

INTRODUCTORY HISTORICAL GEOLOGY GEOL102-001 – FALL 2021

Syllabus

Lecture type: ON CAMPUS – INNOVATION HALL 132

Lecture time: Tuesday-Thursday 7:30-8:45 AM

Instructor: Dr. G. Mattietti; **E-mail:** gkysar@gmu.edu

Office Hours: Monday 6-8 PM on campus or by appointment

Instructional Material

- Suggested Textbook: [Earth Through Time](#) by Harold Levin and David T. King Jr. Students need only the textbook, not the ancillary material from the publisher. Cheaper option is to rent the e-book. Used, and/or loose-leaf copies and earlier editions are acceptable
- Pdfs of the lecture-course notes, lecture activities, test and test practice are available to the students through Blackboard*. Notes for each lecture will be posted the day before class.

Course Objectives and Outcomes

Historical geology is a discipline of geology that seeks to understand the history of planet Earth and its life by using stratigraphic principles and the knowledge acquired from paleontology and physical geology. In GEOL 102 is centered on the evolution of the world in which we live, starting from the formation of the solar system. We will consider the hypothesis about the origin of Earth and learn from the geologic evidence of the past and the observation of the present. The course includes an overview of the evolution of the homo species and the search for life on other planets. Throughout the course we will consider the historical development of the fundamental ideas of modern geology.

Students who apply themselves to the study of the course material will gain the foundation requirement of core knowledge of Natural sciences for a better understanding of how science approaches the knowledge of our world.

This course fulfills the [Mason Core Learning Outcomes for Natural Sciences](#)

Therefore, this course will provide students with an understanding that:

1. Scientific inquiry is based on investigation of evidence from the natural world, and that scientific knowledge and understanding: • evolves based on new evidence • differs from personal and cultural beliefs

2. There are scope and limits of science.

Additionally, students will be able to recognize and articulate the relationship between the natural sciences and society and the application of science to societal challenges (e.g., climate change, etc.) and evaluate scientific claim (e.g., distinguish primary and secondary sources, assess credibility and validity of information).

**Lecture powerpoint slides, notes, any course materials, tests, outlines, and similar materials posted on blackboard are protected by U.S. copyright law and/or are intellectual property of the course instructor. You may take notes and make copies of course materials for your own use but you cannot repost on the web or distribute in any format outside the class.*

Course requirements and Grading

GEOL 102 grade is based on the results of 3 equally weighted exams, each non cumulative. All Exams are multiple choice, 50 questions, NO lowest score exam will be dropped.

All exams are taken during class time exclusively. Each exam covers 1/3 of the semester and it is NOT cumulative. There is no final exam, however, exam 3 is taken on the day of the final exams as scheduled by the registrar and will be limited to 75 minutes (since it is not a final exam).

All exams are taken individually. Online exams are available on blackboard through with Respondus lockdown browser. The final grade for GEOL 102 is calculated as follows, with no Exceptions: 33% (1st exam) + 35% (2nd exam) + 32% (3rd exam) =100%.

Grading scale: Final grade is based on the following scale, with no exceptions:

A+ ≥99% and above; A ≥95% to <99%; A- ≥90% to <95%

B+ ≥87% to <90%; B ≥83% to <87%; B- ≥80% to <83%

C+ ≥80% to <75% C ≥70% to <75%; C- ≥65% to <70%

D ≥55% to <65%; F <55%

- No final curve, unless the end-of-semester final average for the whole class (based on all lecture exams and lab scores) falls below 80%
- NO Extra-credit available. During lecture, there will be opportunities to collect additional points by working at active and collaborative learning activities. These points will be added to your exams and will be the sole opportunities for additional course points, provided they are completed during class time. Extra-credit based on individualized assignment will not be granted under any circumstance because it is unfair to the rest of the class.

General Course Policies

You are responsible for reading attentively this syllabus. By staying enrolled in this course, you agree to the following course policies:

- Attendance: not mandatory, but highly recommended. Students must wear a mask during class. See University Policy
- Communications: Email is the official way of communicating with students. Any email from me will come from gkysar@gmu.edu or through blackboard. In accordance with protection of privacy best practices, I will not respond to email sent from non GMU email account. It is your responsibility to make sure that your GMU email is set up properly and to check your email regularly. Your email must have a subject line because emails without subject are filtered as spam mail.
- Class etiquette: All students in attendance have the right to a safe and quiet learning environment. Come to class on time and if you must leave earlier do so in a way that will not disturb your classmates. During class, mute your cell phones. Class disruption of any sort will not be tolerated.
- Extenuating circumstances might occur that prevent you from taking an exam. If such circumstances can be justified, a make-up session will be arranged. Should you realize you cannot take an exam as scheduled, inform the professor immediately. As per GMU policy on religious festivities, you must inform the instructor at the beginning of the semester if you will be absent to an exam if order to schedule a make-up.
- Make up or exams for which no evidence of extenuating circumstance is provided will carry a 15%

penalty.

- Course materials available through blackboard is intended to the sole use of the students enrolled in the class, notes and recording are intellectual property of the instructor and cannot be distributed in any format beyond classroom work.

