

Syllabus for Earth: Dynamic Planet (Physical Geology)
51-102 Lecture: Fall 2020 Section: A09C

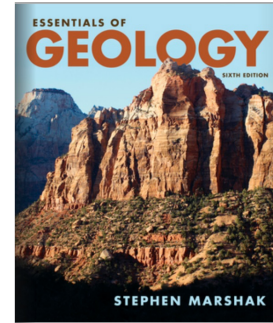
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Online Office Hours: Tue 3:30-4:30, Wed 3:30-4:30,
Thu 2:00-3:00 or by appointment (email Dr. Hallett)



Required Textbooks:

1. Essentials of Geology, 2019, 6th edition by Stephen Marshak, published by W.W. Norton and Company. ISBN: 9780393667530

- The color, print loose-leaf paper version is optional but **strongly recommended** and is a great value (includes e-book and Smartwork5). Bound paperback available from the publisher or Amazon (6th edition only has Smartwork5 and Assignments)
- The online only e-book version is available for \$55 through the publisher's website: <https://digital.wwnorton.com/essgeo6>. If you purchase this you have included access to Smartwork5 (**required** reading quiz assignments) and Guided Learning Activities.

2. UW-Oshkosh custom Earth: Dynamic Planet Fall 2020 (Lab Manual in Physical Geology), 2020 8th edition by Jones and Jones, McGraw Hill Publisher. ISBN: 1307618928 (Required Custom Lab Manual).

- This is an updated, customized edition for our labs costs less than the normal edition. This paper version is ***the only edition that is acceptable. It must say "Fall 2020" on the cover. ***Note: a used, borrowed, or shared lab manual is NOT acceptable for the course.***



About this course

Earth: Dynamic Planet (Physical Geology) is about the study of earth materials and the changes that occur in earth's interior and on its surface. This course provides an introduction to geology as a science and an overview of its basic principles. Many topics are unified by a theme of how the earth system changes through time, with implications regarding sustainability of earth resources. The lab portion of the course is designed to provide training and practice in applying scientific inquiry to the earth and to practice analytical reasoning and quantitative problem solving. Students will increase knowledge of the physical world and develop valuable skills including critical thinking, written communication, quantitative and technical literacy, teamwork, and problem solving. *These are the Essential Learning Outcomes for the course.*

Course Objectives: By the end of the course, as a student you will be expected to...

- Discuss the basic principles of scientific inquiry and apply them to current research and past discoveries and development of theories.
- Define selected vocabulary from the assigned course readings, and employ them in understanding and explaining topics.
- Differentiate between different tectonic plate boundaries describing common geologic features and processes.
- Use physical and chemical properties to classify rocks and minerals.

- Compare the formation of different types of magma and their relationship to volcanic and igneous features.
- Analyze igneous, sedimentary, and metamorphic rocks to determine how they formed.
- Apply principles of relative dating to interpret geologic histories. Understand the application of radiometric dating to geologic events and the geologic time scale.
- Read maps that represent 3-D surfaces and interpret the processes that reconfigure rock units as represented on geologic maps.
- Differentiate the internal structure and composition of the earth.
- Identify folds, faults, and strata in geologic sections and summarize their formation.
- Explain what causes earthquakes and earthquake damage, and how their source is located.
- Discuss a global picture of the world's energy and natural resources and how they are critical to the **sustainability** of modern society.
- Describe the geologic impact of past and projected future changes in earth's climate and how the present outlook relates to issues of **sustainability** and earth resources.

USP Explore “Nature” Course: Physical Geology 102 fulfills an Explore “Nature” requirement for the University Studies Program (USP). The signature question: ***How do people understand and create a more sustainable world? What does this mean?*** The broad topic of sustainability is defined by the UK's Forum for the Future, (2006) as “a dynamic process which enables all people to realize their potential and improve their quality of life in ways which simultaneously protect and enhance the Earth's life support systems”. In this course we will explore this topic as it relates to society's relationships to the earth system through time.

As part of a USP Explore or Quest I Course, you are participating in liberal education. This approach is designed to provide you with the opportunity to discover the world around you from different perspectives while giving you an ability to communicate with people of different backgrounds, putting their expertise in context. This course has been structured to help you learn about geologic processes and sustainability of earth resources, but also to learn to ask questions, make observations, collect data, and begin to synthesize and apply your knowledge to better understand our world. These skills relate not just in earth and other sciences but can be applied to life in general to make you an effective problem solver who can think critically.

In addition to being a USP Explore Course with the **Sustainability** signature question, this course also fulfills requirements for all majors and minors in Geology (including Secondary Earth Science Education) and fulfills a Natural Science **Laboratory Science** course requirement of the College of Letters and Sciences.

