

# GLY2100C - Historical Geology

## GLY2100C – Historical Geology

Course Information Spring 2023

**Dr. Joseph Meert**

**Credits: 4**

**Pre-requisites:** Physical Geology GLY2010C, Environmental and Engineering Geology GLY 2030C or instructor permission.

**Room/Time:** Williamson 202 Tuesday Periods 4-5 (10.40am-12.35pm) and Thursday Period 5 (11.45am-12.35pm).

**Special Notice:** Exams will be scheduled 2 weeks in advance along with the study guide. Exams are given on Tuesdays to take advantage of the 2 hour block.

**Office Hours:** TBD jmeert@ufl.edu

**Office:** Williamson 361 or 112 Wm (Neil Opdyke Laboratory). I will let you know which one on the office hour days.

**Email:** [jmeert@ufl.edu](mailto:jmeert@ufl.edu) (<mailto:jmeert@ufl.edu>)

**Lab Syllabus/Schedule:** [Coming Shortly \(https://ufl.instructure.com/courses/470919/files/74679086?wrap=1\)](https://ufl.instructure.com/courses/470919/files/74679086?wrap=1)

**Lab Instructor:** Ananya Singha

**Office Hours:** TBD

**Office:** Williamson Room 274

**Email:** [singha.ananya@ufl.edu](mailto:singha.ananya@ufl.edu) (<mailto:scottrimiller@ufl.edu>)

**Lab Room:** Williamson Hall Rm 215.

**Suggested Text:** *Evolution of the Earth* by Prothero & Dott. Not required as all test questions come from the lecture.

### Course Description:

Evolution of the earth and its life, including the major physical events and evolutionary changes recorded in the geologic past.

### Course Objectives:

1. Review key introductory geological concepts including: plate tectonics, evolution, stratigraphy.
2. Review/introduce the scientific method and how this is applied in gathering geological evidence. Develop skills for observing, interpreting and analyzing the rock record to tell the geological story.
3. Travel through geological time to understand how major geological events in Earth's history are reflected and recorded in the rock record and the modern landscape.
4. Be able to apply geological skills, knowledge and understanding of key concepts to decide how to approach an unknown area to discover its geological history.
5. Improve communication in a team and life-long learning skills.
6. Learn (memorize) Geological Time Scale (No dates/no rates)
7. The **primary goal** for this course is for you to be able to observe, interpret and analyze the rock record to understand geological history as recorded in crustal rocks.

**CANVAS:** All course announcements, assignments and exercises will be posted to the Canvas website. Your grades will also be updated on the Canvas website. If you fail to check CANVAS, you may not use that as an excuse for a late/absent assignment.

### Expectations:

**Cell Phones/Laptops:** I expect each of you to read this [article \(https://www.technologyreview.com/s/614934/teenagers-without-cell-phones/?utm\\_campaign=site\\_visitor.unpaid.engagement&utm\\_source=email&utm\\_medium=social\\_share&utm\\_content=2019-12-30\)](https://www.technologyreview.com/s/614934/teenagers-without-cell-phones/?utm_campaign=site_visitor.unpaid.engagement&utm_source=email&utm_medium=social_share&utm_content=2019-12-30) before the first

**class.** Cell phones/laptops are not really necessary for this course unless otherwise indicated. Your attention/engagement is more important.

I will put considerable effort into this class and therefore, I expect the same from you. It is vitally important that you understand all the major concepts covered. This is an important class for developing geological thinking– you must keep up with readings, class assignments and lab assignments. It will be **impossible to catch up**. I want you to succeed and I am willing and available to help, but I cannot help unless you **ASK FOR HELP**. Please come to me as soon as you start falling behind. If you come to me the day before the final exam it will be too late.

#### **Class Participation:**

Class participation is very important – you should be actively engaged in answering questions and listening to other answers given. You are also expected to ask questions during class about topics you do not understand. There will always be several other students who will benefit from you asking a question. The more engaged you are, the more you will get out of this class. There will be team-based class activities and peer review will form part of your class participation grade.

