

FLORIDA ATLANTIC UNIVERSITY™

Graduate Programs—NEW COURSE PROPOSAL¹

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

DEPARTMENT: BIOLOGICAL SCIENCES

COLLEGE: COLLEGE OF SCIENCE

RECOMMENDED COURSE IDENTIFICATION:

PREFIX _____ OCB _____ COURSE NUMBER _____ 6266 _____ LAB CODE (L or C) _____

(TO OBTAIN A COURSE NUMBER, CONTACT MJENNING@FAU.EDU)

COMPLETE COURSE TITLE: Coral Reef Ecosystems

EFFECTIVE DATE

(first term course will be offered)
SPRING 2015

CREDITS²: 3

TEXTBOOK INFORMATION: Humann, N, and P. Deloach. 2013. REEF CORAL Identification: Florida, Caribbean, Bahamas, Third Edition. New World Publications, Inc. 276 pp. ISBN-13: 9781878348548
 Sheppard, C, S. Davy, and G. Pilling. 2009. The Biology of Coral Reefs. Oxford University Press. 352 pp. ISBN-13: 9780198566366

GRADING (SELECT ONLY ONE GRADING OPTION): REGULAR SATISFACTORY/UNSATISFACTORY _____

COURSE DESCRIPTION, NO MORE THAN THREE LINES: Explores the structure, biology, ecology, significance, and current status of coral reef ecosystems through a combination of lectures and discussions.

PREREQUISITES *: Graduate status

COREQUISITES*:

REGISTRATION CONTROLS (MAJOR, COLLEGE, LEVEL)*:

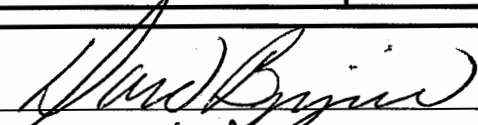

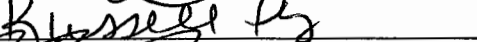

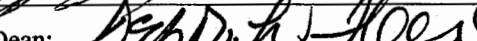
* PREREQUISITES, COREQUISITES AND REGISTRATION CONTROLS WILL BE ENFORCED FOR ALL COURSE SECTIONS.

MINIMUM QUALIFICATIONS NEEDED TO TEACH THIS COURSE: PH.D. IN THE RELEVANT FIELD

Faculty contact, email and complete phone number:
 Dr. Joshua Voss
 jvoss2@hboi.fau.edu
 (772) 242-2538

Please consult and list departments that might be affected by the new course and attach comments.³

Approved by:

Department Chair: 
 College Curriculum Chair: 
 College Dean: 
 UGPC Chair: 
 Graduate College Dean: 
 UFS President: _____
 Provost: _____

Date:

1/30/14
 2/10/14
 2/16/14
 2/26/14
 2/26/14

1. Syllabus must be attached; see guidelines for requirements: www.fau.edu/provost/files/course_syllabus.2011.pdf
2. Review Provost Memorandum: **Definition of a Credit Hour** www.fau.edu/provost/files/Definition_Credit_Hour_Memo_2012.pdf
3. Consent from affected departments (attach if necessary)

Email this form and syllabus to UGPC@fau.edu one week before the University Graduate Programs Committee meeting so that materials may be viewed on the UGPC website prior to the meeting.

Course Syllabus for Coral Reef Ecosystems

1. **Course title/number, number of credit hours:**
Coral Reef Ecosystems – OCB 6266 – 3 credit hours
2. **Course prerequisites**
 - a. Graduate status
3. **Course logistics**
 - a. Term – Spring 2015, every other Spring thereafter
 - b. Notation if online course – The course is not offered online.
 - c. Class location and time (if classroom-based course) – To be determined
4. **Instructor contact information**
 - a. Instructor's name – Joshua Voss
 - b. Office address – Harbor Branch Lab II, Room 121
 - c. Office hours – To be determined
 - d. Contact telephone number – office (772) 242-2538, fax (772) 468-0757
 - e. E-mail address – jvoss2@hboi.fau.edu
5. **TA contact information (if applicable)**
N/A
6. **Course description**
Explores the structure, biology, ecology, significance, and current status of coral reef ecosystems through a combination of lectures and discussions.
7. **Course objectives/student learning outcomes**
Students will be able to:
 - a. Identify common coral reef species and understand their ecological roles, with emphasis on Florida and the Caribbean.
 - b. Understand fundamental ecological concepts as they apply to coral reefs and reef organisms.
 - c. Describe and understand threats to and conservation strategies for coral reef ecosystems.
 - d. Understand contemporary field and laboratory methods for investigating coral reef ecosystems.
8. **Course evaluation method**
Two exams, a midterm and a final, will each account for 25% of the student's cumulative performance. Leadership of and participation in discussions will account for 20% of the student's cumulative performance. An independent research paper will account for 15% of the student's cumulative performance. A

presentation related to the research paper will account for 15% student's cumulative performance. The overall grade in the course is derived from the cumulative performance according to the following table.