Course Components:

- **Lecture** - MWF 10:20-11:20am, Online (Canvas). Lectures will be recorded for you to review on Canvas. The schedule of topics is given below.
- **Labs** - “Hands on” lab work is an essential part of geology. In lab you will learn to make observations and directly experience many of the principles addressed in the readings and in lecture. See lab schedule and information here:
http://www.uwosh.edu/faculty_staff/hallettb/Bens_Course_Pages/102Lab_Syll_Fall.pdf
- **Online Homework** - Assigned through Norton's Smartwork5 system, you will have regular assignments based on the readings that are due prior to lecture topics.
- **In-Class Exercises and Written Homework** – Assignments/questions to help you develop an understanding of key course concepts. Due to the size of the class, you may not get direct

individual feedback on homework beyond a score, though I will go through essential outcomes from these assignments during lecture.

- **Quest I Discussion** – *Quest I first year students only* (Lab A01L or A02L), see discussion syllabus and schedule for information.

Expectations:

- *My expectations for you:* Success in this course requires good attendance and a significant investment of time beyond scheduled class. The National Survey of Student Engagement suggests that there is a disconnect between faculty and student expectations in terms of time spent out of the classroom. Throughout this course, I expect that you spend a minimum of **two to three hours** outside of class reading/studying and preparing *per hour spent* in the classroom. With this course being a 4–5 credit course, **you should be studying 8-12 hours per week in addition to lectures and lab.**
- *What you can expect from me:* I want all students to feel welcome and included in the course whoever you are or how much of a science background you have. I try my hardest to be available when you might need help. I want students to visit and ask questions at my office hours, before/after class, and via email. My goals are the following: to be enthusiastic about course material, to present material in an organized way, to provide resources you need to be successful, to respond quickly, to set a high standard for the course and help you meet those standards, and to be fair and respectful.

Requirements and Grading

Attendance: The material on the exams will come from the lecture, homework, and in-class exercises so attendance is required if you wish to do well in the course. In addition, no opportunities will be available to make up unexcused missing in-class activities, kahoots, or lecture quizzes. Please feel free to ask questions at any time via chat, including during lecture; however, ***disruptive behavior, including talking during lecture or labs or inappropriate browsing/text messaging, is not acceptable*** and will result in a lower course grade.

Kahoots: To introduce/reinforce key course concepts we will be using free Kahoot quizzes in class, which is available on any web-enabled or smart device. Details will be announced in class, but ***your best experience will be to have a second device (smartphone/tablet) for each online lecture.*** In order to assure you qualify for attendance/participation points you must: use your UWO netID as a nickname. Your attendance/participation score will be highest if you participate in all Kahoots for the semester and respond to all questions.

Online Homework: These assignments help you keep up with the reading and course material in preparation for lectures, and are given through the Smartwork5 system, accessed specifically through Canvas. The assignments are due **at the start of lectures for the due date**, and they strictly follow the lecture schedule at the end of your syllabus. There are 15 total Smartwork5 assignments. The first assignment is due on 9/11 at 11:59pm. Additional opportunities to improve your homework score will be announced in class.

Exams: The lecture exams are weighted equally, with the option of taking a cumulative final exam in the final class period. The cumulative final exam option will replace any missed exams

or the lowest exam score. The exams test your ability to grasp concepts, apply terminology, and solve problems. If you fail to take good notes, participate in class, complete the homework, or gain a reasonable understanding of the material you will struggle on the exams.

The tentative exam schedule (subject to change) is:

- Exam 1: Wednesday, Oct. 7
- Exam 2: Monday, Nov. 9
- Exam 3: Wednesday, Dec. 16
- **Optional** Final exam Friday, Dec. 18

Lecture exams will be computer scored and score sheets and question sheets will not be returned to you but, once they are graded, will be viewable during office hours or by appointment. If you have a valid excuse and must miss an exam, you must contact me **BEFORE the exam date**. Only if you have a valid excuse, may you get approval to take a makeup exam.

Grade Basis: Your course grade will be based on three lecture exams (50 points), homework (including online homework) and attendance/in-class exercises (20 points), and your lab grade (30 points). You must pass the lab portion and have a grade $\geq 60\%$ to pass the class. Grades are computed as a percentage of the total points available.

Grade scale: 93% and up = A; 90–92 = A-; 87–89 = B+; 83–86 = B; 80–82 = B-; 77–79 = C+; 73–76 = C; 70–72 = C-; 67–69 = D+; 63–66 = D; 60–62 = D-; <60% = F

Course Policies:

Academic Integrity: The Wisconsin Administrative Code states: “Students are responsible for the honest completion and representation of their work, for the appropriate citation of sources, and for respect of others academic endeavors.” (§ UWS 14.01) **Plagiarism** and other forms of **academic misconduct** are serious offenses with severe penalties. See the University of Wisconsin Oshkosh Student Discipline Code for definitions of academic misconduct and details about procedures, sanctions, and other relevant information:

<http://www.uwosh.edu/deanofstudents/university-policies-procedures/academic-misconduct>.

