

GLY2100C – Historical Geology

Course Information Spring 2025

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 at beginning of semester

Office: Williamson 361.

Email: jmeert@ufl.edu

Cell Phone: 352-870-4642

Lab Syllabus/Schedule:

[Coming Shortly](#)

Lab Instructor: Samuel Kwafo

Office Hours: TBD at beginning of semester

Office: Williamson 253

Email: skwafo@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. This is a useful, but absolutely not required textbook. It is available in the library

Course Description:

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

Course Objectives (Tied to Student Learning Outcomes-SLO's):

1. Review key introductory geological concepts including: plate tectonics, evolution, stratigraphy ([SLO1, 2, 3, 5, 6](#))

🔗 [Links to an external site.](#)).

🔗 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. (SLO1, 2, 3,5

🔗 [Links to an external site.](#))

🔗 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. (SLO1, 2, 3, 4, 6

🔗 [Links to an external site.](#))

🔗 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 (SLO 5, 6

🔗 [Links to an external site.](#)).

🔗 Improve communication in a team and life-long learning skills (SLO7

🔗 [Links to an external site.](#)).

🔗 Learn (memorize) Geological Time Scale (No dates/no rates)

🔗 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 (SLO1, 2, 3, 4, 5, 6

🔗 [Links to an external site.](#)).

🔗 Understand the significance of CRT and DEI in Historical Geology (SLO1, 3

8. [Links to an external site.](#)).

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 \(Links to an external site.\)](#) 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.

Communication Development:

This course is also used to help you learn to communicate your science effectively and efficiently. Communicating science is important as you will be asked to write technical reports, communicate your findings to the general public, engage in public speaking as well as preparing meaningful data tables, graphs and presentations. These skills are used in a variety of classroom and lab exercises throughout the semester. ***Many scientific topics that are considered by politicians as 'controversial' (climate change, vaccines, evolution) are not at all controversial amongst the scientific community and when the facts/data are evaluated critically.***

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 receive 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.

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](#). [\(Links to an external site.\)](#)

Grading Criteria:

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

Grade Weights:

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

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.

<u>Week #</u>	<u>Topic</u>	<u>Suggested Reading</u>
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1	Science/Philosophy : BAD Science vs good	Class Discussions and Debates
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:CRT	Chapter 8
6.	Precambrian #2	Chapter 9
7.	Evolution and Early Life :DEI	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 (Subject to Change)

Lab 1- Jan 13-17 Survey Online Completion

Lab 2- Jan 20-24 [How do Geologists Study the Rock Record- Written Report](#)

Lab 3- Jan 27-31: Geological Maps and Cross Sections Part 1: Topo Maps

Lab 4- Feb 3-7: [Geological Maps and Cross Sections Part 2](#)

Lab 5- Feb 10-14: [Mineral Evolution](#): Identify rock forming minerals

Lab 6- Feb 17-21: [Rock Evolution: ID Major Rock Types](#)

Lab 7- Feb 24-28: Plate Tectonics and Supercontinent Evolution

Lab 8- Mar 3-7: Precambrian Life and Climate

Week 10-14- Spring Break No Classes

Lab 9- Mar 17-21: Paleozoic Life and Times

Lab 10- Mar 24-28: Permian Extinction and Mesozoic Life

Lab 11- Mar 31- April 4: Cenozoic Life

Lab 12- Apr 7-11: Visit to FLMNH

Lab 13- Apr 14-18: Hominid Evolution

Lab 14: Lab Final Exam