FLORIDA ATLANTIC UNIVERSITY

COURSE CHANGE REQUEST
Graduate Programs

Department Geosciences

College Charles E. Schmidt College of Science

UGPC Approval _____
UFS Approval _____
SCNS Submittal _____
Confirmed _____
Banner _____
Catalog _____

***Current* Course Prefix and Number**	***Current* Course Title**
GLY 6352	Comparative Carbonate Sedimentology

*Syllabus must be attached for **ANY** changes to current course details. See Guidelines. Please consult and list departments that may be affected by the changes; attach documentation.*

Change title to: N/A

Change prefix
From: N/A **To:**

Change course number
From: N/A **To:**

Change credits*
From: N/A **To:**

Change grading
From: N/A **To:**

Academic Service Learning (ASL) **
Add ☐ **Remove** ☐

* Review Provost Memorandum
** Academic Service Learning statement must be indicated in syllabus and approval attached to this form.

Change description to:

Change prerequisites/minimum grades to:
GLY4500C or Permission of the Instructor

Change corequisites to:
N/A

Change registration controls to:
N/A

Please list existing and new pre/corequisites, specify AND or OR and include minimum passing grade.

Effective Term/Year for Changes:	**Terminate course? Effective Term/Year for Termination:**
Fall 2023	

Faculty Contact/Email/Phone Dr. A. Oleinik, aoleinik@fau.edu; (561) 297-3297

Approved by	***Date***
Department Chair	2/21/23
College Curriculum Chair Louis Merlin	03/14/2023
College Dean	03/14/2023
UGPC Chair Mihaela Cardei (Mar 29, 2023 16:53 EDT)	Mar 29, 2023
UGC Chair	Mar 29, 2023
Graduate College Dean William David Kalies	Mar 29, 2023
UFS President	
Provost	

Email this form and syllabus to UGPC@fau.edu 10 days before the UGPC meeting.

Florida Atlantic University
Department of Geosciences

Comparative Carbonate Sedimentology

GLY 6352

Field approach to carbonate rocks and sediments in South Florida

Spring 202..

Syllabus and Schedule

3 credits

Instructor: Dr. Anton Oleinik
Email: aoleinik@fau.edu
Phone: (561) 297-3297
Pre-requisits: *Permission of the Instructor*

Catalog Course Description
Dedicated to the study of carbonate deposits in the process of formation, methods of studies, examination of sediment types and factors that control their distribution and tracking depositional environments, rocks and calcareous organisms into the recent geologic past (Pleistocene and Holocene).

Course Goals and Objectives:
South Florida is the only region of subtropical carbonate deposition within the continental United States. It contains a variety of shelf and coastal carbonate deposits and spectacular coral reefs and provides unique opportunities for field study of marine and coastal sites of carbonate sedimentation. The primary objective of the course is to study carbonate deposits in the process of formation, examination of sediment types, and factors that control their distribution, and tracking depositional environments, rocks, and calcareous organisms into the recent geologic past (Pleistocene and Holocene). Recent geologic past of South Florida is a key to understanding the future of the Florida Peninsula. Using hands-on field approach, the course will teach students main concepts of carbonate sedimentology.

Course Format: The course will consist of field days and lab days. Field days will consist of trips to various areas of present and Pleistocene carbonate sedimentation sites in Florida Keys. Each field

trip will be dedicated to a particular depositional environment or process and will culminate in preparation of the Field trip report. Lab days will involve processing and detailed examination of collected samples and preparation of comprehensive reports reports focused on specific topics of carbonate sedimentation (See Tentative Course Schedule).
Reading materials for particular trips, assignments, instructions, and research papers are included in the course manual.
Deadlines for the reports, exercises, experimental studies, and term paper are on the day they are listed. ***There will be no extensions.***

Facilities: General lab facilities available for completion of your projects are - binocular microscopes, low-temperature ovens, scale, hydrochloric acid, various glassware, and fume hood. Sets of wet sieves (I have 5 sets), microfossil trays, microfossil slides, cover glasses, dissecting picks and pick up brushes will be available for students to use. Please KEEP EVERYTHING ORGANIZED and put the equipment and supplies back, EXACTLY as you found it after each use. Most of these are expensive and very hard to replace.

References
A comprehensive course manual including key articles on the subject, illustrations, applicable references, field and lab reports guidelines/templates, and quizzes will be provided to every student. No textbook purchase is required.

Field Component: Only reasonably safe sites accessible to public will be visited during field trips. Changes in the Field Trip schedule and objectives are possible due to the weather conditions in the area. Field trips will require snorkeling, boating and getting in the water. Please remember to be dressed appropriately.

Field Gear
You will need to have some very basic field gear to use in the field.

