

THE GEOLOGY OF FLORIDA

GLY4155C, COURSE 14739 (SECTION 042H, 3 CREDIT HOURS, SPRING 2020)

INSTRUCTOR: Dr. Matthew Smith

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OFFICE HOURS: Physical and Virtual Office hours (Wm269): Tuesday and Thursday 9:00-11:00 am, Wednesday 1:45-3:15pm. Additionally, *students can contact the instructor by e-mail to schedule an appt. outside of the regularly schedule office hours.*

COURSE WEBSITE: <http://elearning.ufl.edu>

COURSE COMMUNICATIONS: For any class-related questions, students should use the **Course Questions Discussion Forum**. This will benefit all students that might have similar questions. The instructor will regularly answer all questions and participate in this forum. Students should check if the question they have has already been answered in the forum before posting. *Private questions should be sent to the instructor through the course management system, or to instructors .ufl e-mail address (this would include questions about grades, late work, etc.).* Emails will be responded to within 24 hours except on weekends when it may take a little longer.

REQUIRED COURSE MATERIALS: TEXTBOOK: The Geologic History of Florida: Major Events that Shaped the Sunshine State by Albert C. Hine. University Press of Florida Publishers. ISBN 978-0-8130-4421-7.

Additional outside readings will also be assigned (and provided), although in some cases VPN access to the UF libraries may be required.

MATERIALS AND SUPPLIES FEES: There are no material and supply fees for this course.

ADDITIONAL RESOURCES: Access to a basic introductory Physical Geology Text and Historical Geology Text is useful, but not required.

COURSE DESCRIPTION:

In this course the principles of physical and historical geology are applied to the study of the geology and mineral resources of Florida.

The course is comprised of 4 ~3-4-week modules that each investigate a different aspect of Florida's geology. Understanding of basic core knowledge from the core courses in the curriculum (GLY2010C, 2030C or equivalent; GLY2100C or GLY3105C; GLY3202C or equivalent) will be pre-assessed with a course pre-assessment (pre-assessment counts as a completion grade, content will be assessed during the Exam 1). Two in-class exams will assess student understanding of geologic process and the Geology of Florida. Additionally, students write a paper on the geologic history of a place outside of Florida and create a presentation on a geoscience topic. Module Subject Areas are detailed below. All due dates are listed in the course calendar.

Module 1. Basement Geology and Geologic History

Module 2. Surface geology and Cenozoic History

Module 3. Geologic Resources: Solid Earth Materials, Water and Aquifers

Module 4. Regional Geohazards and coastal processes

GENERAL EDUCATION: GLY4155C, The Geology of Florida, is a GenEd physical science (P) course. Physical science courses provide instruction in the basic concepts, theories and terms of the scientific method in the context of the physical sciences. Courses focus on major scientific developments and their impacts on society, science and the environment, and the relevant processes that govern physical systems. Students will formulate empirically-testable hypotheses derived from the study of physical processes, apply logical reasoning skills through scientific criticism and argument, and apply techniques of discovery and critical thinking to evaluate outcomes of experiments.

General Education Program Student Learning Outcomes

Category	Institutional Definition	Institutional SLO
Content	Content is knowledge of the terminology, concepts, methodologies and theories used within the subject area.	Students demonstrate competence in the terminology, concepts, methodologies and theories used within the subject area.
Critical Thinking	Critical thinking is characterized by the comprehensive analysis of issues, ideas, and evidence before accepting or formulating an opinion or conclusion.	Students carefully and logically analyze information from multiple perspectives and develop reasoned solutions to problems within the subject area.
Communication	Communication is the development and expression of ideas in written and oral forms.	Students clearly and effectively communicate knowledge, ideas, and reasoning in written or oral forms appropriate to the subject area.

Physical and Biological Sciences Subject Area Student Learning Outcomes

Content	Critical Thinking	Communication
Identify, describe, and explain the basic concepts, theories and terminology of natural science and the scientific method within the subject area. Identify, describe, and explain the major scientific developments within the subject area and the impacts on society and the environment. Identify, describe, and explain relevant processes that govern biological and physical systems within the subject area.	Formulate empirically-testable hypotheses derived from the study of physical processes or living things within the subject area. Apply logical reasoning skills effectively through scientific criticism and argument within the subject area. Apply techniques of discovery and critical thinking effectively to solve experiments and to evaluate outcomes	Communicate scientific findings clearly and effectively using oral, written and/or graphic forms. Write effectively in several forms, such as research papers and laboratory reports.

