

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

Course	Title	Credits	Sem.
<b>Admission to Teacher Education Program Requirements</b>			
COMM 110	Essentials of Speaking & Listening	3	B
ENG 151	Academic Writing	4	B
MATH 110 OR MATH 150	College Algebra OR Calculus I	3 5	B B
<b>Professional Secondary Education Sequence</b>			
ED 101	Introduction to Education & Lab	3	B
ED 102	Tech: Classroom Applications & Portfolio	2	B
HLTH 225	Alcohol, Narcotics & Tobacco	<i>Not Required, but Strongly Encouraged</i>	F
PSYC 341	Child & Adolescent Psychology	<i>*Pre-Requisite: PSYC 101</i>	S
SOCI 331 OR ED 312	Race & Ethnic Relations in America ( <i>meets LEP Goal 7</i> ) OR Human Relations for Teachers	3	B, Su B
SPED 290	Introduction to Special Needs & Lab	<i>*Pre-Requisite: ED 101 &amp; Sophomore Status</i>	B
ED 301	The Teaching & Learning Process & Lab	3	F
ED 304	Professional Development & Classroom Applications	<i>*Pre-Requisite: ED 301</i>	S
ED 304L	Pre-Student Teaching Experience Practicum	0	S
ED 407	Secondary Methods: Science	3	S
ED 430	Reading in the Content Areas	2	S
<b>Required Content Classes</b>			
CHEM 231 & 231L	General Chemistry I & Lab	4	F
CHEM 232 & 232L	General Chemistry II & Lab	<i>*Pre-Requisites: CHEM 231</i>	S
CHEM 243	Analytical Chemistry I	<i>*Pre-Requisites: CHEM 232</i>	S
CHEM 351 & 351L	Organic Chemistry I & Lab	<i>*Pre-Requisites: CHEM 232</i>	F
CHEM 352 & 352L	Organic Chemistry II & Lab	<i>*Pre-Requisites: CHEM 351</i>	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 OR University Physics I & Lab <b>and</b> University Physics II & Lab	4 4 5 5	F S F S
<b>Student Teaching</b>			
ED 469	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 Education Program

F = Fall S = Spring B = Both F & S Su = Summer se = spring even

MTLE test required for licensure: Chemistry Gr. 9-12 Content test (2 subtests) and Secondary Pedagogy test (2 subtests) prior to licensure.

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

This information is provided for advising. Official curriculum is published in the SMSU academic catalog: [www.SMSU.edu/catalog/](http://www.SMSU.edu/catalog/)  
Students should refer to the online catalog or their DARS report for current curriculum. **This advising guide was printed: 2/23/2021**