University policies and resources for students

As a GMU student enrolled in this class, you must be aware of the following:

- Mask Policy <https://www2.gmu.edu/safe-return-campus/personal-and-public-health/face-coverings>
- Privacy: is governed by the [Family Educational Rights and Privacy Act \(FERPA\)](#) and is an essential aspect of this course. Students must use their GMU email account to receive important University information, including communications related to this class. In accordance with FERPA regulation, I will not respond to messages sent from or send messages to a non-GMU email address.
- The Honor Code is an integral part of the educational process, and GMU takes these matters very seriously. Violations of academic integrity occur when students fail to cite research sources properly, engage in unauthorized collaboration, falsify data, cheat during exams and in other ways outlined in the [Honor Code](#). Students accused of academic integrity violations should contact the Office of Academic Integrity to learn more about their rights and options in the process. Outcomes can range from failure of assignment to expulsion from the University, including a transcript notation. The Office of Academic Integrity maintains a permanent record of the violation. For more information, please refer to the [Office of Academic Integrity website](#).
- Be aware of the issues related to the use of study sites, refer to the instruction from the Office of Academic Integrity with important information about study sites. All students are required to watch this video: <https://youtu.be/oKbTrgBCN7c>
- As a faculty member I am required to report all disclosures of sexual assault, interpersonal violence, and stalking to GMU [Title IX Coordinator](#). If you wish to speak with someone confidentially, please contact the Title IX office at <https://diversity.gmu.edu/title-ix/who-can-i-call>
- [Disability Services](#). Any student who may need an accommodation based on the potential impact of a disability should contact Disability Services ods@gmu.edu to establish eligibility and to coordinate reasonable accommodations. IN order to receive accommodation for exams students must submit their DS paperwork before the exam.
- [Counseling and Psychological Services](#) GMU offers counseling and psychological services, supporting mental health and personal development by collaborating directly with students to overcome challenges and difficulties that may interfere with academic, emotional, and personal success.
- [Diversity and Inclusion](#): Faculty, staff and students in this course welcome and value individuals and their differences including race, economic status, gender expression and identity, sex, sexual orientation, ethnicity, national origin, first language, religion, age, and disability.
- Observance of religious holidays. In accordance with University policy, students should notify faculty during the first week of the semester of their intention to be absent from class on their day(s) of religious observance if that should coincide with an exam. For details and policy, see: <https://ulife.gmu.edu/religious-holiday-calendar/>

Course Calendar*

- See Academic Calendar for standard holidays (Labor day, Election day, Thanksgiving dates)
- Notes and reading assignments for each lecture are published on blackboard the day before class

Date	Lecture topic	
Aug 24	Part 1: Principles of historical Geology –Precambrian Earth	The science of historical geology – stratigraphic principles
Aug 26		The sedimentary archives
Aug 31		Themes in historical geology - plate tectonics - Long term climate
Sept 2		Themes in historical geology – deep time
Sept 7		Themes in historical geology – fossils and evolution
Sept 9		The Hadean and the Archaean Early Earth
Sept 14		Proterozoic Geology - Climate
Sept 16		Precambrian Life – The Avalon Fauna
Sept 21		Study Day - Q&A for exam 1
Sept 23		EXAM 1 – online during class time
Sept 28	Part 2: Paleozoic and Mesozoic	Paleozoic Geology – The Making of Pangea
Sept 30		Paleozoic Geology II – Paleozoic Climate
Oct 5		Paleozoic Life – at sea – The Cambrian Explosion. The Burgess Shale
Oct 7		Paleozoic life - the rise of the tetrapods
Oct 14		Paleozoic life – plants.
Oct 19		Mesozoic Geology – the breaking up of Pangea
Oct 21		Mesozoic Life – Marine reptiles
Oct 26		Dinosaurs
Oct 28		Study Day Q&A for exam 2
Nov 2		EXAM 2 – Online during class time
Nov 4	Part 3: Cenozoic geology, Human Origins Life in the Solar system	Cenozoic Geology -1
Nov 9		Cenozoic Geology 2
Nov 11		Cenozoic Climate
Nov 16		Cenozoic Life – Mammals and megafauna
Nov 18		Primates and Human Origins
Nov 23		Early humans – The Anthropocene?
Nov 30		Life in the solar system (online)
Dec 2		Study day - Q&A for exam 3 - online
Dec 14	EXAM 3 – 7:30-AM	

* instructor reserves the right to change lecture topic and order to fit class needs and learning objectives.

Best practices for effective studying of GEOL102

The following are suggestions from tried and true strategy for doing well in this class:

1 – Attend class so you can participate actively; take your own notes, in addition to those posted on blackboard. Engaging with the learning material will help you remember better

2 - For each hour of lecture, spend at least one hour studying on your own. That is an average of 2.5 hours a week. Spread that time during the week. The most effective way to study is to review your class notes on the same day of class.

3 - There is a considerable amount of material to know for GEOL 102, many technical terms and names to remember and fit in the big picture of the understanding of geological processes. It is not wise to count on scoring high on an exam by binge-studying the night before; Mega study sessions tend to result in huge headaches and memory blackouts at exam times. One of the best strategies is to review what you have learned at the end of each week, make note of what is unclear and ask for clarifications at office hours or during lectures during Q&As.

4 – How to know if something is going to be in the exam? All geology topics discussed in class can be in the exam questions. The course will not cover all that is in the book, but all that is in the notes AND has been covered in class can be question material for the exam.

5 - It is a good thing to have questions and doubts as you study, it means your brain is working at understanding and elaborating the knowledge. Ask questions during class as well as take advantage of office hours (it is like free tutoring).

6 - Engage with the topics of geology. Talk about what you learned in class, create study sessions with your classmates, talk about geology with family and friends. Make observations of your surroundings, pay attention when geology-related topics come up in the news. Above all, enjoy learning about your home planet's rich history!