

OCEA 101 - INTRODUCTORY OCEANOGRAPHY (LECTURE) - CLASS# 1554

3 Lecture Hours; 3 Units; Letter Grade; Student may petition for Credit/No Credit

MEETING TIMES: 8/20/2018 - 12/15/2018 – Tuesday/Thursday 4:40 pm to 5:55 pm – Room OC4529

INSTRUCTOR: Ray Rector

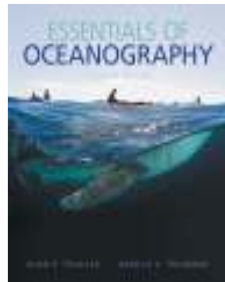
CONTACT: E-mail – oceanprof@seascisurf.com Phone: 760-942-9201

OFFICE HOURS: Tuesdays and Thursdays – 6:00 pm to 6:45 pm; Room OC4529

CLASSROOM WEBSITE: <http://www.seascisurf.com/> Click the “MiraCosta Ocea101 Tu-Th” link

COURSE DESCRIPTION: This course explores the major processes and features of the world’s oceans. Topics include the origin and history of the ocean basins, atmospheric circulation and weather, ocean circulation, and the dynamics of waves, tides, and coastlines. The course also reviews marine life (including plankton, nekton, benthos, and marine mammals), explores the oceans as a resource for people, and considers human impacts on marine environments.

OPTIONAL/HIGHLY RECOMMENDED TEXTBOOK: [Essentials of Oceanography](#), 12th or 11th Edition;
Authors: Trujillo & Thurman



12th Edition: Print ISBN: **9780134073545, 0134073541**

eText ISBN: **9780134298092, 0134298098**

11th Edition: Print ISBN: **9780321814050, 0321814053**

eText ISBN: **9780133558890, 0133558894**

COLLEGE'S FREE OPEN-SOURCE E-TEXT URL: <http://gotbooks.miracosta.edu/oceans>

CLASS CANVAS URL: <http://www.miracosta.edu/instruction/distancededucation/index.html>

PROFESSOR'S WEB URL: <http://www.seascisurf.com/> Click on the “MiraCosta Online” link

STUDENT LEARNING OUTCOMES: Upon completion of this course, students should be able to:

1. Explain the theory of plate tectonics and relate it to the formation of major sea floor features.
2. Reconstruct the circulation patterns of atmosphere and ocean circulation systems, and analyze their interrelationships.
3. Describe the major principles involved in the formation and behavior of waves and tides, and evaluate their effects on coastal processes.
4. Summarize the major physical properties of the oceans and evaluate how each one affects marine communities and marine life.
5. Summarize the major types of marine pollution, including global warming, and evaluate how each one affects marine communities and marine life.

CLASS ENROLLMENT NOTES: 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. If you decide to withdraw from this course, you are reminded to do so before the following deadlines: **September 2** is the last day to withdraw with a refund and with no grade (no “W”) placed on permanent record.), or **November 16** (last day to withdraw with a “W” on your transcript). If you stop coming to class, and fail to withdraw by the 11/16

deadline, then a final grade must be assigned to you. The last day to change from a letter grade to pass/no pass is the September 21. **IMPORTANT NOTE:** If you drop or get dropped from your OCEA101 lecture section, then you will be automatically dropped from this lab course too.

ACCOMMODATION OF DISABILITY: If you have a disability, you are encouraged to contact Disabled Students Programs & Services at 795-6658. Their office is located in Building 3000, adjacent to Parking lot 3C. They will help you determine what assistance is available for you.

INSTRUCTOR'S ATTENDANCE POLICY: Attendance is critical to teaching and learning in this class. You will most likely fall behind in acquiring course content, vocabulary, concepts, and skills if you do not attend class regularly. I realize that situations can arise that are beyond your control, which could interfere with attending this class. A student will be dropped from this course for excessive absences (exceeding 20% of the course meetings). Attendance is taken every class meeting by means of a sign-up sheet that will be passed around at the beginning of each class. Note that it is your responsibility to sign it on the attendance sign-in sheet during each class meeting in order to receive attendance credit for that class meeting. It will be up to you for staying current with timely class notes, classroom website information concerning the material that was missed during absences. There is no make-up or rescheduling of quizzes or exams 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 either, attending the regular-scheduled exams and quizzes, or making assignment due dates. Business, pleasure, or being generally ill, is not a compelling reason. Being horribly sick or having a death in the family is good reason.

TARDINESS and LEAVING CLASS EARLY: Being late to a class once or twice is understandable; however, it should not become a habit. Constant tardiness will not be tolerated. Students will be given a warning and if he or she continues to be tardy, then each additional tardy (past the initial first two) will be counted as half an absence. If you do arrive to class late, then please use the interior entry door to enter the classroom. Leaving class early once or twice during the semester is understandable, but it should be done so not as to be discourteous and disruptive to class. If you continue to leave class early - prior to the instructor's finishing of the lecture - more than twice during the semester, it will count as half an absence. If you do arrive to class early, then please use the interior entry door to exit the classroom.

