

## GEOL 301 Fossil Record

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**Office Hours:** MW 3-4pm or by appointment LFG 214

**Phone:** (702) 895-4615

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**Textbook:** Introduction to Paleobiology and the Fossil Record (Benton and Harper) 2<sup>nd</sup> ed

**Course Description:** This course is an overview of the history of life as it is preserved in the fossil record. The course is designed for geology and biology students who have already had one or more introductory courses in their respective fields.

### Course Objectives:

1. Commit the geologic time scale to memory
2. Describe the major features and events in the history of life and when they occurred
3. Describe the key aspects of evolution and natural selection
4. Describe the processes associated with the postmortem alteration and post-burial alteration of organisms and their impact on the faithfulness of the fossil record (taphonomy)
5. Describe the role of the fossil record in understanding evolutionary processes and the testing of competing hypotheses, specifically hypotheses concerning the tempo of evolutionary change (punctuated equilibrium and phyletic gradualism).
6. Name and describe the main groups of organisms

### Assessment: Quizzes 20% and Exams 80%

Grade		Grade	
A	over 93	C	between 73 and 77
A-	between 90 and 93	C-	between 70 and 73
B+	between 87 and 90	D+	between 67 and 70
B	between 83 and 87	D	between 63 and 67
B-	between 80 and 83	D-	between 60 and 63
C+	between 77 and 80	F	less than 60

**Exams:** There are four exams each worth 20% of your total grade. **Make-up exams** will only be given in documentable emergency circumstances. If you cannot take an exam at the scheduled time, you must make arrangements with me **ahead of time in writing (via email)**, to take an exam *before* the scheduled time. Without prior written arrangement, **missed exams will result in a score of zero** unless it is an emergency.

**Exam 1 Wednesday Feb 8<sup>th</sup>**

**Exam 2 Wednesday Mar 8<sup>th</sup>**

**Exam 3 Wednesday Apr 12<sup>th</sup>**

**Final Exam Wednesday May 10<sup>th</sup> 10:10am – 12:10pm**

**Quizzes:** Quizzes will be administered periodically through Canvas, and your lowest quiz grades will be dropped. There will not be any make-ups for missed quizzes, if you miss a quiz, that quiz would be counted as one of your two allowable drops.

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## POLICIES

**Attendance:** If you have any symptoms of illness (such as a fever or cough), do not attend lecture, and please notify your instructor as soon as possible via email. No student, faculty, staff member who is ill or has been in close contact with an individual who has tested positive for COVID-19 should attend class or come to campus. Instructors will, without prejudice, provide students with reasonable opportunities for completing missed work. However, students are ultimately responsible for material covered in class, regardless of whether the student is absent or present. Instructors are not expected to create a facsimile of in-class instruction, but should identify reasonable ways to accommodate the absence. If your absence is of significant duration or severity, your instructor will advise you about other options that might be available including assigning an incomplete grade or requesting a medical withdrawal.

Legitimate reasons for absences include, but are not limited to, illness and injury, disability, pregnancy-related conditions and childcare as a parent or primary, medical appointments, military service, death in the immediate family, religious observance, academic field trips, participation in an approved concert or athletic event, and direct participation in university disciplinary hearings.

**Extra Credit:** There are no extra-credit assignments in this course. Your grade is determined by the quality of work that all students undertake.

**Communication:** I will primarily communicate using Canvas, so please check your email associated with your Canvas account regularly and **set up Canvas to send you email notifications when announcements are made**. I will not typically read or respond to emails sent after 5pm until the next day, or on the weekends, so I recommend that you don't leave questions until the last minute.

**Religious Holidays:** Any student missing class quizzes, examinations, or any other class or lab work because of observance of religious holidays shall be given an opportunity during that semester to make up missed work. The make-up will apply to the religious holiday absence only. It shall be the responsibility of the student to notify the instructor **within the first 14 calendar days of the course** of their intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit the Missed Classwork policy, under Registration Policies, on the [Academic Policies](https://catalog.unlv.edu/content.php?catoid=39&navoid=10666) webpage, <https://catalog.unlv.edu/content.php?catoid=39&navoid=10666>.