1. Working gloves (cheap cloth type, can be purchased in Home Depot or Lowe's)
2. Field notebook (if you do not have an "official" geology field notebook, you can Use any notebook you feel comfortable with to take notes)
3. Pencil(s)
4. Hand lens
5. Rock hammer (optional for most places, as we will be mostly looking at soft sediments)
6. Pocket knife
7. Hat and sun lotion
8. Zip lock bags (medium size) for loose sediment collecting
9. Snorkeling gear (fins, mask, snorkel). A wetsuit might be a very good idea, especially if the water is chilly. We will try to snorkel in several areas. Snorkeling will depend on weather conditions.
10. Camera is always a plus, camera with underwater housing is even better. If you do not have underwater housing, be careful not to expose it to salt water.

Safety
Sunburn, heat exhaustion, and sunstroke
Field trips in the shallow water subtropical setting are physically demanding and require special considerations. You can easily get a severe burn or be adversely affected by the sun without

knowing it. Even with an overcast sky, the reflection from the water is a danger. Use the sunscreen (sun block) cream and/or wear a long-sleeved shirt and hat in the boat. Do not take chances if you want to make the whole trip without discomfort or injury.

Snorkeling
We will be doing some snorkeling in the general area of Florida Keys. The water may be chilly, particularly in February and March, so I strongly suggest using wetsuits. They also protect your skin from excessive UV exposure. According to the University regulations, in order to participate in class snorkeling activities, each one of you mush fill out and sign the Diving and Boating safety committee form, Appendix B and the first page (**First page only!**) of the Appendix C.

Grading and Evaluation:
Evaluation for this course will be determined by your performance in class (participation in the field trips and lab work), written field reports and class assignments/exercises. Your overall grade for the course will be apportioned as follows:
Oxygen and Carbon Isotopes Exercise – 15%
Field Trips reports (short papers) = 3 x 15% ea. = 45%
Lab report on carbonate sediments - 25%
Introductory Quiz - 15%

Final grades to be determined according to the following guidelines:

Grading Scale			
Percent	Grade	Percent	Grade
93-100 %	A	73-76.9 %	C
90-92.9 %	A-	70-72.9 %	C-
87-89.9 %	B^+	67-69.9 %	D^+
83-86.9 %	B	63-66.9 %	D
80-82.9 %	B-	60-62.9 %	D-
77-79.9 %	C^+	< 60 %	F

Tentative Class Schedule

(Variations from this syllabus may and most probably will occur in order to better meet the needs of this particular group and to accommodate weather changes. Any changes will be announced in class or via email.)

Day 1 (*Lab/Field day*)
Introduction.
Carbonate producing organisms. Grain size and Composition of carbonate sediments. Identification of skeletal fragments in carbonate sediments
Carbonate rocks and sediments classification and depositional environments
Examining representative sediment samples in the lab
Snorkeling trip in the vicinity of KML (ocean side) and collecting a series of sediment samples from Tennessee Reef onshore.
Completing Introductory Quiz.

Day 2 (*Field day*)
Carbonate sand beaches and shoals.
Field trip to Long Key and Bahia Honda State Parks. Examining sediment structures and sediment-animal interactions. Taking sediment samples from the beach and offshore bar.

Day 3 (*Field day*)
Lime mud production and depositional environments of Florida Bay
Sediment on banks and in the "Lakes". Examining sediment cover thickness, taking push (piston?) cores, collecting sediment samples from the bottom. Sea grass invertebrate communities, time-averaging and formation of mollusk layers in Florida Bay. Storm and hurricane deposits in Florida Bay.
Collection of samples of calcareous algae *Halimeda, Udotea,* and *Penicillus*.

Day 4 (*Lab day*)
Comparison of the grain size and constituent composition of sediments from Carbonate sand beach (Day 2), Florida Bay (Day 3) and Ocean side (Day 1).
Examining lime mud production by calcareous algae (algae samples dissolution). Examining insoluble residue in carbonate sediments from different environments. Completing comprehensive lab report on composition of carbonate sediments.

Day 5 (*Field Day*)
Zonation of carbonate-producing organisms on the ocean side.
Zonation of sediment-producing plants and animals related to depth and water Energy. Field trip to Rodriguez Bank and Tavernier Key or to Molasses and Money Key. Examining hardgrounds (off Money Key), Geologic record of severe storms and hurricanes – tempestites and rubble deposits off Molasses and Money Keys.
Completing Field report

Day 6 (*Field Day*)
Coral species and reef types of the Florida Reef tract - Reef zonation, formation of "spurs and groves", reef flats, and rubble piles. Evaluation of hard coral cover within the recent coral reefs. Stages of reef development. Trip to Trip to Coffins Patch or Hens and Chickens, Sombrero, Alligator, and/or Tennessee Reefs.
Completing Field report

Day 7 (*Field/Lab day*)
Pleistocene carbonate bedrock of Florida Keys
Field trip to the Windley Key Quarry. Examining of the Key Largo Limestone. Coral species and sediment types of the Key Largo limestone. Comparison of today coral species (Day 6) with the corals from the Pleistocene Key Largo Limestone. Evaluation of present day hard coral cover (Day 6), comparison with the Key Largo Limestone.
Optional/time permitting – examination of dolomitic crusts and oolitic deposits of the Sugarloaf Key.
Completing of the Field Report

Additional days (*optional*)
1. Tidal and supratidal depositional environments - Worm reefs and Mangroves - Bear Cut, Miami
2. Oolitic shoal deposition and non-skeletal carbonate particles. Burrows and bioturbations. Miami Limestone - Greynolds Park and Anemone Garden
Rocky shore environments - Rocky shore environments.
3. Mangrove environments and sedimentation in Florida Bay. Sediments of Islands of the Bay.

