

# GEOL 101 - Introductory Geology: Exploring Planet Earth, Spring 2023, Section 1001, Tuesday and Thursday 11.30 AM – 12.45 PM, FDH109

## Faculty:

Instructor: Dr. Simon Jowitt

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Office Hours: Tuesday 10.00 am – 11.00 am, Wednesday 9.00 am – 10.30 am, and by appointment

## General Information:

Course format: Lecture twice a week, Laboratory once a week

Textbook: Essentials of Geology by Marshak, 7th edition

Prerequisites: None

## Learning Outcomes:

After successfully completing this course, students will be able to: 1) Identify common rocks and minerals and place them in the context of the rock cycle; 2) Locate major plate boundaries around the world, and identify the geological processes and features that may accompany those boundaries; 3) Explain the surface processes that have shaped the landscape over geologic time; and 4) Explain the origins and limitations of major renewable and non-renewable resources.

## Grading Policies:

- Students must pass both the lecture and the laboratory in order to pass GEOL 101.
- An average score of less than 60% in lecture will lead to a grade of F for GEOL 101.
- Either an average score of less than 60% in the GEOL 101 Lab or more than two missed lab assignments will lead to a grade of F for GEOL 101.
- Required reading means that the instructor may test on that material even if it has not been covered in lecture.
- No extra credit will be given.

## Grade Calculation:

Each student's final grade will be calculated according to the following schedule. The calculated total will be rounded to the nearest integer number.

|                                |      |
|--------------------------------|------|
| Three lecture exams (15% each) | 45%  |
| Comprehensive final exam       | 20%  |
| Lecture quizzes/assignments    | 10%  |
| Laboratory                     | 25%  |
| Total %                        | 100% |

## Grade Assignment:

Final grades will be assigned according to the following schedule. The instructor may elect to curve the final grades in the students favor.

|       |         |       |         |
|-------|---------|-------|---------|
| Grade | Total % | Grade | Total % |
| A     | 93-100  | C     | 73-76   |
| A-    | 90-92   | C-    | 70-72   |
| B+    | 87-89   | D+    | 67-69   |
| B     | 83-86   | D     | 63-66   |
| B-    | 80-82   | D-    | 60-62   |
| C+    | 77-79   | F     | 0-59    |

## Lecture Exams:

- Exam 1: Feb. 9, covers: Prelude Box P1; Chapters 1, 3, 4, 5
- Exam 2: Mar. 7, covers: Chapters 6, 7, 10, 11; Interludes A, B2, C, E
- Exam 3: Apr. 11, covers: Chapters 8, 9, 14, 16, 17, 18; Interludes D, F
- Final Exam: Date/time TBA (check My UNLV and the UNLV website for details), covers: Cumulative with emphasis on Chapters 2, 9, 12, and 19

## In-lecture Quizzes

The course has a total of four short in lecture quizzes that are based on the immediately preceding lecture. These are as follows:

- February 14<sup>th</sup> (on Volcanoes)
- March 2<sup>nd</sup> (on Geochronology and the Fossil Record)
- March 23<sup>rd</sup> (on Winds and Deserts)
- April 4<sup>th</sup> (on Earthquakes)

Quizzes will be held at the beginning of each of the above lectures; please ensure you arrive for the lecture in a timely fashion.

## Class Schedule

Weekly schedule showing topics for lecture and laboratory, plus required reading assignments from the class textbook. The listed date is the start of each week (Monday).

### Week 1 (Jan. 16)

Lab: **No labs this week**

Lecture 1: Introduction, Scientific Method

Lecture 2: Minerals I

Reading: Prelude Box P1; Chapter 1, 3

### Week 2 (Jan. 23)

Lab: Physical Properties

Lecture 1: Minerals II

Lecture 2: Formation and Structure of the Earth

Reading: Chapter 3

**Week 3 (Jan. 30)**

Lab: Mineral Identification  
Lecture 1: Igneous Rocks I  
Lecture 2: Igneous Rocks II  
Reading: Chapter 4

**Week 4 (Feb. 6)**

Lab: Igneous Rocks  
Lecture 1: Volcanism  
Lecture 2: **Exam 1**  
Reading: Chapter 5

**Week 5 (Feb. 13)**

Lab: Mineral and Igneous Rocks Practicum  
Lecture 1: Sedimentary Rocks I, Quiz 1  
Lecture 2: Sedimentary Rocks II  
Reading: Chapter 6, Interludes A, B2, C

