

Syllabus Spring 2026



GEOS 102: Geology in the National Parks

Spring 2026

Time: Monday/Wednesday/Friday 11:00 – 11:50 AM

Location: King Hall 110 (Large lecture hall)

Instructor

Professor: Dr. Michelle Abshire

Office: King Hall 201 and Hagen Hall 307B

Email: michelle.abshire@mnstate.edu

Student Support hours: MW 10:00 – 11:00 AM; 1:00 – 2:00 PM in KH 201; Th 10:00 am – 12:00 noon in HA 307B. Additional student support hours by appointment. *Generally, I am available in my King Hall office all day on MWF, just pop in.*

Course Description

This course will study the processes that have shaped the Earth, including earthquakes, volcanoes, erosion, glaciation, sedimentation, structural deformation; and the geologic history of North America, including mountain building and ocean advances and retreats. There is a focus on the geological features seen in our National Parks. A student taking this course will gain an awareness of geology in the most visited natural areas, an introduction to the physical, chemical, and life processes that shape the Earth and the geologic history of Earth, and an appreciation for the importance of geology and the role of science in public policy.

Credits: 3

Prerequisites: None

LASC Area: Goal 3

Required Materials

- **Geology of the National Parks, Harris (GNP).** Provided via the Access Program
- **Subscription to Top Hat.** During class I will be using Top Hat (<http://tophat.com>) to ask questions, receive feedback, and take attendance. **Join Code: 868675**

Websites/Required Accounts

- D2L Brightspace: <https://mnstate.learn.mnstate.edu>

Goals

To improve students' understanding of natural science principles and of the methods of scientific inquiry, i.e., the ways in which scientists investigate natural science phenomena. As a basis for lifelong learning, students need to know the vocabulary of science and to realize that while a set of principles has been developed through the work of previous scientists, ongoing scientific inquiry and new knowledge will bring changes in some of the ways scientists view the world. By studying the problems that engage today's scientists, students learn to appreciate the importance of science in their lives and to understand the value of a scientific perspective.

Official Course Objectives/Student Learning Outcomes (SLO)

Students will be able to

1. Demonstrate understanding of scientific theories.
2. Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students' laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
3. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

Course Structure

Throughout this course you can expect:

- Lectures with embedded Top Hat questions
- Group work
- Discussions
- Reading Quizzes
- Exams

This is an in-person class. As such, you are expected to be present and engaged in all class meetings.

Class Schedule

See the Document posted on D2L for our tentative Course Schedule, which may change a bit as we go through the semester. Any major changes will be announced in class. ***Exam dates are also available on D2L from the first day of class. Please be sure to add these to your calendar and make a point to not schedule anything on these days.***

Assessments and Grading

Item	Points ea.	% of total grade
Top Hat	variable	10%
Homework/In-Class Work	variable	15%
Reading Quizzes (15)	10	15%
Term Project	100	10%
Class Participation/Professionalism	100	10%
Exams (4, including final)	100	40%
Total	-	100%

Grades will be calculated in the following manner:

90% and above = A

80-89% = B

70-79% = C

60-69% = D

Below 60% = F

Top Hat

During class I will be using Top Hat (<http://tophat.com>) to ask questions, receive feedback, and take attendance. In-class activities and questions will occur in every class, with grades allocated for both participation and correctness, though in some situations only participation will be graded. These Top Hat activities are worth 10% of the overall course grade and will be distributed evenly throughout the semester. There will be a curve applied to this overall attendance and participation grade, so if you miss one class there is no need to worry, but if you miss class regularly you will see a significant penalty on your grades. There is a link on Blackboard to top hat that will take you to purchase the subscription. **Join Code: 986565**

Reading Quizzes

There will be weekly quizzes due on Fridays. These quizzes will cover the textbook chapter from that week. These will be open-book, but not “open-internet”. If you are reading this, send me a geology-related comic or meme before 1/16 for 5 extra credit points.

Exams

Exams will be focused on lecture topics and readings. A study guide will be provided that will list major topics covered.

Exam Dates:

Exam 1	Wed. Feb. 4th
Exam 2	Fri. Mar. 6th
Exam 3	Wed. Apr. 8th
Exam 4 (final exam)	Wednesday, May 6th 9:45 - 11:45 AM

Term Project

You will be asked to create a project in ESRI StoryMaps that focuses on environmental issues faced by the park service due to tourism. You will conduct research and assemble your project throughout this course. More information will be provided in class.