#### **Attendance/Absences:**

You are expected to attend **ALL** classes and labs and do the assigned readings. There is a strong positive correlation between attendance and final grade. Attendance will be taken at random times and will form part of your class participation grade. If you are going to be absent you need to email me **BEFORE** the scheduled class time and provide a subsequent written excuse from a doctor (for illness) or family member (for a death in the family). I expect you to be **on-time** to every class. I understand that sometimes lateness is unavoidable. If you are late on a test day you will not be given extra time.

#### **Late Work:**

Assignments will be due **before** class unless otherwise stated. I will accept late work up to three working days (M-F) after the original deadline with a deduction of 10% for each day i.e. if your work is graded at 90% and it is 3 days late you will received a grade of 60%. After this, NO late work will be accepted. You will lose 5% if you hand it in late on the date due, but before 5pm. Penalties will be determined by 5pm each day. If you have a written excuse from a doctor (for illness) or family member (for a death in the family) AND let me know within a week of the assignment being due, you will not be penalized for late work as long as it is handed in by a re-scheduled date. Make-up exams are highly discouraged, but will be granted if a written excuse is provided.

#### **Etiquette, Disabilities, Cheating:**

All students are expected to adhere to the student honor code (<http://www.dso.ufl.edu/judicial/honorcode.php>). Cheating and plagiarism will not be tolerated. No texting, calling, radios, MP3 players, emailing or social media play during class. I will deduct points from your class participation for persistent offenders! Please show courtesy to our instructors and classmates by turning up on-time and leaving on-time (not early) and avoiding unnecessary disturbances during class. *Students with disabilities requesting classroom accommodation should contact the instructors as soon as possible to discuss appropriate accommodations.* The Dean of Students Disability Resource Center website is <http://www.dso.ufl.edu/drc> (<http://www.dso.ufl.edu/drc>).

#### **Assessment and Grade Weighting:**

See the grade weighting listed below. Each exam is 14.99% of your grade and the exams are non-cumulative although each assumes you've mastered the concepts previously addressed.

Geological Time Scale: Part of the 'pop' quiz score will be how well you know the geological time scale available [here](https://ufl.instructure.com/courses/470919/files?preview=74918906) (<https://ufl.instructure.com/courses/470919/files?preview=74918906>) . (<https://www.geosociety.org/documents/gsa/timescale/timescl.pdf>)

#### Grading Criteria:

Three major performance areas will determine your grade: **Individual Performance, Team Performance, Class Participation and Labs.**

#### Grade Weights:

1. <b>Exams (3 exams 14.99% each)</b>	<b>44.97%</b>
1. <b>Pop Quizzes/In class stuff</b>	<b>25.03%</b>
2. <b>Labs</b>	<b>30%...</b>
	<b>Total: 100%</b>

#### Determination of Final Grades:

Raw scores will be weighted according to the grade weights for each performance area as set out in the grade weighting section including the decisions made by the class online survey. Final course grade will be based on an individual's standing in the overall distribution of total

individual scores in the class. There is no limit to the number of A's earned in this class, but the mean grade will be placed in the B category. There will be no down grading. Letter grades are as follows:

A=92% or above, A-= 89-91.9%, B+=86-88.9%, B=82-85.9%, B-=79-81.9%, C+=76-78.9%, C=72-75.9%, C-=69.5-71.9%, D+=67-69.4%, D=63-66.9%, D-=60-62.9%, E=<60%.

**Syllabus is subject to change – including the number of assignments and grading.**

**Course Schedule (Extremely Flexible!).** This course moves as quickly/slowly as required. Sometimes we get hung up on a certain topic and that's fun. Othertimes, we move quickly.

<b>Week #</b>	<b>Topic</b>	<b>Suggested Reading</b>
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1	Science/Philosophy : BAD Science vs good	None
2	Basic Concepts/Review of Intro Course	Chapter 2,3,7
3	Time, Relative and Absolute	Chapters 1,4 &5
4.	Origin/Evolution of the Earth	Chapter 6

**EXAM 1- Covering the above topics**

5.	Precambrian #1	Chapter 8
6.	Precambrian #2	Chapter 9
7.	Evolution and Early Life	Chapter 9
8.	Early Paleozoic/Sauk Sequence	Chapter 10

**EXAM 2- Covering the above topics**





9.	Late Ordovician	Chapter 11
10.	Middle Paleozoic	Chapter 12
11.	Late Paleozoic	Chapter 13
12.	Why life goes extinct	None

