

**ESC-5 OCEANOGRAPHY (Online Lecture) – CRNs 36465 and 36466**

Lecture 3 Units; 3 Lecture Hours; Total Hours: 48-54; Letter Grade; TOP Code: 191900 - Transfer Status: Transferable to both UC and CSU.

**COURSE DURATION:** 14-Week Duration – September 3rd to December 6th

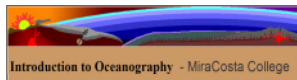
**MEETING TIMES AND PLACE:** Purely Online and Asynchronous; Canvas: <https://canvas.chaffey.edu>

**INSTRUCTOR:** Ray Rector **CONTACT:** Canvas Inbox and college e-mail: [ray.rector@chaffey.edu](mailto:ray.rector@chaffey.edu)

**COURSE DESCRIPTION:** An introduction to the marine sciences. Properties of water, air-sea interaction, ocean currents, waves, tides, beaches, marine life, marine resources, ocean pollution, and the nature and origin of the sea floor.

**COURSE TEXTBOOK: A No-Cost Open-Source E-Textbook:**

[MiraCosta Oceanography 101](#) - Author: MiraCosta College



**Digital Copy:** [HTTPS://WWW.OERCOMMONS.ORG/COURSES/OCEANOGRAPHY-101-MIRACOSTA/VIEW](https://www.oercommons.org/courses/oceanography-101-miracosta/view)

**STUDENT LEARNING OUTCOMES:**

Upon successful completion of ESC-5 (grade “C” or higher), students will be able to:

1. Distinguish between what is fact, hypothesis, theory, and law in oceanography
2. Evaluate the human impact on the world ocean
3. Explain how plate tectonics accounts for the geologic history and topography of the seafloor

**COURSE OBJECTIVES:** Upon completion of the course, the student will be able to accomplish the following in addition to other learned aspects of earth sciences:

1. Apply scientific methodology and understand the limitations and changes in theories proposed by scientists.
2. Discuss major events in the development of modern oceanography.
3. Explain atomic structure and physical and chemical properties of water.
4. Distinguish between major oceanic provinces by bathymetry and biological productivity.
5. Discuss the origin of the ocean floors using the present plate tectonics model.
6. Classify marine sediments by chemical, biological, and spatial distribution patterns.
7. Define the interaction of the atmosphere and oceans.
8. Distinguish between surface and deep circulation patterns and casual mechanisms.
9. Define wave properties and classify wave types.
10. Explain the cause and variations of tides and the effects of tides on land masses, fauna, and flora.
11. Determine the erosional and/or depositional origin of shoreline features.
12. Analyze coastal features such as wetlands and estuaries in terms of bio-productivity, water mixing, human habitat, and global significance.
13. Distinguish between adaptive strategies of pelagic and benthic organisms.
14. Discuss natural resources and pollution of the oceans.

**COURSE COMMUNICATION CHANNELS:** Below are the various means of communication used in this course between professor and student and between students on a weekly basis:

You can contact and talk with me directly in these ways:

- Via Chaffey email at [ray.rector@chaffey.edu](mailto:ray.rector@chaffey.edu) (please allow 24 hours for a reply)
- Via Canvas Inbox (please allow 24 hours for a reply)
- Via Zoom (by Appointment and during Finals Week -Monday through Thursday 5:00 - 7:00pm)

I will contact you in these ways:

- Via Chaffey email
- Via Canvas Inbox
- Via Canvas Announcements (at least once a week)
- Via whole-class or individual feedback on weekly discussions\*
- Via gradebook feedback on each graded assignment and discussion

- Via Canvas gradebook (published grades)

You can contact fellow students in these ways:

- Via Canvas Inbox
- Via weekly discussions\*
- Other methods of contact as arranged between students
- Via the Canvas Questions/Help forum
- Via the Chat feature in Canvas

For most discussions, students will communicate with one another publicly while I will offer individualized feedback through the gradebook.

**CLASS ATTENDANCE, AND ENROLLMENT NOTES, AND DEADLINES:** ALL STUDENTS registered in this course prior to the start date MUST sign-in into the official Canvas course page sometime on or before the end of the THIRD DAY of classes on the first week of the semester - **Thursday, September 5th, 2024**, in order to stay registered in the course. If you do not log by the above date, then you will most likely be dropped to make room for a waitlisted student.