CLASSROOM BEHAVIOR AND STUDENT CODE OF CONDUCT: Students are expected to respect and obey standards of student conduct while in class and on campus. Charges of misconduct and disciplinary sanctions may be imposed upon students who violate these standards of conduct or provisions of college regulations. As your instructor, I have the following expectations of your behavior in this class:

- 1) Promote a positive learning environment by exhibiting mutual respect and consideration of the feelings, ideas, and contributions of others.
- 2) Demonstrate a genuine desire to learn, interact, and improve academically.
- 3) Demonstrate respect for furniture, tools, equipment, and supplies in the classroom.
- 4) Clean up after yourself.
- 5) No eating or drinking in class; exception is water.
- 6) All cell phones, pagers, and audio players must remain turned off, or in silent mode.
- 7) This class will be conducted in accordance with the college code of student conduct and basic standards of academic honesty. Cheating, plagiarism, or other forms of academic dishonesty are totally unacceptable and will not be tolerated. Violations of standards of academic honesty will be reported to the school dean for appropriate action. See the full version of the instructor's plagiarism policy at <http://www.seascisurf.com/plagiarism.mht> located at the "MiraCosta Ocea101 -Tu-Th link on the professor's website.

CANVAS ONLINE QUIZZES: There are ten (10) required online quizzes for this course, and they are posted on the course **Canvas** page. Each quiz covers a specific set of the course topics, with associated information coming from the textbook, Endless Voyage Videos, instructor's Power Points and class lectures, and the college's E-textbook. Each quiz is available for a period of time (several weeks), and appears in the course schedule with a due date. The due date for each quiz is on a given Sunday before the associated exam. The online quizzes are open-book, and you can start and stop each test within the multi-week test-taking period. You get three (3) attempts at taking each quiz. The quizzes are independent tests; each student must take their own test without help from other people. The online quizzes are automatically graded by Canvas and post immediately to your "Grades" on Canvas.

REQUIRED OCEANOGRAPHIC RESEARCH TERM PROJECT: The research project consists of the following four required components done over the course of the semester:

- 1) Submit a research topic choice under the category "Marine Environmental Issues" - **Due 9/11**
- 2) Prepare/assemble/submit a Written Presentation Outline of your research presentation (must include a comprehensive, format-correct bibliography) Submit either, in Canvas (as an attached DOC file, or as a TYPED paper handed in class to instructor - 60 points – **Due 11/15**
- 3) Give an 8-minute Oral Presentation in front of class – Present highlights of your research - 60 points-
– **Presentation days are 12/27, 12/29, 12/4 and 12/6**
- 4) Fill out Presentation Evaluations of your fellow student's presentations during presentation class meetings, including your own. Receive 1 point per evaluation - typically 25 - 30 points. **Peer Evaluation days are 12/27, 12/29, 12/4 and 12/6**

Notes: The research project information is found both on professor's page and on Canvas. Research projects and presentations may be conducted by a group of two with following restrictions: 1) You must check with instructor first for the "OK"; 2) Each group member must submit separate and original work – groups cannot submit single, nor (remotely) identical work. 3) Each group member must present her or his presentation over the required 8-minute talk time.

GRADING/ASSESSMENT:

- I. Ten (10) multiple-choice online (Canvas) quizzes @ 15 points each – No make-ups
- II. Four (4) true/false, multiple-choice, essay exams (includes final) @ 100 points each – No make-ups
- III. Term Project – Approx. 150 points (Note: Late project assignments not accepted – no exceptions)
- IV. Total possible points = Approximately 700. Final grade is based on a purely points total percentage.
- V. Extra credit is offered: You can earn a maximum of 35 points of extra credit
- VI. Grading Scale: 100% – 90% = A
89% -- 80% = B
79% -- 70% = C
69% -- 55% = D
< 55% = F

Extra Credit Deadline: All extra credit must be turned in by **Thursday, December 6th** for credit. Late extra credit work will not be accepted - no exceptions - period.

CONFLICT RESOLUTION: If you feel that you have valid grounds to challenge a grade, you must first attempt to resolve your problem informally with me, your instructor. If the grade challenge cannot be resolved, you must file a petition for grade challenge with the Dean of Physical Sciences who will work with the Department Chair to help resolve the issue. If resolution does not occur, your next step is to file an appeal with the Vice President of Instruction. Grade Challenge Procedure is found in the college catalogue.