**Exam 3-Covering the above topics**

13.	Mesozoic Life-1	Chapter 14
14.	Mesozoic Life-2	Chapter 14
15.	Cenozoic and Hominids	Chapters 15,16
16.	Summary	None

**Final Exam-Optional, but cumulative and can replace lowest exam grade**

## Tentative Lab Schedule:












<b>Date</b>	<b>Details</b>	
Fri Jan 10, 2020	 <a href="https://ufl.instructure.com/courses/394498/assignments/4090267">SURVEY (https://ufl.instructure.com/courses/394498/assignments/4090267)</a>	due by 11:59pm
Mon Jan 13, 2020	 <a href="https://ufl.instructure.com/courses/394498/assignments/4099034">Lab 1- How do Geologists study Geology? (Written Report) (https://ufl.instructure.com/courses/394498/assignments/4099034)</a>	due by 4pm
Tue Jan 21, 2020	 <a href="https://ufl.instructure.com/courses/394498/assignments/4135531">Quiz 1 (https://ufl.instructure.com/courses/394498/assignments/4135531)</a>	due by 1pm
Mon Feb 10, 2020	 <a href="https://ufl.instructure.com/courses/394498/assignments/4141566">Lab 5 Mineral Evolution (https://ufl.instructure.com/courses/394498/assignments/4141566)</a>	due by 1:55pm











Date	Details	
	<a href="https://ufl.instructure.com/courses/394498/assignments/4145270">📄 Lab 6- Miller-Urey Experiment</a> <a href="https://ufl.instructure.com/courses/394498/assignments/4145270">https://ufl.instructure.com/courses/394498/assignments/4145270</a>	due by 2:15pm
	<a href="https://ufl.instructure.com/courses/394498/assignments/4138772">📄 Lab 4 Rock Evolution Pt. 2</a> ( <a href="https://ufl.instructure.com/courses/394498/assignments/4138772">https://ufl.instructure.com/courses/394498/assignments/4138772</a> )	due by 11:59pm
Tue Feb 18, 2020	<a href="https://ufl.instructure.com/courses/394498/assignments/4146938">📄 Exam1</a> ( <a href="https://ufl.instructure.com/courses/394498/assignments/4146938">https://ufl.instructure.com/courses/394498/assignments/4146938</a> )	due by 11:59pm
Mon Mar 30, 2020	<a href="https://ufl.instructure.com/courses/394498/assignments/4171476">📄 Lab 10- Mesozoic Life Activity</a> <a href="https://ufl.instructure.com/courses/394498/assignments/4171476">https://ufl.instructure.com/courses/394498/assignments/4171476</a>	due by 1:50pm
Tue Mar 31, 2020	<a href="https://ufl.instructure.com/courses/394498/assignments/4171394">📄 Assignment #1-Covid Interval</a> <a href="https://ufl.instructure.com/courses/394498/assignments/4171394">https://ufl.instructure.com/courses/394498/assignments/4171394</a>	due by 11:59pm
Mon Apr 6, 2020	<a href="https://ufl.instructure.com/courses/394498/assignments/4178524">📄 Exam 2-Part 2</a> ( <a href="https://ufl.instructure.com/courses/394498/assignments/4178524">https://ufl.instructure.com/courses/394498/assignments/4178524</a> )	due by 11:59pm
Mon Apr 13, 2020	<a href="https://ufl.instructure.com/courses/394498/assignments/4185952">📄 Lab 11- Extinctions, a mollusk based activity</a> <a href="https://ufl.instructure.com/courses/394498/assignments/4185952">https://ufl.instructure.com/courses/394498/assignments/4185952</a>	due by 1pm
Mon Apr 20, 2020	<a href="https://ufl.instructure.com/courses/394498/assignments/4165242">📄 Lab 9- Geography of Phanerozoic Geology using Google Earth (GPGuGE)</a> ( <a href="https://ufl.instructure.com/courses/394498/assignments/4165242">https://ufl.instructure.com/courses/394498/assignments/4165242</a> )	due by 5pm
Fri Apr 24, 2020	<a href="https://ufl.instructure.com/calendar?event_id=1410659&amp;include_contexts=course_394498">📅 University of Florida GatorEvals – Spring 2020</a> <a href="https://ufl.instructure.com/calendar?event_id=1410659&amp;include_contexts=course_394498">https://ufl.instructure.com/calendar?event_id=1410659&amp;include_contexts=course_394498</a>	11:59pm
Fri May 1, 2020	<a href="https://ufl.instructure.com/courses/394498/assignments/4199055">📄 Exam 3, Part 2</a> ( <a href="https://ufl.instructure.com/courses/394498/assignments/4199055">https://ufl.instructure.com/courses/394498/assignments/4199055</a> )	due by 11:59pm
	<a href="https://ufl.instructure.com/courses/394498/assignments/4189316">📄 Exam 3-part 1</a> ( <a href="https://ufl.instructure.com/courses/394498/assignments/4189316">https://ufl.instructure.com/courses/394498/assignments/4189316</a> )	due by 11:59pm
	<a href="https://ufl.instructure.com/courses/394498/assignments/4162081">📄 Lab 7- Introduction to trilobite morphology</a> <a href="https://ufl.instructure.com/courses/394498/assignments/4162081">https://ufl.instructure.com/courses/394498/assignments/4162081</a>	
	<a href="https://ufl.instructure.com/courses/394498/assignments/4139015">📄 Lab 2- Geologic Maps, Cross Sections &amp; Structure Contours</a> ( <a href="https://ufl.instructure.com/courses/394498/assignments/4139015">https://ufl.instructure.com/courses/394498/assignments/4139015</a> )	
	<a href="https://ufl.instructure.com/courses/394498/assignments/4134633">📄 Lab 3- Geologic Maps Exercise</a> <a href="https://ufl.instructure.com/courses/394498/assignments/4134633">https://ufl.instructure.com/courses/394498/assignments/4134633</a>	
	<a href="https://ufl.instructure.com/courses/394498/assignments/4139703">📄 Lab 4- Rock Evolution Pt 1, Rock ID</a> <a href="https://ufl.instructure.com/courses/394498/assignments/4139703">https://ufl.instructure.com/courses/394498/assignments/4139703</a>	
	<a href="https://ufl.instructure.com/courses/394498/assignments/4166270">📄 Lab 8- Paleozoic Life</a> ( <a href="https://ufl.instructure.com/courses/394498/assignments/4166270">https://ufl.instructure.com/courses/394498/assignments/4166270</a> )	

