

## Bachelor of Science: Chemistry Education (grades 9-12)

Course	Title	Credits	Sem.
<b>LEP/MNTC Courses Required for Admission to Teacher Preparation Program</b>			
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 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
<b>Secondary Standards of Effective Practice Core</b>			
ED 101	Introduction to Education & Lab	3	B
ED 102	Tech: Classroom Applications & Portfolio	2	B, Su
PSYC 341	Child & Adolescent Psychology <i>*Pre-Requisite: PSYC 101</i>	3	B
ED 312	Human Relations for Teachers	3	B
SPED 290	Introduction to Special Needs & Lab <i>*Pre-Requisite: ED 101 &amp; Sophomore Status</i>	3	B
ED 301	The Teaching & Learning Process & Lab <i>*Pre-Requisite: ED 301</i>	3	F
ED 304	Professional Development & Classroom Applications	1	S
ED 304L	Pre-Student Teaching Experience Practicum	0	S
<b>Not Required, but Strongly Encouraged</b>			
HLTH 225	Alcohol, Narcotics, & Tobacco	2	S
<b>Required Content Classes</b>			
ED 407	Secondary Methods: Science	3	se
ED 430	Reading in the Content Areas	2	S
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 <b>and</b> College Physics II & Lab <i>*Pre-Requisites: PHYS 141</i>	4 4	F S
	University Physics I & Lab <b>and</b> University Physics II & Lab <i>*Pre-Requisites: PHYS 182</i>	5 5	F S
<b>Student Teaching</b>			
ED 465	Secondary Student Teaching: Grade 5-12	12	B
ED 473	Teacher Licensure	0	B
<b>Degree &amp; Major Requirements</b>			
	LEP/MnTC requirements	45	
	Chemistry Education major	35-38	
	Education courses	29	
	Total credits required for this degree	109-112	
	Total credits required for graduation	120	

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 2021; se = spring 2022; fe = fall 2022; so = spring 2023

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