

SYLLABUS FOR GEOLOGY 9 – ONLINE

Instructor: Dr. David Tinker

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Websites: class materials will be uploaded to Canvas

Office Hours: TBD; by appointment

Textbook: This class will use an online, open source text [An Introduction to Geology](https://opengeology.org/textbook) (if the title does not work as a clickable link, the URL is <https://opengeology.org/textbook>), Johnson, et al., 2017.

Course Objectives: Geology 9 is a survey course in Earth science. The goal of the course is to introduce the science behind structures and processes that affect humans every day. This is an introductory, general education course in geology appropriate for science majors and non-science majors. The curriculum is aligned with the requirements for prospective teachers.

Student Learning Outcomes (SLOs)

1. Explain and apply the scientific method to problem solving across numerous disciplines.
2. Differentiate among the major Earth systems and describe how the systems are interconnected. Earth's systems include the hydrologic cycle, rock cycle, plate tectonics cycle, solar system, geologic time, weather and climate.
3. Describe basic physical properties of minerals and rocks and use appropriate methods to identify common minerals and rocks.
4. Utilize the plate tectonics theory to explain the distribution of Earth's major topographic features and the distribution of volcanoes and seismic activity.
5. Describe the forces and processes that shape the earth's surface and their effects over geologic time.
6. Describe and explain the controls of Earth's weather and climate.
7. Demonstrate a fundamental understanding of the significant role played by oceans in controlling Earth's weather, climate and biological systems.
8. Be able to explain and critique theories for the origin of the solar system and the universe.
9. Communicate complex course concepts effectively in writing and diagrams.

Online Course Policies

1. **Communication:** For this course to be as effective as possible, it is critical that there is an opportunity for you to ask me questions. I will be available in a couple different ways:
 - a. **Email-** Feel free to email me with any questions or concerns about course content. I do not have a regular schedule in terms of logging in, but you can expect a reply from me within 24 hours of sending your email (on weekdays); if you do not hear from me, please assume that I did not

- receive the email and resend it. I check my email less frequently on weekends, so if you email me on a Saturday or Sunday, expect a reply by Monday evening at 6.
- b. Online office hours- I will hold drop-in office hours, with days and times to be determined. These will be held via Zoom, and the link to join the group meeting will be posted in the “announcements” on the course page.
2. **Attendance and Drop Policy**: For you to get the most out of this course, you must stay engaged throughout the semester. It is important to start out on the right foot:
- a. You will be dropped from the class as a “no show” if you do not submit any assignments from the first learning module (and I have not heard from you) by 9:00 am Wednesday, August 18.
3. **Late Work**: This class is designed in weekly modules. There will be multiple assignments within each module, and it is important that you keep pace with the work.
- a. The “daily” assignments will have posted deadlines, but they will not be locked after that deadline.
 - b. Quizzes, exams, and essays will not be accepted late. If no work is submitted by the posted deadlines for these assignments, a grade of zero will be entered.

Late Adds: The last day to add this class in person is August 27. The last day to add this class using Webadvisor is August 29 (for this, you must have full access to Webadvisor). Please be aware that these are firm deadlines; mistakes such as forgetting to use an add code will not be forgiven. Any student who adds this class late forfeits the opportunity to complete assignments that were submitted before his or her add date.

Drop Deadline: The last day to drop this class for a full refund is August 20. The last day to drop this class in person, to avoid a “W” on your transcript, is August 27 (this deadline is August 29 online, if you have full access to Webadvisor). The last day to drop this class, to avoid having your current letter grade appear on your transcript, is October 8.

Pass/No Pass Grading: The last day to change the grade reporting format to or from a letter grade to Pass/No Pass is September 10.

Grading (all assignments will be submitted on Canvas):

Quizzes (25 %): There will be one quiz per week, beginning in the second week of the course. These quizzes will be short, written assignments that reinforce information presented in the previous week’s notes. Any quiz not submitted by the weekly

deadline discussed above will be entered as a zero grade. There are no make-ups. The three lowest quiz grades will be dropped when your final grade is calculated.

Exams (30 %): There will be three midterm exams. These exams will ask you to apply concepts discussed in the class. The lowest midterm exam score will be dropped when your final grade is calculated.

Final Exam (10 %): The final exam is required. It will be a cumulative exam that will be completed online on the day scheduled for the final.

Daily Assignments (25 %): There will be two of these assignments each week. These assignments will ask you to apply ideas discussed in that week's notes. They are intended to supplement lecture material, filling the role of in-class questions and lab activities in a traditional face-to-face class. The four lowest assignments scores will be dropped when your final grade is calculated.

Essays (10 %): These assignments will ask you to discuss recent geologic events (e.g., volcanic eruptions). Specific requirements will be spelled out in rubrics attached to these assignments on Canvas.

General Grading Break-down : **A** 90-100%, **B** 80-89%, **C** 70-79%, **D** 60-69%, **F** 0-59%

Additional notes:

- Copying of any class work (including exams) is considered fraudulent behavior for both the copier and the originator and assignments that seem very similar may be given scores of zero.
- No extra credit will be given.

If you have a verified need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact the Disabled Student Services as soon as possible.

With this statement on my course syllabus, I am **referring** each of my enrolled students in need of academic support to **tutorial services**. Referral reason: Mastering the content, study skills, and basic skills of this course is aided by the use of trained peer tutors.

Diversity Statement:

Respect for Diversity: It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. In addition, if any of our class meetings conflict with your religious events, please let me know so that we can make arrangements for you.

Tentative course outline:

Week 1: Introduction to Geology and Plate Tectonics

Week 2: Minerals and Igneous Processes, pt. 1

Week 3: Igneous Processes, pt. 2 and Weathering

Week 4: Sedimentary rocks and **Midterm 1**

Week 5: Metamorphic Rocks

Week 6: Geologic Time and The Solar System

Week 7: Earth History and Crustal Deformation

Week 8: Earthquakes and the Earth's Interior

Week 9: Mass Wasting and **Midterm 2**

Week 10: Surface Water and Groundwater

Week 11: Coastlines and Deserts

Week 12: Glaciers and Oceans

Week 13: Climate Change and **Midterm 3**

Week 14: Extreme Weather and Nonrenewable Energy

Week 15: Renewable Energy

Week 16: Atmospheric Circulation and Oceanic Circulation

Week 17: Topographic Maps and the Earth-Moon System

Week 18: **Final Exam**