

MYSTERIES OF MARINE BIOLOGY

DEPARTMENT OF INTEGRATIVE BIOLOGY

COURSE INFORMATION

- **Course Prefix, Number:** BSC4933
- **Course Title:** Organic Evolution
- **Course Section Number:** 002F13 / 051F13
- **Course Status:** open
- **Textbook:** *P. Castro and M. Huber, 2013. Marine Biology (9th Edition). McGraw-Hill. ISBN 9780073524207*
- ***This is a full-length science course prepared for non-majors, but administered in 6 weeks. Be prepared to proceed at an intense pace.***
- **Note:** This course will not count towards Biology major elective credits, but can be used as general elective credits for a degree from the College of Arts and Sciences.

INSTRUCTOR INFORMATION

- **Instructor Name:** Christina Richards
- **Office Location:** SCA 127
- **Telephone Number:** (813)974-5090
- **E-mail Address:** clr@usf.edu
- **FAX Number:** (813)974-3263
- **Virtual office hours:** TBD on Canvas. These will be structured as time for questions and answers from students who will be able to send questions by either email or text through the canvas interface. I will not be lecturing on material and will only go over slides or other material as appropriate to clarify concepts to students who send in questions. Most of the material will be straightforward and if you read the text, you should be able to perform well on the quizzes and exams. Take advantage of the resources on the McGraw Hill web site if you are unsure of your ability to perform well on the exams: http://highered.mcgraw-hill.com/sites/0073524204/student_view0/ If you need to schedule a face-to-face meeting, or an alternative meeting time through Canvas please email me to do so.

COURSE OBJECTIVES

This class will cover basic concepts and facts relating to the biology of marine organisms and the habitats in which they live. This course will address cellular, organismal, population, community, and ecosystem level biology. A premise that will permeate the course and allow for deeper understanding of the material is the theory of evolution. Evolution is fundamental to a comprehensive understanding of ALL biological disciplines, and is included in the national science standards and in the Florida state science standards. Since the concept of evolution is a critical foundation for understanding any

biological science including Marine Biology, I encourage students without a background in the subject or who may be confused by the various representations of the subject to explore the following reputable web-sites:

<http://ncse.com/evolution>

<http://evolution.berkeley.edu/evolibrary/home.php>

<http://www.pbs.org/wgbh/evolution/library/faq/>

http://www.blackwellpublishing.com/ridley/video_gallery/

In addition to the biological principles, which will be the focus of the class, we will start with a review of background information on oceanographic features and physical characteristics of coastal settings that are critical for understanding the ecological conditions that influence function of marine organisms.

COURSE POLICIES

All course policies are based on University of South Florida and Department of Integrative Biology policies. University policies are contained in the catalog (<http://www.ugs.usf.edu/catalogs.htm> and <http://www.grad.usf.edu/catalog.php>) and Department policies in the Instructional Policies for Students (<http://biology.usf.edu/ib/admin/>). Refer to these sources for information concerning the following topics: **Religious Observances, Students with Disabilities, General Attendance, Emergency Preparedness, Laboratory Safety, Learning Assessment, Grading, Make-ups, Academic Dishonesty, Intellectual Property, Electronic Devices, Computer and Network Access, and Disruption of the Academic Process.** It is your responsibility to read and understand how University and Department policies apply to this course. Some policies specific to this course that you will need to include directly on your syllabus:

- **Class format:** This class is an online class and will be administered entirely through Canvas with the exception of the 3 exams. All other work is to be submitted online as indicated below and on canvas. You are responsible for reading the text as well as utilizing the powerpoint presentations provided by McGraw Hill and other web-based resources including those available on the McGraw Hill web-site to participate in discussion or homework questions. The class will be broken into three modules which will be self directed. All material for each module is due before the beginning time of the exam for that module. See the schedule below for when all assignments are due.
- **Grading:** Assignments and examinations will NOT be focused on the ability to memorize, but to synthesize, and to apply knowledge in a new context. The assignments are particularly geared to get the students to read the text and supplementary literature, develop the ability to critique the literature and discuss the literature in the context of emerging questions in the field of evolutionary biology.

Chapter Quizzes (40%): There will be a syllabus quiz and quizzes for every chapter (17 total equally weighted). You may complete quizzes in advance of their due date; no quizzes will be accepted after the due date, and you will earn a 0 for these assignments.

Discussions (20%): Your discussion sessions through CNAVAS will be scored and account for 20% of your final grade. We will provide ideas for the class to discuss, but generally these are an open forum and we encourage any discussion related to the subject matter, which may include something that happened in the news, politics,

government policy, or something you read in Science, Nature or other scientific journal. Please feel free to explore the material.

