

T-Th 8:30 – 9:45 AM, LFG (Lily Fong Geoscience Building), Room 102

Instructor: Dr. Ganqing Jiang
Office: SEB (Science and Engineering Building), Room 3241
Contact info: Email: Ganqing.Jiang@unlv.edu
 Phone: 702-895-2708
Laboratories: LFG 105: T 2:30 – 5:15 pm (Section 1); Th 2:30 – 5:14 pm (Section 2)
Office Hours: Tuesday and Thursdays, 10:00 – 11:30 am and by appointment
Textbook: Steven M. Stanley, 2009, *Earth System History*, 3rd Edition, W.H. Freeman and Company, 551 pp. ISBN: 1-4292-0520-2
T. A. : Heather Stoller
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Course Description:

Basic concepts and major techniques used by geologist to understand the evolution of Earth and life through time. Topics include the stratigraphic principles, rock cycles, dating methods, plate tectonics, the fossil record, evolutionary theory, mass extinctions, tectonic evolution and paleogeographic interpretation. Laboratory work includes identification of minerals, rocks and major groups of fossils, interpretation of depositional environments, stratigraphic sequence analysis, and geological maps and cross sections.

Learning outcomes:

At the end of the class, every student should be able to:

- Use relative and absolute dating principles to interpret the geological history of rock units.
 - Identify the major types of sedimentary rocks and their depositional environments.
 - Explain the tectonic theory and apply it to the tectonic cycles in Earth history
 - Understand the sequence of major events in the history of the Earth and life and their interrelationships
 - Identify and classify the major groups of fossils and apply them for stratigraphic correlation
 - Correctly interpret geological maps and geological cross sections
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Grading:

- Attendance, participation, and quizzes.....15% -----(a)
- Midterm Exam.....25% -----(b)
- Final Exam.....30% -----(c)
- Lab/Field work.....30% -----(d)

Final exam will be cumulative. No make-ups for exams except stated by the university rules (see below).

Your final score will be calculated as follows:

$$\text{Final score} = (a) * 15\% + (b) * 25\% + (c) * 30\% + (d) * 30\%$$

Your final grade will be assigned on the following schedule:

A: 90-100; B: 80-89; C: 70-79; D: 60-69; F: < 60

A plus/minus system may be employed at the instructor’s discretion.

Lecture Schedule: Updated syllabus and lecture notes will be provided in the class website.

Date	Topic	Reading	
(T)	Jan. 17	Introduction: WHYs and HOWs	Chapter 1
(Th)	Jan. 19	How did our earlier generations think about the Earth: Historical View	Chapter 1
(T)	Jan. 24	How do we know the age of the Earth: Relative and Absolute Ages	Chapter 6
(Th)	Jan. 26	Materials for studying the Earth history: Rocks and Minerals	Chapter 2
(T)	Jan. 31	Sedimentary Environments	Chapter 5
(Th)	Feb. 2	Sedimentary Record: Interpreting the Earth History	Chapter 5-6
(T)	Feb. 7	Fossils in Sedimentary Record: A Major Tool for Telling Time	Chapter 3,7
(Th)	Feb. 9	Fossils in Sedimentary Record: Information on Earth System Changes	Chapter 4,7
<i>Friday, Feb. 10, Field trip to Frenchman Mountains (Mapping project)</i>			
(T)	Feb. 14	Plate tectonics and rock cycles: Complexities of the Rock Record	Chapter 8-9
(Th)	Feb. 16	Plate tectonics and rock cycles: Revealing the Hidden History	Chapter 8-9
(T)	Feb. 21	No Class, AGU meeting in Salt Lake City	
(Th)	Feb. 23	No class, prepare for midterm exam	
(T)	Feb. 28	Major Chemical Cycles	Chapter 10
(Th)	Mar. 1	Life through Time: The Early Days	Chapter 11
(T)	Mar. 6	Midterm Review	Chapter 1-11
(Th) Mar. 8 Midterm Exam (8:30 am)			
(T)	Mar. 13	Life through Time: the rise of oxygen and evolution of life	Chapter 11-12
(Th)	Mar. 15	Life through Time: The Proterozoic Eon	Chapter 12
(T)	Mar. 20	Biological Innovation: The “Snowball” Earth	Chapter 12+
(Th)	Mar. 22	Life through Time: The Paleozoic Biosphere	Chapter 13-15
(T)	Mar. 27	The Paleozoic Tectonic History of North America	Chapter 13-15
(Th)	Mar. 29	Mass extinction: What Happened at the End of the Permian?	Chapter 15+
<i>April 2 – April 7, Spring Breaks, No class</i>			
(T)	April 10	Life through Time: What’s new in the Mesozoic?	Chapter 16-17
(Th)	April 12	Mass extinction: What happened to the Dinosaurs?	Chapter 16-17
<i>April 14 (Sat): Alamo, Carboniferous Joana Limestone & Limestone X (fossils)</i>			
(T)	April 17	No class, work on field notes	
(Th)	April 19	From Dinosaurs to Birds: Evidence and Debates	Chapter 17+
(T)	April 24	Cenozoic Tectonics and Climate	Chapter 18-19
(Th)	April 26	Life through Time: Cenozoic–The Age of Mammals	Chapter 18-19
(T)	May 1	Life through Time: Human Origins	Chapter 18-19
(Th)	May 3	Final Exam Review	
(T)	May 8	No class, Final Exam Week	
(Th) May 10 Final Exam (8:00 – 10:00 am)			

+ -- Means that additional information (references) will be provided

Logistics and Policies

1. Participation:

I expect that students will come to this class with very different backgrounds and levels of educational training. As a result, you may find some material difficult, feel that you are already familiar with some of the concepts, or have personal experiences that can inform us all. Whatever your situation, please share your position with us through class participation. Most importantly, however, if you are confused about a concept, *please ask questions* in class for clarification and further explanation. You will not be alone in your confusion. There are many ways to present this material, and I will attempt to find one that works for you. If you do not feel comfortable asking questions in class, please contact myself or your lab instructor.

