



Undergraduate Degree Map for Completion in Four Years

College:	College of Social & Behavioral Sciences <input type="text"/>
Department:	Geography <input type="text"/>
Name of Program:	EARTH SCIENCE TEACHING <input type="text"/>
Degree Designation:	BS <input type="text"/>
Emphasis/Concentration:	<input type="text"/>
Option:	<input type="text"/>
Version:	1 <input type="text"/>
Version Explanation:	<input type="text"/>
Type of Program:	Broad Major <input type="text"/>
Minor Required:	No <input type="text"/>
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 will qualify for two licenses (1) 5-8 general science and (2) 9-12 specialty.

Each major 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 University Science Teaching Program must meet speci_c 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.

The Earth Sciences are focused on understanding the Earth's interrelated physical systems including: the atmosphere, biosphere, geosphere, hydrosphere, and Earth's place in the cosmos. Fundamental to Earth Science are the impacts of people on our planet's natural systems as well as the interaction of physical, chemical, and biological processes at all spatial scales ranging from submicroscopic to planetary, and over time scales from the immediate to billions of years. Thus, courses in Astronomy, Biology, Chemistry, Geography, Geology and Physics are required to fulfill the degree requirements. Majors in Earth Science can gain expertise in addressing critical societal issues related to environmental management, resource management, natural hazard management, resource exploration, atmospheric and climate sciences, water resources, and much, much more.

Admission Requirements:

GPA Policy. Students obtaining a degree in science teaching must maintain a minimum cumulative GPA of 2.50 in the sciences. Students who are not science teaching majors should consult an advisor concerning possible additional course requirements.

P/N Grading Policy. Courses leading to a degree in science teaching may not be taken on a P/N basis except where P/N grading is mandatory.

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.

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
BIOL	105W	General Biology I	4	Satisfies part of Gen Ed 3, and Gen Ed Writing Intensive, and is required for the major
Astronomy	101	Introduction to Astronomy	3	Required for the major
English	101	Composition	4	Satisfies Gen Ed 1A
GEOL	121	Physical Geology	4	Satisfies part of Gen Ed 3, all of Gen Ed 10, and is required for the major
FYEX	100	First Year Experience	1	Optional Gen Ed. Highly recommended

Insert item

Term 1 Notes:

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
BIOL	106	General Biology II	4	Required for the major
GEOL	122	Earth History	4	Required for the major
Gen Ed 4	n/a	Mathematical/Logical Reasoning	3+	Satisfies part of Gen Ed
CHEM	201	General Chemistry	5	Satisfies part of Gen Ed 3, and required for the major

Insert item

Term 2 Notes:

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%
PHYS	211	Principles of Physics I	4	Required in the major
GEOG	217	Weather	4	Required in the major
GEOL	201	Mineralogy	4	Required in the major
AST	125	Observational Astronomy	3	Required in the major
Gen Ed 6	n/a	n/a	3	Make sure it is a purple course

Insert item

Term 3 Notes:

PHYS 211 has a prerequisite of Math 112 & 113, or 115.

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
Gen Ed 4	n/a	Speech and Oral Reasoning	3	
Physics	212	Principles of Physics II	4	Required in the major
KSP	202	Technology Integration in the Classroom	2	Required professional education
KSP	220W	Human Relations in a Multicultural Society	3	Required professional education, satisfies Gen Ed 7 & 11
KSP	222	Introduction to the Learner and Learning	2	Required professional education
KSP	464	Professional Seminar	1	Required professional education, credit awarded after fourth semester of enrollment in this course
HLTH	240	Drug Education	3	Required Gen Ed 5

Insert item

Term 4 Notes:

Consider a Writing Intensive Gen Ed 6 or 9 course, two are required. This semester has only 14 credits. Be sure to take an average of 15 credits per term to graduate in 4 years.

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
Gen Ed 8	n/a	Global Perspective	3	Consider finding a purple course
GEOG	315	Geomorphology	3	Required for the major
GEOL	310	Earth and Space Systems	3	Required for the major
PHIL	120W	Introduction to Ethics	3	Fulfills part of Gen Ed 6, and all of 9.
Geography	217	Weather	4	Required for the major

Insert item

Term 5 Notes:

PHIL 120W is not required as a Gen Ed as it is only one of several possibilities for Gen Ed 6 & 9 as well as being a writing intensive course; however, it is the only one that covers all three at once, thus it helps complete the degree more efficiently.

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	479	Teaching Physical Science	4	Required for the major
KSP	330	Planning, Instruction, and Evaluation in the Classroom	5	Required Professional Ed
KSP	464	Professional Seminar	1	Required professional education, credit awarded after fourth semester of enrollment in this course
n/a	n/a	Research Experience	1+	Required for the major
n/a	n/a	Electives in the major	4+	Required for the major
Gen Ed 5	n/a	n/a	3	Make sure it is a Purple course

Insert item

Term 6 Notes:

Strongly consider beginning work on Certificate in Geographic Information Science (GISc), i.e., take GEOG 373 - 4cr, or perhaps a second major, although one is not required. Completed the Writing Intensive requirement? Completed two "Purple" Diverse Cultures courses? Many Gen Ed 5, 6 & 8 courses satisfy these requirements.

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%
KSP	440	Creating Learning Environments to Engage Children, Families, and Community	3	Required professional education
KSP	442	Reading, Literacy, and Differentiated Instruction in Inclusive Classrooms	3	Required professional education
KSP	464	Professional Seminar	1	Required professional education, credit awarded after fourth semester of enrollment in this course
n/a	n/a	Electives in the major	5+	Required for the major
Gen Ed 5	n/a	n/a	3	Make sure it is a Purple course
Gen Ed 6	n/a	n/a	3	Make sure it is a Purple or Gold course

Insert item

Term 7 Notes:

Completed the Writing Intensive requirement? Completed two "Purple" Diverse Cultures courses? Many Gen Ed 5, 6 & 8 courses satisfy these requirements.

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	Required professional education, credit awarded after fourth semester of enrollment in this course
KSP	477	5-12 Student Teaching	11	Required professional education

Insert item

Term 8 Notes:

PROGRAM NOTES

The Certificate in Geographic Information Science provides skills in geospatial technologies that are critical in the workforce today. We cannot encourage you enough to complete this certificate. In Earth Science, more math is better. Strongly consider math through Calculus I and II and Ordinary Differential Equations and one year of Physics, rather than the one semester required. To become proficient in a foreign language, more than two semesters coursework is recommended as is a study abroad experience.

DEGREE MAP CHECKLIST: GRADUATION REQUIREMENTS

<input checked="" type="checkbox"/>	1. Minimum of 15 credits per semester
<input checked="" type="checkbox"/>	2. General Education = 44 credits
<input checked="" type="checkbox"/>	3. Diverse Cultures = 2 course (6 credits minimum) from two disciplines
<input checked="" type="checkbox"/>	4. Writing Intensive = 2 courses (6 credits minimum)
<input checked="" type="checkbox"/>	5. Major = <input type="text" value="49"/> credits
<input checked="" type="checkbox"/>	6. Upper-Division Requirements = 40 credits minimum
<input checked="" 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" value="0"/> credits
<input checked="" type="checkbox"/>	10. Total credits required for degree <input type="text" value="120"/>

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

<input checked="" type="checkbox"/>	Map reviewed and approved by Dean
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Save and Close