The last day to withdraw with a refund and with no grade (no "W" placed on permanent record.) is **Wednesday, September 18th, 2024**. The very last day to drop a class with a "W" is **Tuesday, October 29th, 2024** (the official withdrawal deadline). If you fail to withdraw by **10/29/24** and/or stop participating in class, then a final grade must be assigned to you.

It is the student's responsibility to add, drop, or withdraw from classes before the deadlines stated in the class schedule. Petitions to add, drop, or withdraw after the deadline will not be approved without written proof of circumstances beyond the student's control, which made her/him unable to meet the deadline. Lack of money to pay fees is not considered an extenuating circumstance. Students anticipating difficulty in paying fees before the deadline should check with the Financial Aid Office about sources of funds or other alternatives for which they may be eligible.

**STATEMENT OF RETENTION:** Student, please discuss your plans to withdraw from class with your instructor prior to dropping. You might have options that may allow you to continue and succeed in class.

**ACCOMMODATION OF DISABILITY:** If you require extra assistance because of a learning or physical disability you should contact Disabled Programs and Services (DPS) at (909) 652-6379. [Click here for the DPS registration form](#). They will help you determine what assistance is available for you. Please submit your DPS paperwork to the instructor in a timely manner.

## **INSTRUCTOR'S ONLINE COURSE POLICIES**

**A. Student Work Load Obligations:** Independent direction, discipline and motivation of the student are critical to both learning course content and academic success in this online course. It will be up to you, the student, for staying up with homework assignments, quizzes, and exams. Make sure and consult the instructor and/or fellow classmates about anything in this course that you find difficult and/or confusing. There are no make-up exams or accepted late work, unless the student provides proof of some compelling reason for the make-up. It is the student's responsibility to contact me personally to forewarn me of any problem in completing the regular-scheduled tests or assignments by their due dates.

**B. Late or Missed Test and Assignment Policy:** All tests and assignments are due each week by Sunday, 11:59 PM. Late tests or assignments will not be accepted and no make-ups offered.

**C. Instructor-Initiated Contact Policy:** This course is taught as a completely on-line course. That is, the communication between the instructor and the students, as well as among students, takes place via electronic means on the Internet. The instructor will be initiating contact with students on a nearly daily basis, via announcements, discussion board posts, email, and by phone. Students are expected to log into this class's MiraCosta Canvas course page regularly (several time per week) to update communication with instructor and fellow students.

**D. Course Assignments and Testing:** Assignments, either for discussion on the bulletin board, or for completion and return to the instructor, will be posted on the course Canvas classroom page. Student contributions will be evaluated on both the quality (intelligent use of scientific terminology learned from using the textbook and other sources) and quantity (frequency and length) of comments. Reports from students, which are submitted directly to the instructor, will be evaluated based on quality (use of appropriate scientific vocabulary, for instance) and on rigor of the analysis. Testing will occur via the Internet within the Canvas course platform, and tests will use a variety of formats (true-false, multiple choice, matching, short answer, and essay). Quizzes are untimed, open book and students get three attempts per quiz. Exams are timed, open book, and students get only one attempt per exam.

**E. Deadlines and Backing-up:** Quizzes will be available each week and will appear with a due date. Availability for quizzes and exams prior to the finishing deadline is roughly three to four days. The research writing assignment will not be accepted or submitted following the due date. Note that because it sometimes happens that computer networks (including your own computer) are down or unavailable, it is preferable to get assignments done a day or two earlier, to avoid trying to post an assignment on the very last minute of the due date, only to find that one's Internet Service Provider is down, for example. ALSO, as with any writing endeavor on a computer, YOU MUST ALWAYS BACK-UP ALL YOUR WORK on an external memory device, in timely increments. The excuse that you permanently lost your entire writing assignment file during a computer crash is not acceptable, because those sorts of mishaps are totally avoidable by doing regular backup. Additionally, you need to make sure to have a planned BACK-UP COMPUTER at your disposal: family members, friends, or library, school, or even your own secondary computer/smart phone.

**F. Online Netiquette and Student Code of Conduct:** This class will be conducted in accordance with the college code of student conduct and basic standards of academic honesty. Students are expected to respect and obey standards of student conduct while interacting online in this course. As your instructor, I have the following expectations of your academic behavior while online:

Promote a positive learning environment by exhibiting mutual respect and consideration of the feelings, ideas, and contributions of others, as reflected in your written dialog. Demonstrate a genuine desire to learn, interact, and improve.