Participation and Professionalism

Your participation in class is important, as is being professional in your academic interactions. Thus, your attendance and participation in class activities and discussion will be noted. You are assumed to have earned all points for professionalism from day 1. Points may be lost for emails that are unprofessional in nature (meaning demanding or rude emails, emails that do not adhere to standard email etiquette, etc), interactions in class that are inconsiderate or disrespectful to the professor or fellow classmates, or other unprofessional behavior.

Course Policies

Missed classes

I expect you to be at every class. We will regularly be doing in-class assignments for which you will receive a grade. I do realize that life happens, so if you have a *valid* reason for missing class, please contact me to propose a solution for any missed points.

Course Communications Expectations

You are expected to:

1. Check the announcements on the D2L course page daily. Consider turning on notifications of announcements in D2L. For help with this, contact Information Technology (see Technical Support below).
2. Check your email daily. Information Technology can help you set up email access on your smartphone or other portable device (see Technical Support below).

Instructor Response Time

I will generally try to respond to emails within 24 hours during the work week. If you do not receive a response within 24 hours, feel free to send a gentle reminder email.

Grades and feedback on assignments will generally be provided within a week of the assignment due date.

Academic Honesty

Your education is only as good as your integrity. Academic honesty is expected from you at all times. Any plagiarized work, intentional or not, will receive zero points. Please contact your instructor with any questions you have about using sources. All work for this class must be original to this class and to this semester. The use of AI to generate or complete classwork is strictly prohibited, unless specifically stated.

University Policies

As a student of MSUM, you are expected to be familiar with all University policies. These can be found in the Policies & Procedures section of the [Student Handbook](#).

Technology Requirements

In any course, certain technical skills are expected. In this course we expect you to be able to:

- Navigate the course site hosted in D2L Brightspace to locate materials and participate in course activities
- Create written assignments in MS Word and presentation material via MS PowerPoint.
- Have a basic knowledge of Microsoft Excel.

Make sure to have the most recent versions of the following software as you will be required to view and interact with some of the course materials:

- [Acrobat Reader](https://get.adobe.com/reader/) (<https://get.adobe.com/reader/>)
- Microsoft Word (or compatible alternatives). (MS Office, which includes Word and OneDrive cloud storage, is available for free to registered students as [Office 365](#).)

Make sure your browser and computer are compatible with D2L Brightspace by conducting a [computer check](#).

To be successful in this course, you will need regular, reliable Internet access in class. This can be through Wifi on campus or from your phone. You will also need internet access outside of class. If you have concerns about the reliability of your Internet, make sure to have contingency plans in place such as internet access at a computer lab, your local library or another trusted location.

Technical Support

Should you need technical assistance, the [IT Help Desk](#) is available by phone 218.477.2603, email support@mnstate.edu, or drop-in at their desk in the Library, room 122 (by the north door)

[D2L Brightspace Tutorials](#) are available to answer frequently asked questions.

Technology Privacy Policies and Accessibility Statements

Links to the privacy policies and accessibility statements for the course software are provided here:

- **D2L Brightspace** [Privacy](#) and [Accessibility](#)
- **YouTube** Accessibility: [screen reader](#) and [captions](#)
- **Adobe Acrobat Reader** [Accessibility](#)
- **Microsoft Word and PowerPoint** [Accessibility](#)

Academic and Student Support Services

MSUM provides multiple student support services to help you through your academic career.

- The Academic Support Center has resources to assist you with Advising, Registration, Tutoring and Academic Support. Visit their website for a list of services [Academic Support Center](#), or call 218.477.4318
- [Online Tutoring](#) through, [Tutor.com](#), is available to assist students with study guides, test prep, and other assistance.
- The [University Writing Support Center](#) is staffed by trained writing tutors to offer constructive feedback on your writing assignments.
- [eServices](#) provides online registration and account management.
- [Library Distance Ed Services](#) are available to you as you research and study.
- [Hendrix Clinic & Counseling Center](#) offers mental and physical health care for students.
- The [Student Handbook](#) is a reference for understanding University policies and procedures.

Links to student support resources are also available on the D2L navigation bar under the Resources/Help menus.