EXTRA CREDIT: Extra credit activities are a great way to get more education (and points) out of this course; I encourage students to do extra credit. There are several ways to earn extra credit in this class:

- 1) Instructor- and student self-guided field trips
- 2) Supplementary research/writing assignments approved by instructor
- 3) Internet-based activities and assignments approved by instructor

Notes: a) The instructor must first approve extra credit work; approval is based on several criteria.
b) Extra credit can be used to boost a student's grade points by a maximum of 35 points.
c) Last day to turn in extra credit work is Thursday December 6th – Late work will not be accepted.
d) The Birch Aquarium voluntary field trip will cost the student about \$12 for admission. However, if a student is financially strapped, the college will reimburse the admission fees (save receipt)

VOLUNTARY WEEKEND FIELD TRIPS: Four weekend field trips are planned for the semester. Field trips earn extra credit and are totally voluntary!

- 1) Weekend field trip: Saturday September 8 – Torrey Pines Beach, 2:00 pm
- 2) Weekend field trip: Sunday October 7 – Blacks Beach, 10:00 am
- 3) Weekend field trip: Saturday October 20 – Moonlight Beach, 10:00 am
- 4) Weekend field trip: Sunday November 11 – Birch Aquarium, 9:00 am

Field Trip Notes: Check the professor's classroom web page for fieldtrip details

- Extra credit and/or excessive absence make-up will be awarded for participating on these trips.
- Experience gained on fieldtrips greatly helps in understanding the text and lecture material.
- Field trips are fun and a great way to better know your classmates and instructor.
- Note that if you cannot attend an in-person fieldtrip, then you can do a virtual fieldtrip option
- Earn up to 10 points per in-person fieldtrip. Earn up to 5 points per each virtual fieldtrip.

CLASSROOM WEBSITE RESOURCE: The instructor has set up a website specifically as an academic resource for his earth sciences students. This site is located at <http://www.seascisurf.com/> Clicking on the Mira Costa OCEA101 Tu/Th link will give you direct access to a wide variety of classroom information and oceanographic resources. Classroom information includes professor contacts, class syllabus and schedule, important dates/deadlines, classroom lecture notes, PowerPoint presentations, exam study guides, practice exams, research project guides and resources, and field trip information. It is strongly urged that you take utmost advantage of this site.

MiraCosta Oceanography Tu-Th Schedule – Fall 2018

Date	Class Meeting Lecture and Discussion Topics	Homework/Tests Textbook Reading and Online Video Viewing
Tu 8/21	Course Introduction Importance of Studying the Ocean Brief History of Marine Science The Scientific Method	Course Syllabus and Schedule TT Ch 1; GB Ch1 EV Videos 2 and 9
Th 8/23	Origin of Earth, Moon, Ocean, & Life Geologic Time and Age of the Earth Earth's Layered Physiology	TT Ch 1, 2; GB Ch 1, 2 EV Videos 1 and 3
Tu 8/28	Continental Drift Hypothesis Plate Tectonic Theory Seafloor Spreading and Subduction	TT Ch 2: GB Ch 4 EV Videos 3, 4
Th 8/30	Evidence for the Plate Tectonic Theory Deadline to withdraw w/ refund & no "W" is September 1	TT Ch 2; GB Ch 4 EV Videos 3, 4
Sun 9/2	Canvas Quiz 1 - Syllabus & Schedule	Canvas Quiz 1 - Syllabus
Tu 9/4	Methods of Studying the Seafloor Continental Margin Seafloor Deep-Ocean Basin Seafloor	TT Ch 3: GB Ch 5 EV Video 5
Th 9/6	Marine Sediments	TT Ch 4: GB Ch 6 EV Video 6
Sat 9/8 2 PM	Voluntary Weekend Fieldtrip - Torrey Pines Beach - Coastal Geology and Tectonics Theme	Online Fieldtrip guide
Tu 9/11	Physical and Chemical Properties of Seawater Research Project Topic Due	TT Ch 4: GB Ch 6 EV Video 6
Th 9/13	Physical and Chemical Properties of Seawater	TT Ch 5; GB Ch 7 EV Videos 7, 8 & 9