Cheating, plagiarism, or other forms of academic dishonesty are totally unacceptable and will not be tolerated in this class. Violations of standards of academic honesty will be reported to the school dean for appropriate action. A detailed explanation of academic integrity of students is found below:

The academic integrity of the students in this course and the Chaffey Community College District Standards of Student Conduct, require that all student work including, but not limited to, discussion postings, assignments, essays, papers, and exams be free of plagiarism. Students must fully cite any text, graphics, or others' ideas they include in that work. Please review the [Standards Of Student Conduct](#) document found on the Chaffey College Website.

As part of my commitment to academic integrity, student work in this course may be submitted to an online plagiarism checking service.

Any student caught cheating or plagiarizing will be subject to the disciplinary procedures given in the Chaffey College's [Student Academic Integrity Code](#), which may include receiving a failing grade for the assignment. Any cheating or plagiarism will be reported to the Dean of Student Affairs. Specifically, the following actions are examples of cheating/plagiarism (this list is not exhaustive).

1. Copying directly from the textbook. Note: you can summarize the information from when completing homework assignments, but please phrase homework answers in your own words!
2. Using unauthorized notes while taking an exam, or copying another student's work.
3. Sharing exam answers or collaborating with another student during an exam.
4. Turning in homework that contains large blocks of text that are identical or nearly identical to another student's (both parties will receive zero score).
5. Copying from any source (including the Internet) without citing the source.
6. Turning in work completed for another class (unless pre-authorized by the instructor).
7. Passing off any work as your own that is not. This includes use of work completed by other students.
8. To avoid any possibility of someone else plagiarizing your work, I highly recommend that you not share any content-specific material, such as test questions and answers and assignment responses, with any other students.

**Instructor's Artificial Intelligence Policy:** The use of AI for help in doing coursework is prohibited in this class. The use of generative AI tools (such as ChatGPT, Bard, etc...) is not allowed in this course for any part of a graded assignment, discussion, or assessment. Doing so is considered a violation of the academic honesty standards of Chaffey College. Violations could result in failure of the assignment and further appropriate action with the Dean's office.

Please note that if I receive any course work from two or more students that is identical or strikingly similar, I reserve the right to assign all such students a score of zero for the assignment in question. Also please note that if I suspect academic dishonesty on an assignment or an exam, I reserve the right to schedule a one-on-one Zoom meeting to give you the opportunity to demonstrate that you understand the answer(s) you supplied. If a student is unable to demonstrate their understanding of an exam/assignment answer, I reserve the right to assign the student a score of zero for that exam/assignment.

If you have any concerns regarding plagiarism, cheating, or using AI, please contact me, the instructor.

**GRADING/LEARNING ASSESSMENTS:** Grading is based on points earned by completing assignments and tests and participating in class. Final course grades are based purely on point percentages without any type of weighting. The following is the course grading points breakdown based on the assessment activity:

**I. Quizzes:** (10 @ 30 points each = 300 points); Each quiz covers specific topics covered during the course and typically has 30 questions that include true/false, multiple choice, matching, and short fill-in questions; You get TWO (2) attempts allowed per quiz; Quizzes are untimed and open book. Each quiz has a specific due date. Quizzes are found in the Canvas Quizzes folder and can be accessed from the Canvas home page Weekly Schedule.

**II. Final Exam** (150 points) The final exam covers the entire course curriculum and will have roughly 75 questions that include true/false, multiple choice, matching, and short fill-in questions; You get ONE (1) attempt at the final; The final is timed and open book. The final is given during the last week of class and is due on the last day of the course. The final exam is found in the Canvas Quizzes folder and can also be accessed from the Canvas home page Weekly Schedule.

**III. Assignments** (4 total @ 140 possible points: **1)** Personal Greeting assignment = 20 pts; **2)** Seafloor-Ocean-Atmosphere Research and Discussion Forum assignment = 40 points; **3)** Ocean Waves and Coastlines Research and Discussion assignment = 40 points; **4)** Marine Life and Environmental Concerns Research and Discussion assignment = 40 points

**IV. Late Work and Makeup Policy:** Late tests or assignments will not be accepted and no make-ups offered. All tests and assignments are due each week by Sunday, 11:59 PM.