**Names and Pronouns:** In this course, we will respect people's chosen names and pronouns. Pronouns are how we refer to people instead of using their name, such as he/him or they/them. Do not assume someone's pronouns, and always be open to correction if someone lets you know that you are using the wrong pronouns for them.

**Public Health Directives:** Face coverings are currently optional for all faculty and students in the classroom. Students must follow all active UNLV public health directives while enrolled in this class. UNLV public health directives are found at [Health Requirements for Returning to Campus](https://www.unlv.edu/coronavirus/health-requirements), <https://www.unlv.edu/coronavirus/health-requirements>. Students who do not comply with these directives may be asked to leave the classroom. Refusal to follow the guidelines may result in further disciplinary action according to the [UNLV Student Conduct Code](#),

[https://www.unlv.edu/sites/default/files/page\\_files/27/StudentConduct-Code.pdf](https://www.unlv.edu/sites/default/files/page_files/27/StudentConduct-Code.pdf), including being administratively withdrawn from the course.

**Classroom Conduct:** Students have a responsibility to conduct themselves in class and in the libraries in ways that do not interfere with the rights of other students to learn, or of instructors to teach. Use of devices such as cellular phones and pagers, or other potentially disruptive activities are only permitted with the prior explicit consent of the instructor. Students are specifically **prohibited to record classes without instructor authorization**, including online/remote classes (either audio only, or video and audio). The instructor may rescind permission at any time during the class. If a student does not comply with established requirements or obstructs the functioning of the class, the instructor may initiate an administrative withdrawal of the student from the course. Since the COVID-19 pandemic forced some instruction to be delivered remotely starting in Spring 2020, numerous students have asked instructors to record their synchronous classes, so that they can access them at their convenience. Instructors who agree to record their classes (audio only, or video and audio) should inform students in advance. Recorded lectures may not be broadly released to anyone, but made available exclusively to those students enrolled in the class during the particular academic term. Recorded lectures must be stored securely, and are subject to the Nevada System of Higher Education's Records Retention Policy, meaning that the recordings can only be deleted 120 days after the end of class (i.e., after grades are posted). Once this requirement is met, the recordings should be deleted. Class recordings are protected from disclosure, as they are deemed part of an educational record under the Family Educational Rights and Privacy Act (FERPA).

**Academic Misconduct:** 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. Please be sure that you understand UNLV's academic honor system. Academic integrity is a legitimate concern for every member of the University community. We 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 Student Academic Misconduct Policy, and are encouraged to always take the ethical path whenever faced with choices. Students enrolling at UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's educational mission. An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another person, from the Internet or any other source without proper citation of the source(s). See the [Student Conduct Code](https://www.unlv.edu/studentconduct/student-conduct), <https://www.unlv.edu/studentconduct/student-conduct>.

The Honor Code will be strictly enforced in this course. All assignments submitted shall be considered graded work, unless otherwise noted, and all aspects of your coursework are covered by the Honor System. Plagiarizing, using sources without documentation, and borrowing work from other students represents intellectual theft and violates UNLV's academic honor system. Students who appear to break these rules will be investigated by the University for misconduct.

**Copyright:** The University requires all members of the University Community to familiarize themselves with and 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 nor defend you, nor assume any responsibility for student or employee violations of fair use laws. Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. **All materials provided to you in this course are copyrighted. None of the course materials may be reproduced, distributed, or**

transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without prior written permission. Additional [copyright policy information](#) is available at <https://www.unlv.edu/provost/copyright>.