Basic Needs Statement

I urge any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, to speak to me or contact the Dean of Students Office (Flora Frick 153) at 218-477-2391. Or you can contact the Dean of Students, Kara Gravley-Stack, directly at 218-477-4222 or kara.gravleystack@mnstate.edu. We recognize that concerns about housing and food insecurity impact a student's academic performance and ability to learn in any class, and we can put you in touch with resources and support services. All students are welcome to access the Dragon Pantry located in Flora Frick hall and apply for additional types of support through the Dean of Students. More information can be found on the Dean of Students webpage, "[Student Resources for Basic Needs](#)."

Pronouns

Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender, gender variance, and nationalities, and all humans have the right to be addressed in accordance with their personal identity. Class rosters are provided to the instructor with the student's legal name. The instructor will gladly honor your request to address you by an alternate name or gender pronoun. Please advise the instructor at the beginning of the semester.

Mental & Emotional Health & Wellness

MSUM offers free counseling services to students. Whether you are struggling with coursework, experiencing relationship issues, concerned over drinking or drug use, or experiencing anxiety or depression or any other issue, a trained therapist can help you navigate the tough times. MSUM Counseling Services is available to help balance the social, emotional and educational pieces of your life. They offer free and confidential mental health, alcohol and drug, sexual assault and violence counseling. Appointments are recommended, though same-day care may be available when needed. You can make an appointment and find out more by visiting <https://www.mnstate.edu/student-life/health-wellness/counseling-services/mental-health/>.

Land Acknowledgment

MSUM acknowledges that it occupies the ancestral land of the Anishinaabe (Ojibwe), Dakota (Sisseton, Wahpeton) and Yanktonai Dakota First Nations. We will strive to build toward better relationships between our university and the Indigenous people still present with us.

Writing Help

The University Writing Support Center (UWSC) helps students develop strategies to improve their writing. The writing assistance is not designed to edit or proofread papers. Instead the assistance that is provided is intended to foster students' writing proficiency and independence during the writing process.

UWSC tutors are student peers—undergraduates with a strong background in writing and formal training in tutoring. Although UWSC tutors will not simply proofread papers, they will offer valuable feedback on a

wide variety of writing issues, ranging from content to organization to style and mechanics. All students are invited to take advantage of this service.

The UWSC will be closed on any days the campus is closed, such as non-instructional days, major holidays, or snow days.

Accessibility

Minnesota State University Moorhead is committed to providing equitable access to learning opportunities for all students and strives to make courses inclusive and accessible in accordance with sections 508, 504 of the 1973 Rehabilitation Act and the Americans with Disabilities Act. The University will make reasonable accommodations for students with documented disabilities. Accessibility Resources (AR) is the campus office that collaborates with students in need of accommodations and assists in arranging reasonable accommodations.

If you have or think you may have a disability or are currently registered and have questions/concerns, please contact the Director of Accessibility Resources at: Charles.Eade@mnstate.edu. Additional information is available on the AR website: <http://www.mnstate.edu/accessibility>

The ADA Coordinator for students and ADA compliance issues is Chuck Eade, Director of Accessibility Resources; charles.eade@mnstate.edu.

Sexual Violence Prevention Statement

Acts of sexual violence are intolerable. MSUM expects all members of the campus community to act in a manner that does not infringe on the rights of others. We are committed to eliminating all acts of sexual violence.

MSUM faculty and staff are concerned about the well-being and development of our students. We are obligated to share information with the MSUM Title IX Coordinator in certain situations to help ensure that the students' safety and welfare is being addressed, consistent with the requirements of the law. These disclosures include but are not limited to reports of sexual assault, relationship violence, and stalking.

If you have experienced or know someone who has experienced sexual violence, services and resources are available. You may also choose to file a report. For further information, contact Ashley Atteberry, Director of Student Conduct & Resolution; ashley.atteberry@mnstate.edu, 218-477-2174; both located in Flora Frick 153. Additional information is available at: www.mnstate.edu/titleix

Building Emergency Plans

Building floor plans showing emergency exit routes, fire extinguisher locations and fire alarm pull stations are conspicuously located in classrooms, labs, conference rooms, departmental main offices and residence halls. The Emergency Preparedness Guides (flip style booklets) are located with the maps. Please review the floor plans, as well as the guide, so you know how to respond in an emergency situation to help protect yourself and others. If you have questions, please contact Ryan Nelson, Director of Public Safety, at ryan.nelson@mnstate.edu or 218-477-5869. <https://www.mnstate.edu/public-safety/>