GLY4155C-Section 042H, 03 cr. : The Geology of Florida.
Class Meeting: Mon. Periods 7-8 and Wed. Period 7 in Wm 202.

Instructor: Dr .Matthew Smith, 269 Williamson Hall, 392-2106

Office hours: M per 4, W per 4 and 8, F per. 4 and 7 or by appt (or whenever you can catch me)
msmith@geology.ufl.edu

Course Objectives: This course serves as the capstone for students in the Geology B.A. and Environmental Geosciences BA and, as such, it is intended to assess your mastery of the core BA program coursework. Specifically, the objectives of this course are to apply knowledge acquired from the core required Geological Sciences coursework (particularly Physical geology and Historical geology or their equivalents) to the interpretation and understanding of the geology and geologic history of Florida and to continue the development of oral and written communication skills, specifically as they pertain to geological concepts and data. There are several additional objectives to this course including

1. Development in oral and written communication skills, specifically as pertains to geological concepts and data.
2. Experience working in both a group context and individually to produce deliverable products
3. Exposure to current issues and research in the geosciences.
4. Exposure to different potential career possibilities that utilize geologic knowledge.

Course Description: To accomplish the above stated goals this course will employ several different approaches including readings from the course textbook and published geosciences literature (government publications, peer-reviewed journal articles), instructor led classroom lectures , talks by invited speakers/researchers, and attending and summarizing topically relevant seminars on campus (seminars in UF Geology, UF Geography, the Florida Museum of Natural History, and the Water Institute are few of the many possible opportunities).

In addition to lectures and readings students will be assigned several homework assignments comprised of problem sets or data sets to be analyzed and interpreted. As part of this, students will work in a small group setting to prepare and deliver a short topical presentation to the class. Presentation topics will be developed based on the course syllabus and the geosciences (or other relevant) coursework that each student has taken. Potential examples include: preparing a report on Florida's geologic history for a particular geologic epoch, reporting on an environmental contamination case-study including the relevant geology and methods used to define and remediate the contamination, reporting on case studies/issues associated with coastal processes, geohazards, or other geologically-related issues pertinent to Florida, discussion/ debate surrounding contemporary policy issues related to Florida and the geosciences, designing a school curriculum module to teach a specific state learning standard, etc..

Lastly, there will be an individual term paper assignment and presentation. Topics for the term paper must be approved by the course instructor and must relate in some way to Florida and geology. A detailed schedule or this semesters schedule and assignments is provided below.

Textbook/required materials: 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. Additionally, access to a basic introductory Physical Geology Text and Historical Geology Text is useful, but not required. Additional readings from governmental or other publicly available documents will also be assigned (and provided)

Grading: Your grade will be determined based on performance on two in-class exams (15% each) and a comprehensive final (20%), completion of 5 seminar summaries (15%), homework assignments/presentations (15%), your end-term paper (15%) and class participation/preparation (5%).

Etiquette, disabilities, cheating etc. : No cell phones, pagers, radios, MP3 players, etc are allowed to be on during class. Please show courtesy to both your instructors and classmates by arriving and leaving on time (NOT EARLY) and avoiding unnecessary disturbances during class. All students are expected to adhere to the student honor code. Cheating or plagiarism will not be tolerated. We will follow standard UF policies on plagiarism and cheating: http://www.dso.ufl.edu/stg/

Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation. Students with disabilities should contact the instructor as soon as possible to discuss appropriate accommodations.

Tentative Schedule of Topics and Textbook readings

(an active Schedule will be kept on Sakai)

Week	Date	Topic	Speaker/Reading (date to be completed).
1	5-Jan	No Class	
	7-Jan	Intro/Basic Concepts	
2	12-Jan	Basic Review of Physical Geology- PT	
	14-Jan	Basic Review of Physical Geology- Driving Forces of Plate tectonics and Earth Magnetism	HW1 Assigned. Intro to excel., Reading
3	19-Jan	No Class-MLK day	
	21-Jan	Basic Review of Historical Geology- An overview of some important Earth Events/History, using magnetism to reconstruct tectonic history	Hine Ch 1 &2, **HW1 assigned**
4	26-Jan	Concept Mapping activity, Intro to Florida's pre-Cenozoic history	Reading Hine ch 3
	28-Jan	Exploring evidence that informs about Florida's pre-Cenozoic history.-	**HW1 Assigned,** HW assignment 2 given : Relative and absolute dating in Geology
5	2-Feb	Exploring evidence that informs about Florida's pre-Cenozoic history.-Basement Radiometric Dating	Outside reading: Mueller et al.
	4-Feb	Exploring evidence that informs about Florida's pre-Cenozoic history.-Basement Radiometric Dating	**HW1 due, HW2 assigned** Outside reading: Mueller et al.

6	9-Feb	**Guest Lecture: Chong Ma: The Suwanee Suture.** Pre-cenozoic evolution and geophysics of the Florida Basement Continued.- Rock geochemistry	Hine Ch 4,
	11-Feb	Pre-cenozoic evolution and geophysics of the Florida Basement Continued –rifting of Pangea and rift facies. The carbonate Factory	Hine Ch ,5 **HW assignment 2 due**
7	16-Feb	No Class. Use the time to determine a topic for your presentation.	
	18-Feb	Florida Cenozoic History lecture overview of the formation of the FL Platform (Hine Ch 4 and 5), FL Cenozoic stratigraphy TBA.	

8	23-Feb	FL Cenozoic History discussion, Exam review	
	25-Feb	**Exam 1**	
9	2-Mar	**Spring Break- No Class**	**Hine ch 6 and 7**
	4-Mar	**Spring Break- No Class**	
10	9-Mar	Student Presentations- Florida Cenozoic History	Outside reading : Sinkholes of West Central Florida, Tihansky, 1999
	11-Mar	Student Presentations- Florida Cenozoic History/Intro to groundwater	Outside Readings: The Cody Scarp, Upchurch, 2007;
11	16-Mar	Intro to groundwater and Karst Geology, **Guest Lecture: Stephanie James: Constraining the character of the Floridan Aquifer Middle Confining unit.**	HW 3 assigned Modeling Inflow/outflow Data from the Santa Fe Sink-Rise systems.
	18-Mar	**Student Groundwater contamination presentations**	Outside reading Assigned: Outside reading: The Geomorphology and Physiography of Florida
12	23-Mar	**Guest Lecturer: Dr. Mark Brenner-Florida Lakes and Paleolimnology**	Outside reading: Primer on Florida Lakes , HW3 due
	25-Mar	**Exam 2**	
13	30-Mar	Sea level and coastal processes	Hine ch 8
	1-Apr	**Guest Lecture: Dr. Peter Adams**	

14	6-Apr	**Student presentations**	
	8-Apr	**Guest Lecture: Dr. Andrea Dutton**	
15	13-Apr	**Student Presentations**	
	15-Apr	**Guest Lecture: Richard Hamann: Florida Water Management Districts: What they do, how they have evolved and future challenges**	Hine ch 9-10
16	20-Apr	**student presentations, Mining in FL**	
	22-Apr	**Guest Lecturer TBA or Mining in FL**	**Final Student Papers Due**