This course challenges students to investigate physical, historical, economic and societal aspects of geology. Successful completion of all aspects of this course requires students to demonstrate ability in each of the *Student Learning Outcomes* listed above. Although each of the three content categories for the SLO is important for every aspect of this course, different aspects of your grade address and evaluate each. Reading assignments and course assessments focus on *Content* outcomes, module assignments on *Critical Thinking* outcomes, and the course paper and presentation on *Communication* outcomes (in addition to the other two).

PREREQUISITE KNOWLEDGE AND SKILLS: Students should have completed courses in Physical Geology (GLY2010C, 2030C or the equivalent) and Historical Geology (GLY2100C, GLY3105C or equivalent). Additionally, students should have completed (preferred) or at least be concurrently taking a course in Earth Materials (GLY3202C or equivalent). Additional GLY coursework is of benefit but not essential, so ideally this course should be taken in a student's final year. Students are expected to be proficient with basic computer skills and productivity software (spreadsheets, word processing, presentation software, etc.). Quantitative reasoning, use of a scientific calculator and basic algebra and trigonometry skills are needed for some assignments.

COURSE GOALS AND/OR OBJECTIVES: When you complete this course you will be able to:

- Demonstrate understanding and ability to apply important concepts and skills established as goals in previous geological sciences coursework.
- Demonstrate an understanding of Florida's geologic history and the events and processes that shaped it past and present, and to be able to place that history into context of the relevant global geologic history and events.

- Apply knowledge and skills attained from geological sciences BA degree curriculum coursework to analyze and communicate to others the geologic history and important issues of geologic context as they pertain to a specified region other than Florida.
- Put into practice fundamental data analysis and communication skills necessary to the successful geoscience professional including the ability to work in a group context.
- Demonstrate awareness of different Florida-Related geoscience research topics.

INSTRUCTIONAL METHODS: In this course lecture meetings will utilize team-based learning pedagogy and operate in a basic flipped class format. More information on team-based learning is available via the course canvas site. You will have reading assignments taken from the course text and/or select professional publications in addition to pre-recorded lectures to review prior to the first class meeting of a new topic/module. Module topics will begin with a readiness assurance test (RAT), which is taken both individually and in a team format. Additionally there are written assignments/labs, quizzes and discussion forums or peer review assignments associated with each module.

The course paper requires you to research the geology of an assigned area outside of Florida, and the presentation an issue of geologic relevance to the State of Florida. There are 2 non-comprehensive proctored exams (midterm and final).

COURSE POLICIES:

ATTENDANCE POLICY: Students are expected to attend class regularly and actively participate in class activities. Attendance may be taken at the discretion of the instructor. Attendance and participation comprises 5% of your overall course grade.

REQUIREMENTS: Students are expected to:

- Complete all assignments in a timely fashion.
- Actively participate in all class activities.
- Complete the 2 in-class course exams
- Complete the course paper.
- Check the course announcements and class e-mail at least three times a week.

EXAM DATES/POLICY: There are two non-comprehensive in-class exams each worth 20% of the overall course grade. Details regarding the exam scheduling are provided in the course schedule. Tentatively exam 1 is scheduled for 2/24 and exam 2 is held during Final exam week on 4/30 at 3:00pm.

ASSIGNMENT POLICY: Each module has assignments associated with it (combined 30% of overall grade). Due dates are specified on the course calendar, and timely submission is expected. Assignments must be submitted to Canvas via the assignment page and any instructions detailed therein. Assignments will be graded before the end of the subsequent course module.

