



Undergraduate Degree Map for Completion in Four Years

College:	College of Science, Engineering & Technology <input type="button" value="v"/>
Department:	Chemistry & Geology <input type="button" value="v"/>
Name of Program:	CHEMISTRY EDUCATION <input type="button" value="v"/>
Degree Designation:	BS <input type="button" value="v"/>
Emphasis/Concentration:	<input type="text"/> <input type="button" value="v"/>
Option:	<input type="text"/>
Version:	4 <input type="button" value="v"/>
Version Explanation:	CHEM 316 semester 5 KSP 202 semester 6
Type of Program:	Broad Major <input type="button" value="v"/>
Minor Required:	No <input type="button" value="v"/>
Specific Minor (if required):	<input type="text"/>

Program Description:

The State of Minnesota grants science teacher licensure for grades 5-8 general science, 9-12 Chemistry, 9-12 Earth Science, 9-12 Life Science, and 9-12 Physics. Students earning a degree from Minnesota State Mankato in earth science teaching, life science teaching, or physics teaching will qualify for two licenses (1) 5-8 general science and (2) 9-12 specialty. Students earning a degree from Minnesota State Mankato in chemistry teaching will qualify only for 9-12 specialty license.

The Earth Science Teaching, Life Science Teaching and Physics Teaching majors requires the 31 credit general core and a science emphasis that ranges from 27-35 credits of science and science teaching methods courses. In addition, the student must complete a 30 credit professional education component and the 3 credit Drug Education course. The Chemistry Teaching major does not require the 31 credit general core.

The University Science Teaching Program must meet specific competencies to meet professional accreditation and licensure requirements. To stay within the required degree limits of 120 credit hours, students are strongly advised to select courses within the 44 credit general education program that meet both teaching program and general education needs. It is important for the student to meet with their advisor to assist with program planning.

A minor is not required for any of the science teaching programs; however, to broaden one's teaching opportunities, double majors are encouraged. For further details, the student should check with one of the science teaching advisors for an overview of available opportunities.

Admission Requirements:

- a minimum of 32 earned semester credit hours
- a minimum 2.75 cumulative GPA
- evidence of registration for the Minnesota Teacher Licensure Examinations (MTLE) Basic Skills exam.
- enrollment or completion of KSP 220
- "C" grade in ENG 101
- "C" grade in General Education Math

Advising:

You are expected to meet with your advisor on a regular basis to ensure courses are taken in an order that will lead to successful completion of the degree.

College Advising: College of Science, Engineering & Technology Advising Center
 Ken Adams, Student Relations Coordinator
 Trafton C-125
 507-389-1521
 College of Education Advising
 Mymique Baxter, Student Relations Coordinator
 117 Armstrong Hall
 507-389-1215

A complete listing of program faculty, policies, and course descriptions is available in the undergraduate bulletin.

TERM 1 - FALL

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA \geq 2.0 Course Completion Rate \geq 67% Completion of \geq 15 credit hours
CHEM	201	GENERAL CHEMISTRY I	5	C OR BETTER
BIOL	105	GENERAL BIOLOGY I	4	
		GENERAL EDUCATION COURSE	2-4	
		GENERAL EDUCATION COURSE	2-4	GPA \geq 2.5 IN SCIENCE COURSES
		GENERAL EDUCATION COURSE	2-4	

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Term 1 Notes:

GENERAL EDUCATION COURSES MINIMUM CREDITS 6

TERM 2 - SPRING

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA \geq 2.0 Course Completion Rate \geq 67% Completion of \geq 30 credit hours Advance to Sophomore status
CHEM	202	GENERAL CHEMISTRY II	5	C OR BETTER
MATH	121	CALCULUS I	4	C OR BETTER
		GENERAL EDUCATION COURSE	2-4	GPA \geq 2.5 IN SCIENCE COURSES
		GENERAL EDUCATION COURSE	2-4	
		GENERAL EDUCATION COURSE	2-4	

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Term 2 Notes:

GENERAL EDUCATION COURSES MINIMUM CREDITS 6

TERM 3 - FALL

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA \geq 2.0 Course Completion Rate \geq 67%
CHEM	322	ORGANIC CHEMISTRY I	4	C OR BETTER
CHEM	316	DESCRIPTIVE INORGANIC MAIN GROUP CHEMISTRY	3	
PHYS	211	PRINCIPLES OF PHYSICS I	4	C OR BETTER
HLTH	240	DRUG EDUCATION	3	
		GENERAL EDUCATION COURSE	2	GPA \geq 2.5 IN SCIENCE COURSES

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Term 3 Notes:

TERM 4 - SPRING

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA \geq 2.0 Course Completion Rate \geq 67% Completion of \geq 60 credit hours Advance to Junior status
CHEM	305	ANALYTICAL CHEMISTRY	4	C OR BETTER
CHEM	324	ORGANIC CHEMISTRY II	3	C OR BETTER
CHEM	325	ORGANIC CHEMISTRY II LABORATORY	1	
PHYS	212	PRINCIPLES OF PHYSICS II	4	
		GENERAL EDUCATION COURSE	2-4	GPA \geq 2.5 IN SCIENCE COURSES
		GENERAL EDUCATION COURSE	2-4	

