FLORIDA ATLANTIC UNIVERSITY™

Undergraduate Programs—COURSE CHANGE REQUEST[1]

UUPC APPROVAL _____
UFS APPROVAL _____
SCNS SUBMITTAL _____
CONFIRMED _____
BANNER POSTED _____
CATALOG _____

DEPARTMENT: BIOLOGICAL SCIENCE	COLLEGE: COLLEGE OF SCIENCE
COURSE PREFIX AND NUMBER: OCE4006	CURRENT COURSE TITLE: MARINE SCIENCE
CHANGE(S) ARE TO BE EFFECTIVE (LIST TERM): FALL 2013	____ TERMINATE COURSE (LIST FINAL ACTIVE TERM):

CHANGE TITLE TO:

CHANGE PREFIX FROM: **TO:**

CHANGE COURSE NO. FROM: **TO:**

CHANGE CREDITS[2] FROM: **TO:**

CHANGE GRADING FROM: **TO:**

CHANGE WAC/GORDON RULE STATUS[3]
ADD*_____ REMOVE _____

CHANGE GENERAL EDUCATION REQUIREMENTS[4]
ADD*_____ REMOVE _____

*WAC and General Education criteria must be clearly indicated in attached syllabus. For WAC Guidelines: *www.fau.edu/WAC*. Please attach General Education Course Approval Request: *www.fau.edu/deanugstudies/GeneralEdCourseApprovalRequests.php*

CHANGE DESCRIPTION TO:

CHANGE PREREQUISITES/MINIMUM GRADES TO*:

EXISTING
CHM 2045,CHM 2045L CHM 2046,CHM 2046L

NEW PRE/REQ.
BSC 1010,BSC1010L,BSC 1011,BSC 1011L,CHM 2045,CHM 2045L CHM 2046,CHM 2046L,CHM 2210,CHM 2211, CHM 2211L

MINIMUM PASSING GRADE C-

EXISTING COREQUISITES:

CHANGE COREQUISITES TO*:

CHANGE REGISTRATION CONTROLS TO:

*Please list existing and new pre/corequisites, specify AND or OR and

Attach syllabus for ANY changes to current course information.

Should the requested change(s) cause this course to overlap any other FAU courses, please list them here.	Please consult and list departments that might be affected by the change(s) and attach comments.[5]

Faculty contact, email and complete phone number:
David Binninger; binninge@fau.edu; 561.297-3323

Approved by:	*Date:*
Department Chair: _____	Feb. 27, 2013
College Curriculum Chair: _____	3/21/13
College Dean: _____	3/20/13
UUPC Chair: _____	3/22/13
Undergraduate Studies Dean: _____	3/27/13
UFS President: _____	
Provost: _____	

1. **Syllabus** must be attached; syllabus checklist recommended; see guidelines and checklist: *www.fau.edu/academic/registrar/UUPCinfo*
2. Review **Provost Memorandum: Definition of a Credit Hour** *www.fau.edu/provost/files/Definition_Credit_Hour_Memo_2012.pdf*
3. **WAC approval** (attach if necessary)
4. **Gen. Ed. approval** (attach if necessary)
5. **Consent** from affected departments (attach if necessary)

Email this form and syllabus to *mjenning@fau.edu* **seven business days before** the University Undergraduate Programs Committee meeting so that materials may be viewed on the UUPC website prior to the meeting.

Syllabus
Marine Science, OCE 4006 001(CRN 21877)
4 Credits
Fall , 2013

Prerequisites: BSC, 1010,BSC1010L,BSC1011,BSC 1011L,CHM 2045, 2045L, 2046, 2046L,CHM 2210,CHM 2211,CHM 2211L, with a Minimum grade of C-

Corequisites: None

Course Logistics: Lectures originate at Harbor Branch Oceanographic Institute at FAU (MC 209), Mondays and Thursdays, 3:00 to 4:50 p.m.

Instructor Contact Information:

Dr. Ned Smith, office: Rm 113, Marine Science Building, 5775 Old Dixie Hwy, Fort Pierce, FL 34946,nsmith54@hboi.fau.edu, (772) 242-2441, office hours by appointment.

Dr. M. Dennis Hanisak, office: Rm 135, Lab 2 Building, HBOI_FAU, 5600 Old Dixie Hwy, Fort Pierce, FL 34946, dhanisak@hboi.fau.edu, (772) 242-2306, office hours Friday 11 a.m., and by appointment.

Course Description:

An introduction to geological, physical and chemical oceanography.

Course Objectives and Learning Outcomes:

This course is intended to provide a survey of marine geology, physical oceanography and marine chemistry. Through lectures and homework assignments, students will achieve a broad understanding of the fundamental concepts in these three branches of marine science.

Course Grading Scale:

Cumulative performance (¼ from Marine Geology, ½ from Physical Oceanography, ¼ from Marine Chemistry):

92-100%	A	90-91%	A-		
88-89%	B+	82-87%	B	80-81%	B-
78-79%	C+	72-77%	C	70-71%	C-
68-69%	D+	62-67%	D	60-61%	D-
0-59%	F				

Homework

Homework exercises will be handed out at the start of each section of the course (e.g., the four geology exercises will be handed out at the start of the marine geology section). Each exercise has a due date, but it can be handed in at any time before the due date. Points obtained from homework will be added to points obtained from exams to determine a student's final grade. Students will be expected to complete homework problems as assigned.