**V. Extra Credit Policy:** Extra credit is available – up to 30 points maximum. There are several extra credit assignments available: they include virtual fieldtrips, and a couple other research activities. Up to 30 points of extra credit is allowed in this course. Extra credit assignments are listed in the Extra Credit Folder. The very last day to turn in extra credit work is **Friday, December, 6, 2024.**

**VI. Grading Scale:** Your final grade is based purely on total percentage out of possible 590 points

100% – 90% = A

89% -- 80% = B

79% -- 70% = C

69% -- 55% = D

Less than 55% = F

**Note:** *Minor adjustments to the deadlines and total course grade points may be made by instructor during the semester. If changes are made, the instructor will inform the students in a timely manner.*

**IMPORTANT COURSE DATES:** Assessment of student learning outcomes for this class includes 10 quizzes, 4 topic discussion activities, 3 assignments, and 1 final exam. Each assessment activity has a specific due date. Make sure to keep a VERY CLOSE track of the class schedule of activities, so that you stay on track with your coursework, and get all your fully completed work turned in on time. I suggest printing out the class schedule and taping it somewhere around your work area so that you can view it regularly.

Below are the important dates for this course (not counting quizzes and topic discussion activities):

- 1) Quiz and Exam completion dates are all on Sundays (except Quiz #10).
- 2) Class Personal Introduction Discussion Assignment due by Thursday, September 5, 2024
- 3) Last day to drop class without a "W" is Wednesday, September 18, 2024
- 4) Seafloor-Ocean-Atmosphere Assignment due Sunday, October 20, 2024
- 5) Waves and Coasts Assignment due Sunday, November 10, 2024
- 6) Last day to drop class with a "W" (withdraw) is Tuesday, October 29, 2024
- 7) Marine Life and Ocean Concerns Research Assignment due Friday, December 6, 2024
- 8) Last day to turn in extra credit is Friday, December 6, 2024
- 9) Final exam completion date is Sunday, December 8, 2024

### **Course Testing Schedule:**

**Quiz I:** Sunday September 8

**Quiz II:** Sunday September 22

**Quiz III:** Sunday September 29

**Quiz IV:** Sunday October 6

**Quiz V:** Sunday October 20

**Quiz VI:** Sunday November 3

**Quiz VII:** Sunday November 10

**Quiz VIII:** Sunday November 17

**Quiz IX:** Sunday November 24

**Quiz X:** Sunday December 1

**Final Exam:** Sunday December 8

**STUDY MATERIALS FOR THIS COURSE:** There are **FOUR primary sources** of oceanographic information at your disposal for successfully completing this course - they are as follows:

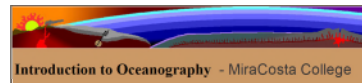
- 1) Course Textbook: the required, free open-source textbook published by MiraCosta College, and/or an optional/ supplemental textbook published by Segar (listed below);
- 2) The instructor's PowerPoint lecture slides and recorded lectures;
- 3) The CCSF oceanography topic tutorial videos;
- 4) The Endless Voyage Streaming Video documentaries

### **1) Course Textbook:**

The first and foremost course resource is your oceanography textbook. Carefully read and study all assigned textbook reading prior to completing the associated quizzes, exams, and assignments. Note below that there is an additional no-cost textbook, that you can supplement or switch with the Oceanography 101 text from MiraCosta.

#### **REQUIRED NO-COST OPEN-SOURCE E-TEXTBOOK:**

**[Oceanography 101](#)** - Author: **MiraCosta College**



**Digital Copy:** <https://www.oercommons.org/courses/oceanography-101-miracosta/view>

#### **Optional/Supplemental No-Cost Open-Source E-Textbook:**

**[Introduction to Ocean Sciences](#)** - 4<sup>th</sup> Ed. Author: Segar

Digital Copy: <https://www.reefimages.com/oceans/SegarOcean4Book.pdf>



### **2) Professor's Recorded Lectures and PowerPoints:** [Professor's PP Slides](#)

The professor's recorded lectures and PowerPoint slide presentations provide a wealth of useful information that closely align with the textbook, EV videos, and test questions. Watch the professor's lectures and view



the complimentary PowerPoint presentations prior to completing the associated quizzes, exams, and assignments. The professor’s recorded lectures and companion PowerPoints slides can be accessed from the Canvas course site, and weekly lectures and PowerPoints are listed in the home page course schedule.

