



**Principles of Marine Biology (BSC 3312)**  
**Spring 2019**  
**HPA1, Room 125**  
**Tu/Th 9:00-10:15 AM**

**Instructor:** Dr. Christa Diercksen



**Office:** Biology 201A

**Communication:**

- **Email:** [christa.diercksen@ucf.edu](mailto:christa.diercksen@ucf.edu)
- **Office Hours** (BIO 201A):
  - Monday: 9-10 AM; Tuesday: 12-2 PM; Wednesday: 2:30-3:30 PM; Thursday: 11 AM-12 PM

**Course Description:**

- *Credit hours:* 3
- *Course Prerequisites:* Biology 1 (BSC 2010) and Biology 2 (BSC 2011)
- *Purpose of the course:* BSC 3312 is an introductory exploration of the marine environment that will provide students with an initial understanding of the different marine ecosystems and the organisms that occupy those ecosystems. This course can provide the foundation for more advanced classes in topics of marine science as well as giving students the knowledge and skills to understand the connections between the marine environment and human society.

**Course Objectives:**

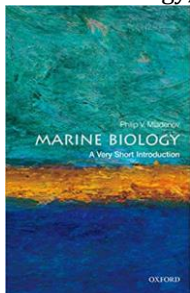
- Learn basic oceanography and the physical marine environment as it relates to the organisms that live in the ocean
- Learn about the different types of marine ecosystems and their specific characteristics that shape those environments and the organisms that live there.
- Explore the major classes of organisms that live in the marine environment with focus on their unique adaptations that allow them to live in their different habits
- Investigate and question the impact of humans on the world's oceans

### General Course Topics:

- Basic salt water chemistry and oceanography
- Basic concepts in marine ecology
- Community structure of the different ocean ecosystems (deep sea, coral reefs, intertidal, etc.)
- Major animal and plant groups that live in marine environments (algae, phytoplankton, marine invertebrates, marine mammals, etc.)
- Human impact on oceans

### Required book/materials:

- "Marine Biology, A Very Short Introduction" by Philip V. Mladenov, ISBN978-0-19-969505-8



- Other readings or background information and/or links will be provided on Webcourses.
- Note: Only the content on oceanography, marine ecosystems and human impact on oceans is covered in "Marine Biology, A Very Short Introduction". Necessary information on the marine organisms will be given in the lecture slides and slide notes.
- **Ruled 3x5 Index cards:** Must bring *at least one* to every class.

### Academic Activity Assignment: Bio 1 & 2 Foundation "Quiz"

- Due date for quiz: **Friday, January 11, 2019 at 5:00 PM**
- This assignment is for *completion only* (i.e No point value assigned) BUT if you do not score well on the quiz, you are strongly encouraged to view the "Primer of Biological Principles and Ecology" and "Properties of Water" Powerpoints containing a basic review of background concepts and important vocabulary necessary for BSC 3312.

### Assessments: 500 possible points

#### Short Answer Exams (200 pts. total):

- Two (2) lecture exams (each worth 100 pts.) with short answer, free response, critical thinking style questions
- Covered content will be announced in class.

#### Multiple Choice Quizzes (100 pts. total):

- Five (5) multiple choice 10 question quizzes (20 pts. each) will be given about every other week (see course schedule).
- Covered content for each quiz will be announced in class. In general, these questions will be more a factual recall style.
- Scantrons will NOT be necessary.

#### Final Exam (50 pts.): April 25 from 7:00-9:50 AM

- This is not a classic cumulative exam but will still address major concepts from the whole semester. More information will be given as the Final Exam period approaches.

**In Class Questions (15 pts):**

- On all lecture days *except* Lecture Exam/Quiz days and the Speed Date Organism day (Total of 19 days), there will be one (1) short written response to a question or scenario posed by Dr. Diercksen in class. Questions will be based on the course content of that day.
- A **maximum of 15 pts.** can be earned allowing for *up to 4 missed questions with no penalty*. Any absences beyond the 4 days must be documented and approved by Dr. Diercksen
- These responses will be turned in at the end of the class period and will be scored as follows:
  - √+ = 1 pt. for a complete, thoughtful and/or correct answer
  - √ = ½ pt. for an answer but not a great one
  - √- = 0 pts. for No Attendance

**Case Studies (75 pts. total):**

- There will be three (3) case studies on course content each worth 25 pts.
- Students will work in randomly assigned groups of 4 students on the case studies in class and the group will turn in ONE group response. Pre-class reading will be assigned if appropriate.
- Everyone in the group will receive the same score but 5 pts. of the score will be peer rewarded to ensure all group members are contributing to the response.
- Material for the case studies will either be on Webcourses or provided in class.
- Students who are absent on case study days for documented and excused absences will be responsible for completing their own case study analysis.
- Submissions will be on Webcourses. Please refer to each case study and rubrics for details on submissions and due dates.
  - Late submissions will be accepted but will lose 20% of the point value for each day late.

**Marine Biology in the News (20 pts.):**

- **Due date: March 19<sup>th</sup> at 11:59 PM.**
  - Late submissions will be accepted but will lose 20% of the point value for each day late.
- Each student will summarize an article of their choice concerning the marine environment in the current news.
- Submissions will be on Webcourses. Please refer to the assignment for details on submission and rubric.

**“Speed Date” Organism (20 pts.):**

- **Due: April 4th at beginning of class time (9:00 AM)**
  - Late submissions will be accepted but will lose 20% of the point value for each day late.
  - Students are required to attend the presentation day as part of the grade (only documented excuses accepted)
- Students will be randomly assigned a marine organism for a VERY BRIEF individual presentation.
- Detailed rubric is on Webcourses.

