
MATH XXX	Any Goal 4 MATH with MATH Prefix <i>(Minimum grade of C or better for admission to TPP)</i>	3-5	B
Standards of Effective Practice			
ED 101	Introduction to Education & Lab	3	B
ED 102	Educational Technology	2	B, Su
ED 251	Child and Adolescent Growth and Development	3	B, Su
SPED 290	Introduction to Special Needs & Lab	3	B
ED 312	Human Relations for Teachers and Diversity in Education	3	B, Su
TESL 431	Foundations of Teaching Multilingual Learners	3	B
ED 301	Inclusive Learning Environments	3	F
ED 304	Pre-Student Teaching Experience for Secondary Educators <i>*Pre-Requisite: ED 301</i>	3	S
Discipline Methods Courses			
ED 407	Secondary Methods: Science	3	se
ED 430	Reading in the Content Areas	2	S
Required Content Courses			
CHEM 231 & 231L	General Chemistry I & Lab	4	F
CHEM 232 & 232L	General Chemistry II & Lab <i>*Pre-Requisites: CHEM 231</i>	5	S
CHEM 243	Analytical Chemistry I <i>*Pre-Requisites: CHEM 232</i>	5	se
CHEM 351 & 351L	Organic Chemistry I & Lab <i>*Pre-Requisites: CHEM 232</i>	5	F
CHEM 352 & 352L	Organic Chemistry II & Lab <i>*Pre-Requisites: CHEM 351</i>	5	S
CHEM 364	Chemical Thermodynamics & Kinetics	3	se
CHEM 420	Chemistry Seminar <i>*Pre-Requisites: CHEM 363 or CHEM 364 or CHEM 365</i>	1-2	S
MATH 150	Calculus I	5	B
PHYS 141 and PHYS 142 OR PHYS 181 and PHYS 182	College Physics I & Lab and College Physics II & Lab OR University Physics I & Lab and University Physics II & Lab <i>*Pre-Requisites: PHYS 141</i>	4 4 5 5	F S F S
Student Teaching			
ED 465	Student Teaching: Grade 5-12	12	B
ED 473	Teacher Licensure	0	B
Degree & Major Requirements			
	LEP/MnTC requirements	45	
	Chemistry Education requirements	28-30	
	Secondary Education requirements	40	
	Total credits required <i>Note: Students must complete a minimum of 120 credits in order to graduate with a Bachelor's degree.</i>	113-115	

Courses in the shaded area can be taken prior to admission to the Teacher Preparation Program

Courses not in the shaded areas require admission to the Teacher Preparation Program

F = Fall S = Spring B = Both F & S Su = Summer fo = fall odd so = spring odd fe = fall even se = spring even
For example- fo = fall 2027; se = spring 2028; fe = fall 2028; so = spring 2027

You are responsible for keeping informed of any changes in requirements which may affect your academic career.