MISCELLANEOUS CLASS POLICIES

Honor Code and Academic Integrity

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education.
Students are expected to uphold the Academic Honor Code.

ACADEMIC DISHONESTY ON ALL ASSIGNMENTS AND EXAMS IS GROUNDS FOR FAILURE IN THE COURSE.

By remaining enrolled in this course past the end of Drop /Add, you are agreeing to:

- uphold The Academic Honor System of Florida Atlantic University, and
- accept accountability for the course requirements, the course expectations, and the attendance policy stated in this document.
- attend the final exam which takes place as scheduled by the University.

Please see the following link for more information:
http://www.fau.edu/ctl/4.001_Code_of_Academic_Integrity.pdf

Cell phones

The use of cell phones and electronic devices is prohibited in class. All cell phones should be turned off *before* the start of class (not set on "vibrate", but turned OFF). If you have a medical or family emergency and need to receive a call during class, you should inform your instructor *before* class and have your phone in SILENT mode. Students without authorization who use cell phones and electronic devices in class may be dismissed from class and counted as being absent for the day. In order that the University may notify students of a campus-wide emergency, either the instructor's, or a designated student's cell phone will be set to vibrate during class.

CLASSROOM ETIQUETTE:
In order to enhance and maintain a productive atmosphere for education, personal communication devices such as pagers, beepers, and cellular phones are to be disabled in class sessions. (University policy which applies to all classes - see FAU Academic policies (http://www.fau.edu/academic/registrar/catalog/academics.php.) Any use of these devices during a quiz or examination will be considered to be cheating, and will be penalized accordingly. Communication devices (cell phones, pages, laptop computers, etc.) must be turned off and **out of reach** during all lectures and examinations.

Lecture Recording

The following statement generally applies to the new law enacted by the Florida Legislature regarding lecture recording by students:

Students enrolled in this course may record video or audio of class lectures for their own personal educational use. A class lecture is defined as a formal or methodical oral presentation as part of a university course intended to present information or teach students about a particular subject. Recording class activities other than class lectures, including but not limited to student presentations (whether individually or as part of a group), class discussion (except when incidental to and incorporated within a class lecture), labs, clinical

presentations such as patient history, academic exercises involving student participation, test or examination administrations, field trips, and private conversations between students in the class or between a student and the lecturer, is prohibited. Recordings may not be used as a substitute for class participation or class attendance and may not be published or shared without the written consent of the faculty member. Failure to adhere to these requirements may constitute a violation of the University's Student Code of Conduct and/or the Code of Academic Integrity.

Guidance on Student Recordings of class lectures

Under a new law recently enacted by the Florida Legislature, a state university student may, without prior notice, audio or video record a class lecture for a course in which the student is enrolled if the recording is for one of the following purposes:
(a) personal educational use of the student;
(b) in connection with a complaint to the university where the recording is made; or
(c) as evidence in, or in preparation for, a criminal or civil proceeding.

Students enrolled in this course may record video or audio of class lectures for their own personal educational use. A class lecture is defined as a formal or methodical oral presentation as part of a university course intended to present information or teach students about a particular subject. Recording class activities other than class lectures, including but not limited to student presentations (whether individually or as part of a group), class discussion (except when incidental to and incorporated within a class lecture), labs, clinical presentations such as patient history, academic exercises involving student participation, test or examination administrations, field trips, and private conversations between students in the class or between a student and the lecturer, is prohibited. Recordings may not be used as a substitute for class participation or class attendance and may not be published or shared without the written consent of the faculty member. Failure to adhere to these requirements may constitute a violation of the University's Student Code of Conduct and/or the Code of Academic Integrity.

Attendance Policy

Students are expected to attend all of their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance.

Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence

Late Work and makeup policy

Dates for the submission of field reports will be set up by the instructor. Students will be given sufficient amount of time to produce the report. Therefore, all deadlines for report submission are final, no exceptions. Field trips cannot be rerun or run again if one student misses it. Incomplete ("I") grade will be reserved for students who are passing a course but have not completed all the required work because of exceptional circumstances. If your college has elaborated on this policy, state so here.

Disability Policy

In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU's campuses – Boca Raton, Davie and Jupiter – however disability services are available for students on all campuses. For more information, please visit the SAS website at

www.fau.edu/sas/

COUNSELING AND PSYCHOLOGICAL SERVICES (CAPS) CENTER

Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual counseling, support meetings, and psychiatric services, to name a few – offered to help improve and maintain emotional well-being. For more information, go to ***http://www.fau.edu/counseling/***