**3) Ocean Topics Tutorial Videos:** [CCSF Oceanography Topics Tutorial Series](#)

An additional set of recorded videos of short earth science slide show presentations, in which each video showcases a specific oceanographic topic, has been created by professor Katryn Wiese of the Earth Sciences Department at City College of San Francisco. These tutorials are also found on YouTube, called “Earth Rocks”. These short tutorial videos on oceanographic topics can be very helpful learning tool to the student for better understanding and reinforcing of the information found in the textbooks and the professor’s lectures. A specific set of these tutorial videos are listed for each week of the course in the schedule, which corresponds to the oceanographic topics covered for that week.

**4) Oceanography Video Documentaries:** [Endless Voyage Documentary Series](#)

The “Endless Voyage” oceanography instructional streaming video series – a set of 26 half-hour lesson. The “Endless Voyage” video series number(s) correspond to the specific topic(s) of homework study each week within the class schedule below the textbook chapter reading assignments. Note that information found within the “Endless Voyage” videos is included in the test questions within the quizzes and exams.

## Chaffey Oceanography Schedule – Fall 2024

<u>Week</u> <u>#/Days</u> and <b>Due Dates</b>	<u>Study Topics, Tests and Assignments</u>	<u>Homework Study Assignments</u> <a href="#">Oceanography 101</a> (MCO Text) <a href="#">Intro to Ocean Sciences</a> (IOS Text) <a href="#">Endless Voyage Videos</a> (EV videos) <a href="#">Prof’s PP Slides:</a> (PPP – Prof’s Slides) <a href="#">Video Slide Tutorials:</a> (VSL – Tutorials)
<b>Week 1</b> 9/3 – 9/8	Course Introduction, Syllabus, and Schedule Importance of Studying the Ocean Brief History of Marine Science The Scientific Method	<a href="#">Course Syllabus and Schedule</a> MCO Ch <a href="#">1</a> and/or (IOS Ch <a href="#">1</a> ) PPP <a href="#">1</a> , EV Videos <a href="#">1</a> , VSL <a href="#">1</a> , <a href="#">2</a>
	Origin of Earth, Moon, Ocean, & Life Geologic Time and Age of the Earth	MCO Ch <a href="#">2</a> and/or (IOS Ch <a href="#">2</a> ) PPP <a href="#">2</a> EV Videos <a href="#">2</a> OTT <a href="#">3</a> , <a href="#">4</a> , <a href="#">5</a> , <a href="#">6</a> , <a href="#">7</a>
<b>Thursday 9/5</b>	<b>Personal Intro to Class Assignment</b>	<b>Submit by Posting Greeting on Discussion Board</b>
<b>Sunday 9/8</b>	<b>Quiz 1</b> – Syllabus & Schedule	Course Syllabus, Schedule and Ocean Intro