**Reflections (15 pts. total):**

- Three (3) personal reflections each worth 5 pts. (total of 15 pts.) will be submitted on Webcourses (Please refer to course schedule below for due dates).
  - Late submissions will be accepted but will lose 20% of the point value for each day late.
- Information about what to include in Reflections can be found within the Assignment information.
- Due to the personal nature of Reflections, assessment will be based not on a “right” or “wrong” response but depth of thought in your Reflection will be assessed.

**Wild Card (5 pts.):**

- I don't like the total points being 495 so something will be announced at a later time!

**Other Grade Information:**

- **Grade Scale:** A=90-100%; B+=87-89%; B=80-86%; C+=77-79%; C=70-76%; D+= 67-69%; D=60-66%; F<60% (Note: No minus grades, e.g. “A-” or NC grades.)
- For all missed exams, quizzes, presentation or other required attendance days, makeup exams or alternative options must be approved at the discretion of Dr. Diercksen and *will require documentation*.

**Classroom Conduct:** By enrolling at UCF, all students have agreed to abide by the Golden Rule. Please become familiar with this document at: <http://www.goldenrule.sdes.ucf.edu>

- Students who fail to show respect for the instructor or fellow students by talking, texting, using their laptops for non-class related material, etc. will be asked to leave.

**Academic Integrity:**

- Cheating on lecture exams and quizzes will not be tolerated.
- Plagiarism will also be monitored on all items turned in for any assignments.
- Penalties for cheating and plagiarism can include but are not limited to:
  - A failing grade on an assignment or in the course
  - Suspension or expulsion from the university
  - A "Z Designation" on a student's official transcript indicating academic dishonesty
    - For more information about the Z Designation, see <http://z.ucf.edu/>
- Students who are caught cheating will be immediately referred to the UCF Disciplinary Action Committee.

**Disability Access Statement:**

- Students who need accommodations must be registered with Student Accessibility Services (SAS), Student Resource Center Room 132, phone (407) 823-2371, TTY/TDD only phone (407) 823-2116, before requesting accommodations from the professor.
- Students are expected to schedule their own exams with SAS to be completed on the same day exams are given in the classroom but please let Dr. Diercksen know if you are taking your exams at SAS or wish to discuss other accommodations.

**Spring 2019 Schedule (subject to change)**

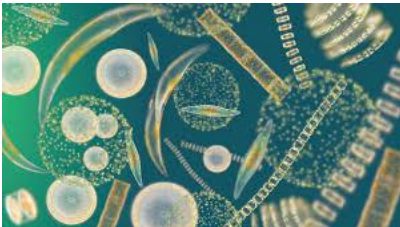
**Week 1: January 8 & 10**



Reading: Chapter 1: *Ocean Environment*; Chapter 7: *Intertidal Life* (pages 119-120)  
Lecture Topic: Introductory Oceanography

---

**Week 2: January 15 & 17**



Reading: Chapter 2: *Marine Biological Processes*  
Lecture Topics: Marine Primary Production  
**Ocean Acidification Case Study**  
**January 15: Reflection #1 due 11:59 PM**

---

**Week 3: January 22 & 24**



Reading: Chapter 3: *Life in the Coastal Ocean* (pgs 38-50); Chapter 7: *Intertidal Life* (pgs 120-127)  
Lecture Topic: Coastal Communities (kelp forests, sea grass meadows, soft & rocky bottom, estuaries)  
**January 22 Quiz #1**

---

**Week 4: January 29 & 31**



Reading: Chapter 4: *Polar Marine Biology* (pages 60-73)  
Lecture Topic: Polar Communities

---

**Week 5: February 5 & 7**



Reading: Chapter 5: *Marine Life in the Tropics* (pages 77-87 and pages 96-98)  
Lecture Topic: Coral Reefs & Mangroves  
**February 5** Quiz #2

---

**Week 6: February 12 & 14**



Lecture Topic: Open Ocean  
**Crown of Thorns Case Study**

---

**Week 7: February 19 & 21**



Reading: Chapter 6: *Deep Ocean Biology*  
Lecture Topic: Deep Ocean Environment  
**February 19** Quiz #3  
**February 21:** Reflection #2 due 11:59 PM

---

**Week 8: February 26 & 28**



Lecture Topic: Marine Macroalgae & Plants  
**February 28:** Exam 1

---



**Week 9: March 7 & 9**



Lecture Topic: Marine Invertebrates  
March 9: **Marine Biology in the News due 11:59 PM**

---

**March 11-15 SPRING BREAK!!!**



**Week 10: March 19 & 21**



Lecture Topic: Marine Fishes  
March 21 **Quiz #4**

---

**Week 11: March 26 & 28**



Lecture Topic: Marine Reptiles, Birds & Mammals

---

**Week 12: April 2 & 4**

Lecture Topic: Catch Up  
April 2 **Quiz #5**  
April 4 **Speed Date Organism due by 9:00 AM**

---

**Week 13: April 9 & 11**



Reading: Chapter 3: Pages 50-59; Chapter 4: Pages 73-76; Chapter 5: Pages 87-96 & 98-99;  
Chapter 7: Pages 127-131  
Lecture Topics: Human Impact on Ocean  
**Dead Zone Case Study**

---

**Week 14: April 16 & 18**



Reading: Chapter 8: *Food from the Ocean*  
Lecture Topics: Sustainable Fisheries  
**April 18 Exam 2**

---

**Week 15**



April 23 Semester Wrap Up  
**April 23: Reflection #3 due 11:59 PM**  
**April 25: 7:00-9:50 AM Final Exam**