**Accessibility:** The [UNLV Disability Resource Center](#) (Campus Resource Center (CRC), across Harmon from the Lied Library, <https://www.unlv.edu/drc>, telephone 702-895-0866) provides resources for students with disabilities. If you have not already done so, you will need to register with the Disability Resource Center, the office responsible for coordinating accommodations and services for students with disabilities. For more information visit SSC-A 143, <http://drc.unlv.edu/> or call 702-985-0866. Accommodations include learning disabilities, attention deficit disorder, psychological, physical, emergency medical information, or special arrangements in case the building must be evacuated. **If you are registered with the UNLV Disability Resource Center, email your professor, or bring your Academic Accommodation Plan from the DRC to the professor during office hours** so that we may work together to develop strategies for implementing the accommodations to meet both your needs and the requirements of the course. Any information you provide is private and will be treated as such. Please note that if you approach the instructor in front of others to discuss your accommodation needs, you are accepting that there may be a resulting breach of privacy.

**Undocumented Student Support:** Immigration is a complex phenomenon with broad impact—those who are directly affected by it, as well as those who are indirectly affected by their relationships with family members, friends, and loved ones. If your immigration status presents obstacles to engaging in specific activities or fulfilling specific course criteria, please request support from the Undocumented Student Program (USP). The Undocumented Student Program offers support services and coordinates resource access for undocumented students (with and without DACA) as well as students from mixed-status families. To learn more, visit [unlv.edu/diversity/undocumented](http://unlv.edu/diversity/undocumented) ([Links to an external site.](#)).

**Land Acknowledgement:** The University of Nevada, Las Vegas wishes to acknowledge and honor the Indigenous communities of this region, and recognize that the university is situated on the traditional homelands of the Nuwu or Nuwuvi, Southern Paiute People, descendants of the Tudu, or Desert People. We offer gratitude for the land itself, for those who have stewarded it for generations, and for the opportunity to study, learn, work, and be in community with this land.

**988 FREE 24/7 SUICIDE & CRISIS LIFELINE:** In addition to campus resources such as the [Counseling and Psychological Services \(CAPS\)](#) website at <https://www.unlv.edu/caps>, visiting the [YOU@UNLV website](https://you.unlv.edu/) at <https://you.unlv.edu/>, and [Early Alert](#) (for graduate students, at <https://www.unlv.edu/graduatecollege/academy/early-alert>), you may now call or text 988 or [chat at 988lifeline.org](https://988lifeline.org) if you or someone you know is in crisis and in need of support.

For **additional policies**, please see the following [University Policies](#) listed on <https://www.unlv.edu/policies/additional> in the Executive Vice President and Provost section, under Academic Semester Memos.

Date	Topic	Readings
Week 1		Chapter 1
16-Jan	<b>Monday No class - MLK day</b>	
	Introduction to Paleontology	
Week 2		Chapter 2
23-Jan	Stratigraphy	
Week 3		Chapter 5
30-Jan	Fossil Preservation	
Week 4		Chapter 7
6-Feb	Evolution, Taxonomy, and Cladistics	
	<b>Wednesday - EXAM 1</b>	
Week 5		Chapter 4
13-Feb	Paleoecology	
Week 6		Chapter 9
20-Feb	<b>Monday No Class – Presidents’ Day</b>	
	Early Life	
Week 7		Chapter 10
27-Feb	Microfossils	
Week 8		Chapter 11
6-March	Early Animals	
	<b>Wednesday – EXAM 2</b>	
Week 9		Chapter 12
13-March	<b>No Class – Spring Break</b>	
Week 10		
20-March	Porifera and Cnidaria	Chapter 13
Week 11		
27-March	Brachiopods and Bryozoans	Chapter 14
Week 12		
3-April	Mollusks	
Week 13		Chapter 15
10-April	Arthropods	
	<b>Wednesday – EXAM 3</b>	
Week 14		Chapter 16
17-April	Echinoderms	
Week 15		Chapter 6
24-April	Form and Function	
Week 16		TBA
1-May	Extinction	

**FINAL EXAM – Wednesday May 10<sup>th</sup> 10:10am -12:10pm**