<b>Week 2</b> 9/9 – 9/15	Earth's Layered Physiology Isostasy Plate Tectonic Theory Seafloor Spreading and Subduction Plate Boundary Processes and Dynamics Evidence for the Plate Tectonic Theory	MCO Ch <a href="#">3</a> , <a href="#">4</a> and/or (IOS Ch <a href="#">4</a> ) PPP <a href="#">3</a> , <a href="#">4</a> EV Video <a href="#">3</a> , <a href="#">4</a> VSL <a href="#">8</a> , <a href="#">9</a> , <a href="#">10</a> , <a href="#">11</a> , <a href="#">12</a> , <a href="#">13</a> , <a href="#">14</a> , <a href="#">15</a>
<b>Week 3</b> 9/16 – 9/22	Methods of Studying the Seafloor Continental Margin Seafloor Provinces Deep-Ocean Basin Seafloor Province	MCO Ch <a href="#">5</a> and/or (IOS Ch <a href="#">3</a> ; EO Ch <a href="#">3</a> ) PPP <a href="#">5</a> EV Videos <a href="#">5</a> VSL <a href="#">16</a>
	Marine Sediments	MCO Ch <a href="#">6</a> and/or (IOS Ch <a href="#">6</a> ) PPP <a href="#">6</a> EV Videos <a href="#">6</a> VSL <a href="#">17</a>
<b>Wed 9/18</b>	<b>Withdrawal Deadline</b>	<b>Last day to withdraw from class with NO "W"</b>
<b>Sunday 9/22</b>	<b>Quiz 2</b> – Origins and Plate Tectonics	MCO Ch 1–4; (IOS Ch 2-4)
<b>Week 4</b> 9/23 – 9/29	Physical and Chemical Properties of Seawater Seawater Salinity Ocean Stratification Properties	MCO Ch <a href="#">7</a> and/or (IOS Ch <a href="#">5</a> ) PPP <a href="#">7</a> EV Videos <a href="#">7</a> , <a href="#">8</a> VSL <a href="#">18</a> , <a href="#">19</a> , <a href="#">20</a> , <a href="#">21</a> , <a href="#">22</a> , <a href="#">23</a> , <a href="#">24</a> , <a href="#">25</a> , <a href="#">26</a>
<b>Sunday 9/29</b>	<b>Quiz 3</b> – Seafloors and Marine Sediments	MCO Ch 5, 6; (IOS Ch 3-6)
<b>Week 5</b> 9/30– 10/6	Atmospheric Properties and Processes Atmospheric Convection and Air Circulation; Storm Systems and Weather Patterns Air-Ocean Interactions	MCO Ch <a href="#">8</a> and/or (IOS Ch <a href="#">7</a> ) PPP <a href="#">8</a> EV Video <a href="#">10</a> VSL <a href="#">27</a> , <a href="#">28</a> , <a href="#">29</a> , <a href="#">30</a> , <a href="#">31</a>
<b>Sunday 10/6</b>	<b>Quiz 4</b> - Seawater Properties	MCO Chapter 7; (IOS Ch 5)
<b>Week 6</b> 10/7 – 10/13	Ocean Circulation Ocean surface currents Gyres Countercurrents	MCO Ch <a href="#">9</a> and/or (IOS Ch <a href="#">8</a> ) EV Videos <a href="#">11</a> PPP <a href="#">9</a> VSL <a href="#">32</a> , <a href="#">33</a>
	Upwelling and Downwelling Thermohaline Deep circulation El Nino and the Southern Oscillation (ENSO)	MCO Ch <a href="#">9</a> and/or (IOS Ch <a href="#">8</a> ) PPP <a href="#">9</a> EV Videos <a href="#">12</a> OTT <a href="#">34</a>