**Week 6 (Feb. 20)**

Lab: **No labs this week**  
Lecture 1: Metamorphic Rocks I  
Lecture 2: Metamorphic Rocks II and the Rock Cycle  
Reading: Chapter 7

**Week 7 (Feb. 27)**

Lab: Sedimentary Rocks  
Lecture 1: Geochronology and the Fossil Record  
Lecture 2: Geologic Time and Paleontology, Quiz 2  
Reading: Chapters 10, 11, Interlude E

**Week 8 (Mar. 6)**

Lab: Metamorphic Rocks  
Lecture 1: **Exam 2**  
Lecture 2: Rivers  
Reading: Chapter 14

**Spring Break (Mar. 13) NO LABS OR LECTURES**

**Week 9 (Mar. 20)**

Lab: Topographic Maps  
Lecture 1: Groundwater  
Lecture 2: Winds and Deserts  
Reading: Chapter 16; Interlude F

**Week 10 (Mar. 27)**

Lab: Rock Exam  
Lecture 1: Glaciers, Quiz 3  
Lecture 2: Earthquakes  
Reading: Chapter 8, 18

**Week 11 (Apr. 3)**

Lab: Groundwater  
Lecture 1: Earth's Interior, Quiz 4  
Lecture 2: Geologic Structure I  
Reading: Chapters 8, 9; Interlude D

**Week 12 (Apr. 10)**

Lab: Geologic Structure  
Lecture 1: **Exam 3**  
Lecture 2: Geologic Structure II  
Reading: Chapter 9

**Week 13 (Apr. 17)**

Lab: Geologic Structure  
Lecture 1: Plate Tectonics  
Lecture 2: Global Change  
Reading: Chapters 2, 19

**Week 14 (Apr. 24)**

Lab: Plate Tectonics  
Lecture 1: Energy  
Lecture 2: Ore Deposits I  
Reading: Chapter 12

**Week 15 (May 1)**

Lab: Applied Geology  
Lecture 1: Ore Deposits II  
Lecture 2: Climate change and the minerals industry  
Reading: Chapter 12

Week 16 (May 8)

**FINAL EXAM TBD; check UNLV website for further details**

### UNLV Academic Policies

Students taking this course are required to be familiar with the UNLV academic policies. You can [read the current UNLV Academic Policies on this link](#) or consult the word document entitled “Syllabus Content Spring 2023” on the course Webcampus page.

## GEOL 101 Policies

### Office Hours

My office hours (see above) are times that I have set aside to answer student questions in person. Please feel free to stop by and knock on my door during those times. I will be happy to answer your questions to the best of my ability. If my scheduled office hours are not convenient for you, please email me and schedule an appointment at an alternate time.

### Attendance

It is important to attend class because I will cover a lot of material, answer questions, and provide guidance on exams. Students who miss class are responsible for the material that was presented. It is often helpful to request notes from a classmate.

### Missed Work

Exams, quizzes, assignments, and labs missed due to absence will receive a grade of zero unless the instructor is provided with advance notification of an exception for a religious holiday or university-sponsored extracurricular activity as specified in the University Catalog. In the case of an excused absence, the nature and format of the make-up work will be at the instructors' discretion.

### Laboratory

All GEOL 101 students are required to enroll in a zero-credit laboratory section.

### First Week Schedule

Unless stated otherwise on the course syllabus, the GEOL 101 laboratory meets the first week of each semester.

### Administrative Drops/Classroom Conduct

All students are required to be familiar with university policies and procedures in the current UNLV Undergraduate Catalog. Importantly, we follow the policies on Administrative Drops/Classroom Conduct as stated in the most recent UNLV Undergraduate Catalog. Any student that does not comply with these requirements, and conducts themselves in a manner that is disruptive and interferes with the right of other students to learn, or of the instructor to teach will be administratively dropped from the course.

### Non-enrolled Guests

Students are not allowed to bring guests, including children to either lecture or laboratory.

### Academic Misconduct

This course operates under a "zero tolerance" policy. Any student who commits cheating or plagiarism will receive a grade of F for the class.

### Changes to the Syllabus

The course schedule is tentative, minor adjustments may be made during the course of the semester. The instructor also reserves the right to change topics to reflect world events. Students will be provided with an updated syllabus if significant changes are necessary.