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Term 4 Notes:

GENERAL EDUCATION COURSES MINIMUM CREDITS 4

TERM 5 - FALL

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA \geq 2.0 Course Completion Rate \geq 67% Apply for Graduation
CHEM	381W	INTRODUCTION TO RESEARCH	2	GPA \geq 2.5 IN SCIENCE COURSES
CHEM	360	PRINCIPLES OF BIOCHEMISTRY	4	
KSP	202	TECHNOLOGY INTEGRATION IN THE CLASSROOM	2	
KSP	220W	HUMAN RELATIONS IN A MULTICULTURAL SOCIETY	3	
KSP	222	INTRODUCTION TO THE LEARNER AND LEARNING	2	
KSP	464	PROFESSIONAL SEMINAR	0	
		GENERAL EDUCATION COURSES	1	

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA \geq 2.0 Course Completion Rate \geq 67% Apply for Graduation

Term 5 Notes:

TERM 6 - SPRING

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA \geq 2.0 Course Completion Rate \geq 67% Completion of \geq 90 credit hours Advance to Senior status
CHEM	340	QUANTITATIVE SKILLS FOR CHEMISTRY AND BIOCHEMISTRY I	1	C OR BETTER
CHEM	341	QUANTITATIVE SKILLS FOR CHEMISTRY AND BIOCHEMISTRY II	1	C OR BETTER
CHEM	479	TEACHING PHYSICAL SCIENCE	4	
CHEM	495	SENIOR SEMINAR	1	
KSP	330	PLANNING, INSTRUCTION, AND EVALUATION IN THE CLASSROOM	5	
KSP	494	PROFESSIONAL SEMINAR	0	
		GENERAL EDUCATION COURSE	2-4	
		GENERAL EDUCATION COURSE	2-4	GPA \geq 2.5 IN SCIENCE COURSES

Term 6 Notes:

GENERAL EDUCATION COURSES MINIMUM CREDITS 4

TERM 7 - FALL

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA \geq 2.0 Course Completion Rate \geq 67%
CHEM	440	PHYSICAL CHEMISTRY I	3	GPA \geq 2.5 IN SCIENCE COURSES
CHEM	450	PHYSICAL CHEMISTRY I LABORATORY	1	
KSP	440	CREATING LEARNING ENVIRONMENTS TO ENGAGE CHILDREN, FAMILIES, AND	3	
KSP	442	READING, LITERACY, AND DIFFERENTIATED INSTRUCTION IN INCLUSIVE CLASSROOMS	3	
KSP	464	PROFESSIONAL SEMINAR	0	
		GENERAL EDUCATION COURSE	2-4	
		GENERAL EDUCATION COURSE	2-4	
		GENERAL EDUCATION COURSE	2-4	

Term 7 Notes:

GENERAL EDUCATION COURSES MINIMUM CREDITS 6

TERM 8 - SPRING

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA \geq 2.0 Course Completion Rate \geq 67%
KSP	464	PROFESSIONAL SEMINAR	1	GPA \geq 2.5 IN SCIENCE COURSES
KSP	477	5-12 STUDENT TEACHING	11	

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Term 8 Notes:

PROGRAM NOTES

1. KSP 464 taken semesters 5-8, credit given only in semester 8.
2. Chem 316 offered Fall of even years only, take in Semester 3 or 5.
3. KSP 202 taken either semester 5 or 6.
4. To use this map, students must have a current ACT Math subscore of 24, or a minimum Accuplacer College Level Math score 103 or a minimum Accuplacer Calculus Readiness score of 22 or a minimum score of C or better in Math 115 or both Math 112 and Math 113. Note that 'C -' is not 'C'.

DEGREE MAP CHECKLIST: GRADUATION REQUIREMENTS

<input type="checkbox"/>	1. Minimum of 15 credits per semester
<input type="checkbox"/>	2. General Education = 44 credits
<input type="checkbox"/>	3. Diverse Cultures = 2 course (6 credits minimum) from two disciplines
<input type="checkbox"/>	4. Writing Intensive = 2 courses (6 credits minimum)
<input type="checkbox"/>	5. Major = <input type="text"/> credits
<input type="checkbox"/>	6. Upper-Division Requirements = 40 credits minimum
<input type="checkbox"/>	7. Professional Education (if required) = 30 credits
<input type="checkbox"/>	8. Language Requirements (if BA) = 8 credits minimum
<input type="checkbox"/>	9. Minor = <input type="text"/> credits
<input type="checkbox"/>	10. Total credits required for degree <input type="text"/>

DEGREE MAP COMPLETE

<input checked="" type="checkbox"/>	Map is complete and ready for review <ol style="list-style-type: none"> 1. Faculty please send an email to your Department Chair when map is ready to review. 2. Department Chair please send an email to your Dean when map is ready to review. 3. Dean please send an email to the Assistant Vice President for Undergraduate Studies when map is ready to review.
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DEAN APPROVAL



Map reviewed and approved by Dean

Save and Close