<b>Week 7</b> 10/14 - 10/20	Ocean Waves – Causes and Dynamics Wind Waves - Origin and Behavior Breaking Waves – Surfing Origin and nature of Tsunamis	MCO Ch <a href="#">10</a> and/or (IOS Ch <a href="#">9</a> ) PPP <a href="#">10</a> , <a href="#">11</a> EV Videos <a href="#">13</a> and <a href="#">14</a> VSL <a href="#">36</a> , <a href="#">37</a>
<b>Sunday 10/20</b>	<b>Quiz 5</b> – Atmosphere and Ocean Circulation	MCO Ch 7, 8; IOS Ch 7-8
<b>Sunday 10/20</b>	<b>Seafloors, Seawater, Atmosphere Circulation &amp; Ocean Currents Research and Discussion Activity</b>	<b>Submit by Posting on Discussion Board</b>
<b>Week 8</b> 10/21 - 10/27	Origin and nature of Tides	MCO Ch <a href="#">11</a> and/or (IOS Ch <a href="#">10</a> ) PPP <a href="#">12</a> EV Video <a href="#">15</a> VSL <a href="#">38</a> , <a href="#">39</a> , <a href="#">40</a>
<b>Week 9</b> 10/28- 11/3	Coasts, Beaches, and Shoreline Processes Human Impacts on Coastal Environments	MCO Ch <a href="#">12</a> and/or (IOS Ch <a href="#">11</a> ) PPP <a href="#">13</a> , <a href="#">14</a> EV Videos <a href="#">16</a> , <a href="#">17</a> VSL <a href="#">41</a> , <a href="#">42</a> , <a href="#">43</a> , <a href="#">44</a>
<b>Tues 10/28</b>	<b>Withdrawal Deadline</b>	<b>Last day to withdraw from class with a “W”</b>
<b>Sunday 11/3</b>	<b>Quiz 6</b> - Ocean Waves & Tides	MCO Ch 9, 10; (IOS 9, 10)
<b>Week 10</b> 11/4- 11/10	Marine Life - Physical Factors and Habitats Marine Life - Evolution & Classification	MCO Ch <a href="#">13</a> , and/or (IOS Ch <a href="#">12</a> ) PPP <a href="#">15</a> , <a href="#">16</a> , <a href="#">17</a> EV Videos <a href="#">18</a> , <a href="#">19</a> VSL <a href="#">44</a> , <a href="#">46</a> , <a href="#">47</a> , <a href="#">48</a> , <a href="#">47</a> , <a href="#">48</a> , <a href="#">49</a> , <a href="#">50</a> , <a href="#">51</a> , <a href="#">52</a> , <a href="#">53</a>
	Primary Productivity Plankton and Marine Food Webs	MCO Ch <a href="#">14</a> and/or (IOS Ch <a href="#">13</a> ) PPP <a href="#">18</a> EV Videos <a href="#">20</a> VSL <a href="#">54</a> ,
<b>Sunday 11/10</b>	<b>Quiz 7</b> - Shorelines and Coastal Waters	MCO Ch 11; (IOS Ch 11)
<b>Sunday 11/10</b>	<b>Ocean Waves and Coastlines Research and Discussion Activity</b>	<b>Submit by Posting on Discussion Board</b>
<b>Week 11</b> 11/11 - 11/17	Marine Invertebrates Marine Vertebrates Pelagic Marine Communities Benthic Marine Communities	MCO Ch <a href="#">15</a> , <a href="#">16</a> and/or (IOS Ch <a href="#">14</a> , <a href="#">15</a> ) PPP <a href="#">19</a> , <a href="#">20</a> , <a href="#">21</a> EV Videos <a href="#">21</a> , <a href="#">22</a> , <a href="#">23</a> VSL <a href="#">55</a> , <a href="#">56</a> , <a href="#">57</a>
<b>Sunday 11/17</b>	<b>Quiz 8</b> - Marine Life I – Overview, Primary Productivity and Plankton	MCO Ch 12-14; (IOS Ch 14-15)



<b>Week 12</b> 11/18 – 11/24	Marine Fisheries – Overview Fishing Practices – The Good, Bad, and the Ugly Fishing Concerns, Management, and Solutions Physical and Energy Marine Resources Resource Extraction Impacts on Marine Habitats	PPP <a href="#">22</a> EV Video <a href="#">24</a> VSL <a href="#">58</a> Special Reading and Video Selections: 1) <a href="#">Marine Ecosystems and Fisheries Report PDF</a> 2) <a href="#">“Troubled Waters” Fisheries Documentary</a> 3) <a href="#">“Overfishing: The Worst and Best Fish to Eat”</a>
<b>Sunday 11/24</b>	<b>Quiz 9</b> - Marine Life II – Marine Animals, Marine Communities, and the Fisheries	MCO Ch 15,16
<b>Week 13</b> 11/28- 12/1	Marine Environmental Concerns: Marine Pollution Climate Change Ocean Warming/Sea level Rise Ocean Acidification	MCO Ch <a href="#">17</a> or (IOS Ch <a href="#">16</a> ) PPP <a href="#">23</a> , <a href="#">24</a> EV Video <a href="#">25</a> VSL <a href="#">58</a> . <a href="#">59</a> . <a href="#">60</a> Special Reading and Video Selections:
<b>Sunday 12/1</b>	<b>Quiz 10</b> - Marine Pollution & Climate Change	MCO Ch 17; IOS Ch 16
<b>Week 14</b> 12/2 - 12/8	Review/Study for Final Exam	Final Study Guide
<b>Friday 12/6</b>	<b>Marine Life and Environmental Concerns Research and Discussion Activity</b>	<b>Submit by Posting on Discussion Board</b>
<b>Friday 12/6</b>	<b>Extra Credit due date</b>	<b>Submit in Assignment Folder</b>
<b>Sunday 12/8</b>	<b>Final Exam</b>	MCO Ch 1–17; (IOS Ch 1-16)

**Please Note:** This is a tentative schedule and may be changed by the instructor at any time during the semester. Students will be notified in a timely basis if changes are made.