2. Attendance

It is important that you attend class daily because we cover a lot of material, and I will provide guidance for reading assignments and exam questions regularly. You are responsible for all material covered in lectures no matter what causes your absence. If you miss a lecture, get the notes from a classmate. *Neither make-up lectures nor make-up exams will be given* except as specified below. Topics covered may vary from the schedule somewhat, but the exam dates remain fixed. If you are absent from a scheduled exam in either lecture or lab without a written medical or university excuse, you will receive a zero for that exam. All exams are comprehensive and cover materials presented in lecture, the laboratory, and reading assignments. Review lectures will be provided before the Midterm and Final exams.

3. Laboratory

Concurrent enrollment in a lab section is required. You must enroll for a section of GEOL102L (Section 1 on Tuesdays or Section 2 on Thursdays), for zero credit hours. The labs and field trip reports are 30% of your final grade. You will be working in small groups in the lab, and it is a great place to make friends and find people to form a study group.

4. Academic Misconduct

As stated on page 63 of the UNLV 2006-2008 Undergraduate catalog: "Academic integrity is a legitimate concern for every member of the campus community; all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility and professionalism. By choosing to join the UNLV community, students accept the expectations of the Academic Misconduct Policy and are encouraged when faced with choices to always take the ethical path. Students enrolling in UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's function as an educational institution."

You are required to be familiar with university policies and procedures in the current UNLV Undergraduate Catalog. Importantly, we follow the policies on Cheating, Plagiarism, and Academic Dishonesty that are stated in the most recent UNLV Undergraduate Catalog. This course operates under a "zero tolerance" policy, meaning that if a student commits cheating or plagiarism they will receive a grade of F for the class.

5. Administrative Drops/Classroom Conduct

You 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 that are 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.

6. Learning Environment

The classroom is intended to be a place of learning. As such, and as specified in the UNLV Undergraduate Catalog, no pagers, cell phones, or other potentially disruptive devices are allowed in lecture. Student usage of laptop computers or similar devices is only allowed with explicit permission of the instructor, and is restricted to taking notes for this course. Disruptive behavior such as those described above, chatting, sleeping, watching video, playing games or texting may result in an administrative withdrawal from the course.

7. Bringing children to class

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

8. Disability Services (DS)

The Disability Resource Center (DRC) coordinates all academic accommodations for students with documented disabilities. The DRC is the official office to review and house disability documentation for students, and to provide them with an official Academic Accommodation Plan to present to the faculty if an accommodation is warranted. Faculty should not provide students accommodations without being in receipt of this plan.

UNLV complies with the provisions set forth in Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, offering reasonable accommodations to qualified students with documented disabilities. If you have a documented disability that may require accommodations, you will need to contact the DRC for the coordination of services. The DRC is located in the Student Services Complex (SSC), Room 137, and the contact numbers are: Voice (702) 895-0866, TTY (702) 895-0652, fax (702) 895-0651. For additional information, please visit: <http://studentlife.unlv.edu/disability>

9. Writing Center

One-on-one or small group assistance with writing is available free of charge to UNLV students at the Writing Center, located in CDC-301. Although walk-in consultations are sometimes available, students with appointments will receive priority assistance. Appointments may be made in person or by calling 895-3908. The student's Rebel ID Card, a copy of the assignment (if possible), and two copies of any writing to be reviewed are requested for the consultation. More information can be found at: <http://writingcenter.unlv.edu>

10. Religious Holidays

As a general rule, a student missing a class because of observance of a religious holiday shall have the opportunity to make up missed work. You must notify me by the last day of late registration if this pertains to you and a clear deadline will be set for completion of work.

11. Official Extracurricular Activity

All students who represent UNLV at any official extracurricular activity have the opportunity to make up an assignment. However, you must provide official written notification to me at least 1 week prior to the missed class(es).

12. Nondiscrimination

The University of Nevada Las Vegas does not discriminate on the basis of race, color, creed, religion, national or ethnic origin, gender, age, sexual orientation, disability, or veteran status.

13. Copyright Issues

The university requires all members of the University Community to familiarize themselves and to follow copyright and fair use requirements. You are individually and solely responsible for violations of copyright and fair use laws. The University will neither protect you, nor defend you, nor assume responsibility for employee or student violations of fair use laws. Violations could subject you to federal and state civil liabilities as well as disciplinary action under University policies. To help familiarize yourself with copyright and fair use policies, the University encourages you to visit its copyright web page at: <http://www.unlv.edu/committees/copyright>

13. Succeeding!

To do well in this class you should study and work with the material daily. At the end of each day, read your notes and make sure that you understand what you wrote. Better yet, re-write your notes in a second notebook using complete sentences: if something isn't clear in your own mind it will be readily apparent to you. For best results, do this within 24 hours of when class ends. Even though not assigned, answer the questions at the end of each chapter. Quiz yourself – use the CD in your text. Develop a study group, you'll learn more and it will be more enjoyable. Keep up with reading assignments, and lecture material. It is harder to come from behind than to stay engaged daily. If you get confused or have questions that have not been resolved in lecture, then do not hesitate to contact me. Meeting with me during office hours is best because I have set aside this time for you. If you cannot make any of my office hours, call or email for an appointment. I am here to help you learn and succeed, but you have to be pro-active in this endeavor. *Cramming for exams is the least productive thing you can do!* In previous classes, over 90% of the students who fail the class didn't attend class regularly.