DISCUSSION/PEER REVIEW POLICY: Online discussion forums and/or peer review assignments (combined with class participation) account for 10% of overall grade. These are opportunities to explore important issues related to the geology of Florida (and elsewhere). Students are expected to adhere to professional etiquette/netiquette standards (see *UF Policies* below) in all posts and to engage in CONSTRUCTIVE dialogue. Posts are expected to be thoughtful, detailed responses (i.e., "yes," "no," "I agree," or "I disagree" answer is not sufficient). In most cases discussions require some research prior to their initial post. Follow-up posts are typically required. For both discussion forums and peer-review assignments **timeliness is critical** and due dates should be strongly adhered to. Please check the course Calendar for the specific due dates.

COURSE PAPER: Each student will be assigned one of several preselected areas that they will study and report on in the form of a term research paper that details the geologic history of that area. Details are provided on the course paper assignment page. An initial draft must be submitted (see deadlines in course calendar) which will then undergo peer review before revision and submission of the final draft. In total the course paper accounts for 15% of the overall course grade (5% for draft submission, 10% for final paper submission). Peer review assignments for initial submissions contribute to the discussions portion of the course grade.

ATTENDANCE AND PARTICIPATION: This 4000-level course meets twice per week. Regular attendance is expected and your attendance and participation contribute to your overall course grade. Attendance will be randomly taken throughout the term.

LATE WORK AND MAKE-UP POLICY: Assignments may be submitted up to one week late with a penalty of 5% of the score per day late (or fraction thereof). Discussion posts more than one day late may not be accepted (penalty for late submission is integrated into the rubric). A note may be required to make-up any missed exams or work overdue by more than one week.

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

COURSE TECHNOLOGY: Access to and on-going use of a computer is required for all students. Competency in the basic use of a computer is required. Course work will require use of a computer and a broadband connection to the Internet. For additional information on UF College of Liberal Arts and

Sciences policy regarding computer requirements you can visit: <http://it.clas.ufl.edu/policies/student-computer-requirement/>

For technology related issues the UF computing help desk can be reached at: <http://helpdesk.ufl.edu>

- (352) 392-HELP - select option 2

ONLINE COURSE EVALUATION: Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at gatorevals.aa.ufl.edu/public-results/.

UF Policies:

UNIVERSITY POLICY ON ACCOMMODATING STUDENTS WITH DISABILITIES (REQUIRED): Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

UNIVERSITY POLICY ON ACADEMIC CONDUCT: UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

CLASS DEMEANOR OR NETIQUETTE: All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats. UF netiquette guidelines can be found at <http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.pdf>

GETTING HELP:

For issues with technical difficulties for Canvas, please contact the UF Help Desk at:

- <http://helpdesk.ufl.edu>
- (352) 392-HELP (4357)
- Walk-in: HUB 132

Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from the Help Desk when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request a make-up.

Other resources are available at <http://www.distance.ufl.edu/getting-help> for:

- Counseling and Wellness resources
- Disability resources
- Resources for handling student concerns and complaints
- Library Help Desk support

Should you have any complaints with your experience in this course please visit <http://www.distance.ufl.edu/student-complaints> to submit a complaint.

GRADING POLICIES:

Your course grade based on the following categories (percentage breakdown included)

- Proctored Exams: 40%
- Module Assignments and class presentation: 25%
- IRATS and TRATs: 10%
- Discussions and Peer reviews, attendance and participation: 10%
- Paper draft submission: 5%
- Final paper submission: 10%

GRADING SCALE: Grading Scale (& GPA equivalent):

Grade	%	Grade Points		Grade	%	Grade Points
A	≥93	4.0		C	73 – 76	2.0
A-	90 – 92	3.67		C-	70 – 73	1.67
B+	87 – 89	3.33		D+	64 – 66	1.33
B	83 – 86	3.0		D	60 – 63	1.0
B-	80 – 83	2.67		D-	57 – 59	0.67
C+	77– 79	2.33		E	< 56	0

Note: A grade of C- is not a qualifying grade for major, minor, Gen Ed, or College Basic distribution credit. For further information on UF's Grading Policy, see:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx#hgrades>

COURSE SCHEDULE:

CRITICAL DATES: Exams 1: 2/24, Exam2: 4/30 3:00-5:00 pm). Deadlines for all modules and deliverables (assignments, discussions, exams, etc.) are included in the Canvas course schedule.

Disclaimer: This syllabus represents my current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.