Exams (40%): There are 3 exams scheduled. Each will be a combination of essay, short-answer, multiple choice, and identification questions. No cumulative final. The exams will be administered on the USF TAMPA CAMPUS in SCA 222 on May 22rd, June 6th, and June 19th from 4:00 – 6:00 pm. Please contact me immediately if you will not be able to be present for these exams so that we can make other arrangements. The exam will span approximately an hour. Students with last names that start with A-M will test from 4:00-5:00, N-Z will test from 5:00-6:00.

- **Grading scale: (No plusses/minuses)**

A – 90 and above; B – 89-80; C – 80-79; D – 69-60; F – 59 and below

No extra credit will be given and grades will not be curved.

- **Make-ups:** Any PowerPoint presentations of material will be available on Canvas, but they will not contain all of the information for which the students are responsible since the student is expected to read the text.

If you believe you are entitled to an extension, you must make your case within 2 days of the assignment due date. Otherwise, you will earn a “0” for that assignment. Reasons for requesting a make-up must relate specifically to the time period of the missed coursework and must be documented in writing by an involved professional. The instructor retains the right to make additional inquiries concerning the documentation. The instructor retains the right to give a make-up that is different in exact content and/or style than the missed coursework. Chronic attendance problems for reasons beyond a student’s control may warrant withdrawal from the course. You should see the Undergraduate Program Assistant for information concerning late withdrawals and refund of fees.

- **Academic Dishonesty:** Academic dishonesty: Dishonesty will not be tolerated and students will be held to all academic policies and standards of the USF. Any form of cheating is academic dishonesty. ‘Cheating’ is defined by the University as (1) unauthorized granting or receiving of aid during the prescribed period of a course-graded exercise (students may not consult written materials such as notes or books, may not look at the paper of another student, nor consult orally with any other student taking the same test); (2) a student’s asking another person to take an examination for or in place of him/her; (3) taking an examination for or in place of another student; (4) stealing visual concepts, such as drawings, sketches, diagrams, musical programs and scores, graphs, maps, etc., and presenting them as one’s own; (5) stealing, borrowing, buying, or disseminating tests, answer keys, other examination materials, research papers, creative papers, speeches, other graded assignments, text or phrases from websites, etc., except as officially authorized; (6) stealing or copying of computer programs and presenting them as one’s own. Engaging in plagiarism is academic dishonesty, even though a student may plagiarize without any intent to be dishonest. ‘Plagiarism’ is defined by the University as literary theft consisting of the unattributed quotation of the exact words of a published text, or the unattributed borrowing of original ideas by paraphrase from a published text. Plagiarism detection software (e.g., SafeAssign) will be used on your assignments. Please familiarize yourself with the policies and punishment for academic dishonesty in the current Undergraduate Catalogue: <http://generalcounsel.usf.edu/regulations/pdfs/regulation-usf3.027.pdf>
- **Intellectual Property:** Electronic recording of lectures will not be permitted without specific consent of the instructor. Students are not permitted to take notes or record lectures by any

means for the purpose of sale.

COURSE OUTLINE

Minor modifications of this outline may be required later in the semester; this schedule is tentative.

Module 1: May 12-May 22

• Readings:

Ch. 1 The Science of Marine Biology

Ch. 2 The Sea Floor

Ch. 3 Chemical and Physical Features of Seawater and the World Ocean

Ch. 4 Fundamentals of Biology

• Discussions:

Module 1

• Quizes

Ch 1

Ch 2

Ch 3

Ch 4

EXAM 1: covers chs 1-4

THURSDAY MAY 22, SCA 202 4-6 pm

Module 2: May 23-June 5

• Readings:

Ch. 5 The Microbial World

Ch. 6 Multicellular primary producers

Ch. 7 Marine animals without a backbone

Ch. 8 Marine fishes

Ch. 9 Marine reptiles, birds and mammals

Ch. 10 An introduction to marine ecology

• Discussions:

Module 2

• Quizes

Ch 5

Ch 6

Ch 7

Ch 8

Ch 9

Ch 10

EXAM 2: covers chs 5-10

THURSDAY June 5, SCA 202 4-6 pm

Module 3: June 6-June 19

• Readings:

- Ch. 11 Between the tides
- Ch. 12 Estuaries: where rivers meet the sea
- Ch. 13 Life on the continental shelf
- Ch. 14 Coral reefs
- Ch. 15 Life near the surface
- Ch. 16 The Ocean Depth

• Discussions:

Module 3

• Quizzes

- Ch 11
- Ch 12
- Ch 13
- Ch 14
- Ch 15
- Ch 16

EXAM 3: covers chs 11-16

THURSDAY June 19, SCA 202 4-6 pm