Sun 9/9	Canvas Quiz 2 - Ocean Origin and Plate Tectonics Canvas Quiz 3 - Seafloors and Sediments	Canvas Quiz 2 - TT Ch 1, 2 Canvas Quiz 3 - TT Ch 3, 4
Tu 9/18	Atmospheric Properties, Processes & Circulation Storm Systems, Weather Patterns and Climate Review for Exam 1	TT Ch 6; GB Ch 8 EV Video 10 Exam 1 Study Guide Practice Exam 1
Th 9/20	Exam 1 – (Chapters 1 through 4) (Bring a 100-answer scantron card and #2 pencil!)	Exam 1 Study Guide Practice Exam 1
Tu 9/25	Ocean surface currents and Gyres	TT Ch 7; GB Ch 9 EV Video 11
Th 9/27	Ocean vertical currents, and Deep circulation	TT Ch 7; GB Ch 9 EV Video 12
Tu 10/2	Water Waves – Causes and Dynamics Wind Waves - Origin and Behavior	TT Ch 8; GB Ch 10 EV Video 13
Th 10/4	Breaking Waves – Surfing	TT Ch 8; GB Ch 10 EV Videos 13, 14
Sun 10/7 10 AM	Voluntary Weekend Fieldtrip - Blacks Beach Waves & Currents	Online Fieldtrip guide
Tu 10/9	Origin and nature of Tsunami	TT Ch 10; GB Ch 11 EV Video 15
Th 10/11	Origin and nature of Tides Coastlines, Beaches, and Shoreline Processes	TT Ch 10, 11; GB Ch 12 EV Video 16
Sun 10/14	Canvas Quiz 4 - Seawater Properties Canvas Quiz 5 - Atmosphere and Ocean Circulation	Canvas Quiz 4 - TT Ch 5 Canvas Quiz 5 - TT Ch 6, 7
Tu 10/16	Coastlines, Beaches, and Shoreline Processes Human Influences on Coastal Environments Review for Exam 2	TT Ch 11; GB Ch 12 EV Video 17 Exam 2 Study Guide Practice Exam 2
Th 10/18	Exam 2 – (Chapters 5 through 7) (Bring a 100-answer scantron card and #2 pencil!)	Exam 2 Study Guide Practice Exam 2
Sat 10/20 10 AM	Voluntary Weekend Fieldtrip - Moonlight Beach Coastal Processes Theme	Online Fieldtrip guide
Tu 10/23	Coastlines, Beaches, and Shoreline Processes Human Influences on Coastal Environments	TT Ch 11; GB Ch 12 EV Video 17
Th 10/25	Marine Life - Evolution & Classification Marine Life - Physical Factors and Habitats	TT Ch 12; GB Ch 13, 14 EV Videos 18, 19
Tu 10/30	Marine Food Webs and Feeding Relationships Primary bio-production Types of Phytoplankton and Seaweeds	TT Ch 13; GB Ch 12 EV Videos 20
Th 11/1	Marine Invertebrates and Fishes	TT Ch 14, 15; GB Ch 14, 15,

	Marine Communities	16; EV Videos 21, 22, 23
Sun 11/4	Canvas Quiz 6 - Ocean Waves Canvas Quiz 7 - Shorelines	Canvas Quiz 6 - TT Ch 8, 9 Canvas Quiz 7 - TT Ch 10, 11
Tu 11/6	Marine Invertebrates, Fishes and Mammals Marine Communities Review for Exam 3	TT Ch 14, 15; GB Ch 14, 15, 16; EV Videos 21, 22, 23 Exam 3 Study Guide Practice Exam 3
Th 11/8	Exam 3 – (Chapters 8 through 11) (Bring a 100-answer scantron card and #2 pencil!)	Exam 3 Study Guide Practice Exam 3
Sun 11/11	Voluntary Weekend Fieldtrip - Birch Aquarium Marine Life and Environmental Issues Theme	Online Fieldtrip guide 9 am meeting time
Tu 11/13	Marine Biological Resources– Marine Fisheries Marine Seafloor Resources – Physical and Energy	TT Ch 10, 11; GB Ch 12 EV Video 24
Th 11/15	Environmental Concerns -- Marine Pollution Deadline to withdraw with a "W" is November 17 Oral Presentation Written Outline due -	TT Ch 16; GB Ch 17 EV Video 25; Teacher's Refs
Tu 11/20	Environmental Concerns – Global Warming / Climate Change	TT Ch 11, 16; GB Ch 17 EV Video 25; Teacher's Refs
Th 11/22	Thanksgiving Holiday	No course work
Tu 11/27	Student Presentations -- See website for details	Prepare Presentation
Th 11/29	Student Presentations -- See website for details	Prepare Presentation
Tu 12/4	Student Presentations -- See website for details	Prepare Presentation
Th 12/6	Student Presentations -- See website for details Review for Final Exam Last day to turn in Extra Credit – No Exceptions	Final Study Guide Final Practice Exam
Sun 12/9	Canvas Quiz 8 - Marine Life I Canvas Quiz 9 - Marine Life II Canvas Quiz 10 - Marine Resources, Pollution & Climate Change	Canvas Quiz 8 - TT Ch 12, 13 Canvas Quiz 9 - TT Ch 14, 15 Canvas Quiz 10 - TT Ch 11, 16
Th 12/13	Final Exam - 4:00pm to 5:50pm (Chapters 12 through 15)	Final Study Guide Final Practice Exam

Disclaimer: This is a tentative schedule and may be changed by the instructor at anytime during the semester. Students will be notified in a timely basis if changes are made.