9. Course grading scale (optional)

Cumulative Performance	Grade
>93%	A
>90% - 93%	A-
>87% - 90%	B+
>83% - 87%	B
>80% - 83%	B-
>75% - 80%	C+
>65% - 75%	C
>60% - 65%	C-
>57% - 60%	D+
>53% - 57%	D
>50% - 53%	D-
<50%	F

10. Policy on makeup tests, late work, and incompletes

If a student cannot attend an exam or hand in a homework project on time due to circumstances beyond their control then the instructor may assign appropriate make-up work. Students will not be penalized for absences due to participation in University-approved activities, including athletic or scholastics teams, musical and theatrical performances, and debate activities. These students will be allowed to make up missed work without any reduction in the student's final course grade. Reasonable accommodation will also be made for students participating in a religious observance. Also, note that grades of Incomplete ("I") are reserved for students who are passing a course but have not completed all the required work because of exceptional circumstances. A grade of "I" will only be given under certain conditions and in accordance with the academic policies and regulations put forward in FAU's University Catalog. The student must show exceptional circumstances why requirements cannot be met. A request for an incomplete grade has to be made in writing with supporting documentation, where appropriate.

11. Special course requirements (if applicable)

N/A

12. Classroom etiquette policy (if applicable)

University policy on the use of electronic devices states: "In order to enhance and maintain a productive atmosphere for education, personal communication devices, such as cellular telephones and pagers, are to be disabled in class sessions."

13. Disability policy statement

In compliance with the Americans with Disabilities Act (ADA), students who require special accommodation 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, MOD 1 (954-236-1222); in Jupiter, SR 117 (561-799-8585); or at the Treasure Coast, CO 128 (772-873-3305) – and follow all OSD procedures.

14. Honor Code policy statement

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty, including cheating and plagiarism, 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/regulations/chapter4/Reg_4.001_5-26-10_FINAL.pdf

15. Required texts/readings

Sheppard, C, S. Davy, and G. Pilling. 2009. *The Biology of Coral Reefs*. Oxford University Press. 352 pp. ISBN-13: 9780198566366

Humann, N, and P. Deloach. 2013. *REEF CORAL Identification: Florida, Caribbean, Bahamas, Third Edition*. New World Publications, Inc. 276 pp. ISBN-13: 9781878348548

16. Supplementary/recommended readings (optional)

Veron, J.E.N. 2008. *A Reef in Time*. Harvard University Press. 304 pp. ISBN-13: 9780674034976

Warner, G.F. 2012. *Corals of Florida and the Caribbean*. University Press of Florida. 224 pp. ISBN-13: 9780813041650

Selected articles to be provided from scientific journals including:

Hughes, Terry P., et al. "Assembly rules of reef corals are flexible along a steep climatic gradient." *Current Biology* 22.8 (2012): 736-741.

Bourne, David G., et al. "Microbial disease and the coral holobiont." *Trends in microbiology* 17.12 (2009): 554-562. Lesser, Michael P., Marc Slattery, and James J. Leichter. "Ecology of mesophotic coral reefs." *Journal of Experimental Marine Biology and Ecology* 375.1 (2009): 1-8.

Allemand, Denis, et al. "Coral calcification, cells to reefs." *Coral reefs: an ecosystem in transition*. Springer Netherlands, 2011. 119-150.

Budd, Ann F., et al. "Taxonomic classification of the reef coral family Mussidae (Cnidaria: Anthozoa: Scleractinia)." *Zoological Journal of the Linnean Society* 166.3 (2012): 465-529.

Ainsworth, Tracy D., Rebecca Vega Thurber, and Ruth D. Gates. "The future of coral reefs: a microbial perspective." *Trends in Ecology & Evolution* 25.4 (2010): 233-240.

Fabricius, Katharina E. "Effects of terrestrial runoff on the ecology of corals and coral reefs: review and synthesis." *Marine pollution bulletin* 50.2 (2005): 125-146.

Zimmer, B. "Coral reef restoration: an overview" in Precht, William F., ed. *Coral reef restoration handbook*. CRC Press (2006): 39-59.

Mumby, Peter J., Alan Hastings, and Helen J. Edwards. "Thresholds and the resilience of Caribbean coral reefs." *Nature* 450.7166 (2007): 98-101.

17. Course topical outline

Topic	Assigned Readings
1. Course introduction: defining coral reef ecosystems	Sheppard 1-19
2. Reef distributions: physical and environmental factors	Sheppard 66-91
3. Coral reef types, formation, and zonation	Sheppard 20-32 Hughes et al. (pdf)
4. Coral anatomy, physiology, and life history	Sheppard 33-46
5. The coral holobiont	Sheppard 98-127 Bourne et al. (pdf)
6. Calcification, reef structure, and bioerosion	Sheppard 62-65 Allemand (pdf)
7. Caribbean coral identification and systematics	Veron 37-45 (pdf) Budd et al. (pdf) review Humann review Warner
8. Trophic dynamics in coral ecosystems	Sheppard 161-184
9. Coral biogeography and reticulate evolution	Veron 150-161 (pdf)
10. Mesophotic and deep coral reefs	Lesser et al. (pdf)
11. Microbes and their roles in coral reef ecology	Sheppard 130-145 Ainsworth et al. (pdf)
12. Land and sea interactions on coral reefs	Fabricius et al. (pdf)
13. Overexploitation of coral reef resources	Sheppard 278-293
14. Coral reefs in a changing climate	Sheppard 239-253
15. Artificial reefs and coral restoration	Zimmer et al. (pdf)
16. Coral resilience and the future of coral reefs	Mumby et al. (pdf)