Specific questions about the Student Discipline Code should be directed to the Dean of Students Office. If you do not understand this statement, please see me as soon as possible.

Email: I will do my best to respond to email within one day. If you have an urgent situation please come to my office or send an email that describes your situation. When you email me please tell me your full name, and which class you are in. Also, email is not the same as a text/instant message, it is a business/academic document. Incoherent emails that are written with incomplete sentences, no punctuation, or text message abbreviations will not get responses.

Disclosure Statement: Students are advised to see the following URL for disclosures about essential consumer protection items required by the Students Right to Know Act of 1990:

<https://uwosh.edu/financialaid/consumer-information/>

Course Resources:

Canvas: All course information, lectures, supplementary links, notes, and grades will be made available on Canvas. Please check Canvas first before making requests for material or grades.

Canvas' final calculated grade may not reflect all grade assignments for the course. We will not use Canvas for messaging or discussions.

Geology Tutoring: Geology student tutors offer optional free study/tutoring sessions several evenings each week via Canvas/Collaborate Ultra. Exact times and how to access will be announced.

Additional online resources: Some additional resources are provided in the “helpful links” on Canvas. There are many online resources for learning physical geology and if you find something new and exciting, please explore and consider sharing with me and your classmates.

Early Alert: The University’s Early Alert program reaches out to students after the first 5 weeks of classes (Emailed around October 13) to help identify academic performance or attendance issues. It is common for students to be unaware or to over-estimate their academic performance in classes so this program is designed to help. If you receive a notice by email, read it carefully, and if you receive an alert it is critical that you make arrangements to meet with me and/or a counselor to help develop an action plan.

Special Accommodations: Reasonable accommodations will be made for students with disabilities. Please contact the Accessibility Center (424-3100 (voice) or 424-1319 (TTY)) or visit their web site at <http://www.uwosh.edu/deanofstudents/Accessibility-Center> for the University’s accommodation request form and documentation requirements. Information related to an individual’s accommodation request will be kept confidential.

Tentative Lecture Schedule:

Week beginning	Topic	Marshak Reading	Smartwork5 Homework
Sep. 7	Introduction to scientific inquiry, Geology matters, Earth in space/time, how our planet is constructed	Ch. 1	SW1 due 9/11
Sep. 14	Plate Tectonics, how earth works	Ch. 2	SW2 due 9/14
Sep. 21	Atoms, compounds, minerals (building blocks of earth materials), magma	Ch. 3	SW3 due 9/21
Sep. 28	Igneous rocks, volcanoes and volcanic hazards	Ch. 4, Int. A; Ch. 5	SW4 due 9/28 SW5 due 9/30
Oct. 5	Volcanic hazards; Exam 1 (Oct. 7) Sediments and soils	Ch. 5+ Int. B	No SW due
Oct. 12	Sediments and soils, Sedimentary rocks and environments	Ch. 6, Int B	SW6 due 10/12
Oct. 19	Streams and Floods; Groundwater and Karst	Ch. 14; Ch. 16	SW7 due 10/19 SW8 due 10/21
Oct. 26	Metamorphic rocks, metamorphism, Rock cycle	Ch. 7, Int. C	SW9 due 10/26
Nov. 2	Earthquakes and Earthquake Hazards	Ch. 8	SW10 due 11/2
Nov. 9	Exam 2 (Nov 9); Geologic Time and Relative Dating	Ch. 10	SW11 due 11/11
Nov. 16	Absolute Dating and the Timescale; Energy and Mineral Resources and Sustainability	Ch. 9; Ch. 12	SW12 due 11/16 SW13 due 11/20
Nov. 23	Mineral Resources; Thanksgiving, No Class 11/24–11/29	Ch. 12	No SW due
Nov. 30	Glaciers, Ice ages, and Earth’s Climate	Ch. 18	SW14 due 11/30
Dec. 7	Global Change, Climate Change and Sustainability	Ch. 19	SW15 due 12/7
Dec. 14	Review, Exam 3 (Dec. 16), Optional Final Exam Dec. 18		No SW due

Important dates: 9/9/20 class begins; 9/15/20 last day to add without instructor's signature; 10/6/20 last day to add with instructor's signature; 10/23/20 last day to drop without Late Drop Appeal; 11/25/20–11/29/20 Thanksgiving Recess; 12/18/20 Classes end.

Other resources are available. Please ask for help if you need it! If you have a course-related issue I will make every effort to help you resolve it or to direct you to the help you need.