January 2021						
27	28	29	30	31	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

Course assignments are not weighted.

## Course Summary:

Date	Details	Due
Tue Jan 10, 2023	 <b>In Class Assignment: Small Groups</b> <a href="https://ufl.instructure.com/courses/470919/assignments/5516163">https://ufl.instructure.com/courses/470919/assignments/5516163</a>	due by 12:35pm
	 <b>Lab 1- How is geologic research conducted?</b> ( <a href="https://ufl.instructure.com/courses/470919/assignments/5479675">https://ufl.instructure.com/courses/470919/assignments/5479675</a> )	
	 <b>Lab 10- Paleozoic Life</b> <a href="https://ufl.instructure.com/courses/470919/assignments/5479671">https://ufl.instructure.com/courses/470919/assignments/5479671</a>	
	 <b>Lab 11- Mesozoic Life</b> <a href="https://ufl.instructure.com/courses/470919/assignments/5479672">https://ufl.instructure.com/courses/470919/assignments/5479672</a>	
	 <b>Lab 12- KT Extinction</b> <a href="https://ufl.instructure.com/courses/470919/assignments/5479673">https://ufl.instructure.com/courses/470919/assignments/5479673</a>	
	 <b>Lab 13- Hominin Skull Activity</b> <a href="https://ufl.instructure.com/courses/470919/assignments/5479674">https://ufl.instructure.com/courses/470919/assignments/5479674</a>	
	 <b>Lab 2- Geologic Maps, Cross-Sections, and Structure Contours</b> ( <a href="https://ufl.instructure.com/courses/470919/assignments/5479676">https://ufl.instructure.com/courses/470919/assignments/5479676</a> )	
	 <b>Lab 3- Geologic Maps and Geologic Structures: A Texas Example</b> <a href="https://ufl.instructure.com/courses/470919/assignments/5479677">https://ufl.instructure.com/courses/470919/assignments/5479677</a>	
	 <b>Lab 4- Rock Identification</b> <a href="https://ufl.instructure.com/courses/470919/assignments/5479678">https://ufl.instructure.com/courses/470919/assignments/5479678</a>	
	 <b>Lab 5- Rock and Mineral Evolution</b> <a href="https://ufl.instructure.com/courses/470919/assignments/5479679">https://ufl.instructure.com/courses/470919/assignments/5479679</a>	
	 <b>lab 6: Life on Earth</b> ( <a href="https://ufl.instructure.com/courses/470919/assignments/5479680">https://ufl.instructure.com/courses/470919/assignments/5479680</a> )	

