

GY401W: Invertebrate paleontology

Spring 2024

Instructor

Dr. Benjamin J. Linzmeier

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Preferred contact: Canvas LMS messages

Office Hours: 10:00 am - 12:00 pm MW

1:00 - 3:00 pm T

Office: Life Science Building room 344

Correspondence policy: Within 24 hours on weekdays; 48 hours on weekends

Class information

Classroom: ELCSB 0119

Class Hours: 9:30 - 10:45 am TTh

Course description

What can studying the history of Earth tell us about the future and the present? In this course we will walk through major events in the history of our planet and dive into the processes and peculiarities that caused them. We will connect these events to places that matter to us and learn about how their occurrence shapes life today. By the end of the semester you will have a broad understanding of the science of Geology and its application to studying how the Earth works.

Important Dates

August 29th - Last day to drop without WD

October 10th - Midterm

November 3rd - Last day to drop or withdraw. See the [Academic Calendar](#) for more information.

December 14th - Final 10:30 am - 12:30 pm

Course goals

1. Explain and apply the scientific method as it is practiced in the Geosciences.
2. Link observations of the Earth on multiple scales to the development of theories.
3. Identify common invertebrate fossils.
4. Describe a broad history of the Earth.
5. Link Geological History to current landscapes, biology, and climate.

Class textbook

We will be reading a book written for a general audience this semester. It has fewer figures than a textbook, but a better narrative. It is also less expensive.

Hazen, Robert M. **The Story of Earth: The First 4.5 Billion Years, from Stardust to Living Planet.** Reprint edition. Penguin Books, 2013.

Lectures and papers

Both lecture slides and supplemental readings will be available via Canvas. Slides will generally be posted shortly before lecture.

Tophat

We will be using Tophat to facilitate active learning during class. It is relatively inexpensive and can be used in other classes as well. If you encounter a hardship in activating it, please let me know as soon as possible.

Canvas

We will be using Canvas for quizzes, discussions, and your gots-and-nots. These will be organized into weekly modules. New discussion posts will be available on Saturday and quizzes for the previous week will be due on Saturday. Quizzes will be accessible Thursday afternoon.

Table 1: Course Schedule.

Date	Class	Lecture	Reading
2023-08-22	1	Introduction	Introduction
2023-08-24	2	Earth History as Science	
2023-08-29	3	The Universe	Birth
2023-08-31	4	The Earth, broadly	
2023-09-05	5	Hadean and Archean	Blue Earth
2023-09-07	6	Archean Eon	
2023-09-12	7	Evolution 1	Living Earth
2023-09-14	8	Evolution 2	
2023-09-19	9	Proterozoic Geology 1	Red Earth
2023-09-21	10	Proterozoic Geology 2	
2023-09-26	11	Proterozoic Life 1	The 'Boring' Billion
2023-09-28	12	Proterozoic Life 2	
2023-10-03	13	Common Cause	White Earth
2023-10-05	14	Paleozoic Geology 1	
2023-10-10	15	Midterm Review	
2023-10-17	16	Midterm	TBD
2023-10-19	17	Paleozoic Geology 2	
2023-10-24	18	Paleozoic Life 1	Green Earth
2023-10-26	19	Paleozoic Life 2	
2023-10-31	20	Mesozoic Geology 1	TBD
2023-11-02	21	Mesozoic Geology 2	
2023-11-07	22	Mesozoic Life 1	TBD
2023-11-09	23	Mesozoic Life 2	
2023-11-14	24	Cenozoic Geology 1	TBD
2023-11-16	25	Cenozoic Geology 2	
2023-11-21	26	Cenozoic Life 1	TBD
2023-11-28	27	Cenozoic Life 2	
2023-11-30	28	Models in Earth Science	TBD
2023-12-05	29	Climate and the future 1	The Future
2023-12-07	30	Climate and the future 2	

Student conduct

Attendance policy

Students who complete less than 50% of assignments/exams will be assigned a failing (F) grade. Review the 'Attendance and Absences Policy', in the Undergraduate and Graduate Bulletin for attendance and absences policy.

Lectures can be attended in person or via Zoom. Recordings will be made available by request.

Grading

Late policy

I will be grading assignments in batches to provide fair assessment to everyone. This means late work can be disruptive. The penalty for late work will be 20% a day after the first 24 hours late. If you have a reason (illness, etc.) the late policy will be relaxed.

Dropped grades

Two weeks worth of your lowest scores will be dropped at the end of the semester. This means that the lowest two quiz scores, discussion posts, and Tophat questions will be removed when calculating your final grade.

Extra credit

Extra credit may be made available throughout the semester at my discretion.

Assignments will be returned within a week of submission.