Policy on make-up tests, late work and incompletes

Assignments completed late will be accepted only with prior approval and under exceptional circumstances. Grades of Incomplete ("I") will be given only to students who are passing the course but have not completed required assignments due to exceptional circumstances.

Disability Policy Statement:

In compliance with the Americans with Disabilities Act, students who require reasonable accommodations due to a disability to properly execute coursework must register with the Office for Students with Disabilities (OSD)—in Boca Raton, SU 133 (561-297-3880); in Davie, LA 240 (954-236-1222); in Jupiter, SR 110 (561-799-8010) or at the Treasure Coast Campus, CO 117 (772-873-3441)—and follow all OSD procedures.

Religious Accommodations

Students who wish to be excused from course work, class activities or examinations must notify the instructor in advance of their intention to participate in religious observation and request an excused absence.

Code of Academic Integrity Policy Statement:

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 in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see University Regulation 4.001 at
http://www.fau.edu/ctl/4.001_Code_of_Academic_Integrity.pdf

Required Text/readings:

"Oceanography. An Invitation to Marine Science," (7th Edition, 2010), by Tom Garrison, Brooks/Cole, Cengage Learning.

Course Topical Outline:

Lectures presented by Dr. Ned Smith and Dr. Dennis Hanisak are indicated by NPS and MDH, respectively. The schedule of topics to be discussed is subject to change during the semester, depending on the needs of the class. Exams will be given during the usual class periods (same time, same room).

Week 1: Monday, January 7th NPS: Introduction to marine geology, Earth's structure, plate tectonics. Assigned reading: Chapter 3

Week 1: Thursday, January 10th NPS: Plate tectonics (continued). Assigned reading: Chapter 3. Homework exercise "G1" due.

Week 2: Monday, January 14th NPS: Continental margins and ocean basins (continued). Assigned reading: Chapter 4

Week 2: Thursday, January 17th NPS: Sediments I. Assigned reading: Chapter 5. Homework exercise "G2" due.

Week 3: Monday, January 21st (No Class, MLK Holiday)

Week 3: Thursday, January 24th NPS: Sediments II. Assigned reading: Chapter 5. Homework exercise "G3" due.

Week 4: Monday, January 28th NPS: Coasts I. Assigned reading: Chapter 12.

Week 4: Thursday, January 31st NPS: Coasts II**.** Assigned reading: Chapter 12. Homework exercise "G4" due.

Week 5: Monday, February 4th Marine Geology Exam

Week 5: Thursday, February 7th NPS: Introduction to physical oceanography, temperature structure, water masses, sound and light in the ocean. Assigned reading: Chapter 6

Week 6: Monday, February 11th NPS: Energy balance, the heat budget equation, impacts of global warming. Assigned reading: Chapter 6

Week 6: Thursday, February 14th NPS: Air-sea interaction, trade winds, hurricanes, sea breezes, wind-driven circulation. Homework exercise "P1" due. Assigned reading: Chapter 8.

Week 7: Monday, February 18th NPS: Ocean waves I: refraction, diffraction, superposition, wave-induced transport. Assigned reading: Chapter 10.

Week 7: Thursday, February 21st NPS: Ocean waves II: internal waves, energy from ocean waves. Assigned reading: Chapter 10. Homework exercise "P2" due.

Week 8: Monday, February 25th Physical Oceanography Exam 1

Week 8: Thursday, February 28th NPS: Ocean circulation I: basic principles, equation of motion, measurement techniques. Assigned reading: Chapter 9. Homework exercise "P3" due.

Week 9: Monday, March 4th No class (Spring Break)

Week 9: Thursday, March 7th No class (Spring Break)

Week 10: Monday, March 11th NPS: Ocean circulation II: surface circulation in regional seas and major ocean basins, circulation in the deep ocean. Assigned reading: Chapter 9.

Week 10: Thursday, March 14th NPS: Ocean tides I: basic principles, tidal constituents, tide predictions. Assigned reading: Chapter 11. Homework exercise "P4" due.

Week 11: Monday, March 18th No class (Oceanographic Experience Cruise)

Week 11: Thursday, March 21st No class (Oceanographic Experience Cruise)

Week 12: Monday, March 25th NPS: Ocean tides II: Tides in the World Ocean, around the United States and around Florida. Assigned reading: Chapter 11.

Week 12: Thursday, March 28th NPS: Nontidal variations in sea level: intra- and inter-annual time scales, sea level rise. Assigned reading: Chapter 12. Homework exercise "P5" due.

Week 13: Monday, April 1st Physical Oceanography Exam 2

Week 13: Thursday, April 4th MDH: Introduction to marine chemistry. Assigned reading: Chapter 7

Week 14: Monday, April 8th MDH: Chemical composition of seawater

Week 14: Thursday, April 11th MDH: Marine nutrient cycles

Week 15: Monday, April 15th MDH: Trace metal chemistry

Week 15: Thursday, April 18th MDH: Dissolved gases in seawater

Week 16: Monday, April 22nd MDH: Carbonate system in the sea

Week 16: Thursday, April 25th Marine Chemistry Exam (10:00a-12:30p)