Date	Details	Due
	 <a href="https://ufl.instructure.com/courses/470919/assignments/5479681">Lab 7- Introduction to paleontology</a> ( <a href="https://ufl.instructure.com/courses/470919/assignments/5479681">https://ufl.instructure.com/courses/470919/assignments/5479681</a> )	
	 <a href="https://ufl.instructure.com/courses/470919/assignments/5479682">Lab 8- Geography of Phanerozoic Geology using Google Earth (GPGuE)</a> ( <a href="https://ufl.instructure.com/courses/470919/assignments/5479682">https://ufl.instructure.com/courses/470919/assignments/5479682</a> )	
	 <a href="https://ufl.instructure.com/courses/470919/assignments/5479684">Lab 9- Precambrian Interview</a> ( <a href="https://ufl.instructure.com/courses/470919/assignments/5479684">https://ufl.instructure.com/courses/470919/assignments/5479684</a> )	
	 <a href="https://ufl.instructure.com/courses/470919/assignments/5479685">Roll Call Attendance</a> ( <a href="https://ufl.instructure.com/courses/470919/assignments/5479685">https://ufl.instructure.com/courses/470919/assignments/5479685</a> )	
	 <a href="https://ufl.instructure.com/calendar?event_id=2684843&amp;include_contexts=course_470919">University of Florida GatorEvals – Spring 2021</a> ( <a href="https://ufl.instructure.com/calendar?event_id=2684843&amp;include_contexts=course_470919">https://ufl.instructure.com/calendar?event_id=2684843&amp;include_contexts=course_470919</a> )	
	 <a href="https://ufl.instructure.com/calendar?event_id=2684844&amp;include_contexts=course_470919">University of Florida GatorEvals – Spring 2021</a> ( <a href="https://ufl.instructure.com/calendar?event_id=2684844&amp;include_contexts=course_470919">https://ufl.instructure.com/calendar?event_id=2684844&amp;include_contexts=course_470919</a> )	
	 <a href="https://ufl.instructure.com/calendar?event_id=2684845&amp;include_contexts=course_470919">University of Florida GatorEvals – Spring 2021</a> ( <a href="https://ufl.instructure.com/calendar?event_id=2684845&amp;include_contexts=course_470919">https://ufl.instructure.com/calendar?event_id=2684845&amp;include_contexts=course_470919</a> )	
	 <a href="https://ufl.instructure.com/calendar?event_id=2684846&amp;include_contexts=course_470919">University of Florida GatorEvals – Spring 2021</a> ( <a href="https://ufl.instructure.com/calendar?event_id=2684846&amp;include_contexts=course_470919">https://ufl.instructure.com/calendar?event_id=2684846&amp;include_contexts=course_470919</a> )	
	 <a href="https://ufl.instructure.com/calendar?event_id=2684847&amp;include_contexts=course_470919">University of Florida GatorEvals – Spring 2021</a> ( <a href="https://ufl.instructure.com/calendar?event_id=2684847&amp;include_contexts=course_470919">https://ufl.instructure.com/calendar?event_id=2684847&amp;include_contexts=course_470919</a> )	
	 <a href="https://ufl.instructure.com/calendar?event_id=2684848&amp;include_contexts=course_470919">University of Florida GatorEvals – Spring 2021</a> ( <a href="https://ufl.instructure.com/calendar?event_id=2684848&amp;include_contexts=course_470919">https://ufl.instructure.com/calendar?event_id=2684848&amp;include_contexts=course_470919</a> )	