Grade	Range
A	90-100 %
B	80-89 %
C	70-79 %
D	60-69 %
F	< 60 %

Assignment weighting will follow:

Item	Weight	Graded
Discussion posts	25 %	Effort
Gots and notes	10 %	Completion
Tophat questions	15 %	Completion (80%)/Correct (20%)
Weekly Quizzes	25 %	Correct
Midterm Exam	10 %	Correct
Final Exam	15 %	Correct

Academic disruption policy

The University of South Alabama's policy regarding Academic Disruption is found in The Lowdown, the student handbook. <http://www.southalabama.edu/lowdown/academicdisruption.shtml>. Disruptive academic behavior is defined as individual or group conduct that interrupts or interferes with any educational activity or environment, infringes upon the rights and privileges of others, results in or threatens the destruction of property and/or is otherwise prejudicial to the maintenance of order in an academic environment. At all times students will be cordial, courteous and respectful of faculty members and fellow students. Cell phones, videotaping, and other electronic devices are not allowed; however, you may use a laptop for note taking. If your laptop is used for other purposes, the instructor holds the right to revoke laptop use.

Academic honesty

The University of South Alabama's policy regarding Student Academic Conduct Policy is found in The Lowdown <http://www.southalabama.edu/lowdown/academicconductpolicy.shtml>: The University of South Alabama is a community of scholars in which the ideals of freedom of inquiry, freedom of thought, freedom of expression, and freedom of the individual are sustained. The University is committed to supporting the exercise of any right guaranteed to individuals by the Constitution and the Code of Alabama and to educating students relative to their responsibilities.

Violation of academic conduct policy may result in receiving 0 credit for the affected exam/assignment.

Do not pass others work off as your own. This constitutes plagiarism and seriously undermines your education. Students may learn about the meaning of plagiarism and how to avoid it at the following link: <http://www.southalabama.edu/univlib/instruction/plagiarismforstudents.html>

Course and Teacher evaluation

Student input for the purpose of course improvement is taken very seriously and will potentially be done periodically. Please take the time to evaluate this course and the instructor, especially at the end of the semester. Evaluations will in no way affect your grade.

Safety

Building Safety

Fire

Random fire safety drills may occur during the course of the term. You will be expected to evacuate the building and assemble at the designated location: outside by the northeast corner of the building (follow your instructor).

Tornado

Move away from external windows to the hallway in the basement, first, or second floor.

Active Shooter Incident

"Get Out" of the building as long as they can do so safely. Once you have exited the building and are at a safe location, "Call Out" to law enforcement using 911, USA Police at 460-6312, or press the Emergency button on your LiveSafe Mobile Safety App. If you can't get out, "Shelter in Place" in a secure location that is away from windows and doors, preferably a location that can be locked and barricaded.

Campus resources

COVID policy

While on campus, students are required to follow all USA COVID-19 policies and practices. These policies can be found at <https://www.southalabama.edu/coronavirus/>. Be advised that policies may change during the semester, and students should check the University's Coronavirus Update page regularly.

There is also a student incentive program for getting vaccinated. Details about incentives can be found at <https://www.southalabama.edu/coronavirus/vaccineincentive/>

Writing center

Over the course of this semester, seek help at the Writing Center if you would like additional guidance and critique. You can access the Writing Center at [at their website](#). During graduate school, I found workshops and writing groups at the Writing Center on campus to be helpful in building my motivation and teaching me new strategies for writing efficiently.

Disabilities

In accordance with the Americans with Disabilities Act, students with bona fide disabilities will be afforded reasonable accommodations. The Office of Special Student Services (OSSS) will certify a disability and advise faculty members of reasonable accommodations. If you have a specific disability that qualifies you for academic accommodations, please notify the instructor/professor and provide certification from the Office of Special Student Services. OSSS is located at 5828 Old Shell Road at Jaguar Drive, (251-460-7212).

Food insecurity

If you are subject to food insecurity, JagPantry provides a food for students needing assistance. More information can be found [on their website](#)

Mental health

Being a university student is stressful and can negatively impact mental health. The University Counseling and Testing Center provides confidential, free counseling and crisis intervention services to eligible USA students and consultation and outreach services to members of the USA community. More information can be found [at their website](#).

Disaster plan

In case of Hurricane we will follow university recommendations and off-campus accommodations will be made. Our broad goals for the semester will continue but mode of delivery and content may change.

In case of a shift to remote learning, we will heavily rely on Canvas. We will have at least one synchronous lecture meeting that will be recorded and made available through Canvas. We will use digital options for rock samples and may also use [Rockd.org](https://rockd.org) for local outcrop locations if we are dispersed.

Final thoughts

This document is a roadmap for our semester. We learn about the Earth together and our individual experiences shape how we interpret and value data. Like all your classes, you will get out what you put into this course. Asking for help from one another and your instructors is important, don't be afraid to ask a question about something you don't know or if you want to check your knowledge about something you think you know.

If this document is updated, a copy will be supplied to you via Canvas and changes will be announced in class.