



UNIVERSITY of HAWAII®
WINDWARD
COMMUNITY COLLEGE

OCN 201 SCIENCE OF THE SEA

3 credits (CRN 64421)

Days and Time: T/R 11:30-12:45 (Room: Hale 'Imiloa 117)

INSTRUCTOR: Pavica Srsen, MSc.

OFFICE: Hale 'Imiloa 119

OFFICE HOURS (times students may drop in for help): Tue 1:30-3:30 pm and Thr 3:45-4:45 pm
or email me to set an appointment

TELEPHONE: 236-9257

EMAIL: pavica@hawaii.edu

EFFECTIVE DATE: Fall 2018

WINDWARD COMMUNITY COLLEGE MISSION STATEMENT

Windward Community College offers innovative programs in the arts and sciences and opportunities to gain knowledge and understanding of Hawai'i and its unique heritage. With a special commitment to support the access and educational needs of Native Hawaiians, we provide the Ko'olau region of O'ahu and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence.

CATALOG DESCRIPTION

An introductory course to oceanography covering the dimensions of the science of oceanography, the physical and chemical properties of sea water, waves, tides, currents, life in the ocean, and the geologic structure of the ocean floor, environmental concerns, and human use of the oceans. (3 hours lecture) WCC DP

PREREQUISITES

No prerequisites nor co-requisites. The student is recommended to take the companion laboratory course OCN 201L concurrently with OCN 201 when it is available.

STUDENT LEARNING OUTCOMES

As a result of taking this course, students can expect to attain the following outcomes:

1. Understand how the scientific method works, how it has been applied in Earth science, and how it differs from other ways of acquiring knowledge.
2. Articulate how the Earth is in integrative system across many scientific disciplines.
3. Understand the internal structure of the Earth and the dynamic processes of plate tectonics that shape its surface, including sea floor spreading, subduction, and continental drift.
4. Understand the causes of rising sea level and its impacts on coastal areas, including erosion and beach loss.
5. Identify the major pathways of chemicals to the oceans and the effect that biological processes have on redistributing and removing chemicals from the oceans.

6. Describe the major processes that cause the deep and shallow circulation of water in the oceans.
7. Identify the major marine habitats, the types of organisms that live in those habitats, and give examples of how organisms are adapted to their habitat.
8. Describe the types of interactions that occur among organisms in the marine food web and between organisms and their environment.

REQUIREMENTS SATISFIED BY THIS CLASS

- This class may satisfy the Windward Community College Associate in Arts Degree diversification requirement for a Natural Sciences physical science class (DP).
- This class may partially satisfy requirements for the Windward Community College Academic Subject Certificate in Bio-Resources and Technology, Bio-Resources Development and Management Track (Elective Set II: Environment and Ecology).
- This class may partially satisfy requirements for the University of Hawai‘i Marine Option Program Certificate as a marine survey course.

COURSE TASKS (*Subject to change*)

MEDIA TOPICS. The media topics encourage students to read the media for earth science articles and to relate classroom topics to local, national or international issues that affect the environment. Each student will select an article from a newspaper, magazine or website about a subject related to a topic discussed in class. Students will hand in a written summary (around 1 page long, double space, 1-1.5” margins, 12- point font, including assignment title, student's name, and date). To receive full credit, students must provide the following: 1. Information on where and when the article was published and what the title was; 2. A copy of the article or the web address; 3. A brief summary of the article; 4. Three to five pieces of information learned in class that relate to the article. There will be a total of 3 media topics (roughly one per month) offered throughout the semester but only one is mandatory; other 2 are optional and will earn you extra credit. **The submission deadlines are: Sep 28th, Oct 26th, and Nov 30th** (emailed or printed out). No late submissions. You can only submit *one* media topic per month (Sep-Nov), so please plan ahead. I will send out reminders a week before the submissions are due.

QUIZZES AND HOMEWORKS The student will take a minimum of 6 quizzes/homework assignments. These quizzes (administered and written in class) and homework assignments will have 2-8 questions requiring short answer and will address the detailed content and major concepts presented in the previous 1-3 class lectures and assigned readings. If the student takes more than six quizzes/homework assignments, only the best six scores will be used in calculating the student's total points. No make-up quizzes/homework assignments for missed quizzes/homework assignments will be administered for computer/internet crashes and undocumented illnesses/emergencies.

EXAMINATIONS. The student will take one midterm examination and a non-cumulative final examination to demonstrate understanding of information presented primarily during lectures and found in assigned reading. Exams will be written and administered in class. These proctored exams will be closed-book exams and students will not be allowed to refer to texts, notes, nor other materials while taking the exam. The student must take the exam during the scheduled time period. A student missing an exam because of an illness (doctor’s note required) or legitimate emergency may take a make-up exam as soon as possible after the student returns from the illness and as determined by the instructor. In such a circumstance, the student should make

every reasonable attempt to contact the instructor before the exam period is over (or as soon as possible). While make-up exams will cover the same content area as a missed exam, the exam format and specific questions will be different.

Extra credit (1 point for each event) may be obtained via documented attendance (please submit an one-paragraph summary) at Marine Option Program (MOP) talks on any UH campus, by visiting either of the UH oceanographic ships, attending lectures/seminars in the Departments of Oceanography/Geology & Geophysics/Biology at UH Manoa, Bishop Museum, etc. **Before doing any of these, please check with the instructor.** Up to 5 points of extra credit will be awarded for each of the extra media topics.

ASSESSMENT TASKS AND GRADING

The assignment of points will be according to the following protocol:

Media Topic	5	%
Class Participation	5	%
Quizzes/Homework	30	%
Midterm Examination	30	%
<u>Final Examination</u>	<u>30</u>	<u>%</u>
TOTAL	100	%

Letter grades will be assigned as follows:

A	90% or above in total points.
B	80-89.9% of total points.
C	65-79.9% of total points.
D	55-64.9% of total points.
F	Below 55% of total points or informal or incomplete official withdrawal from course.
I	Incomplete; given at the INSTRUCTOR'S OPTION when student is unable to complete a small part of the course because of circumstances beyond his or her control. It is the STUDENT'S responsibility to make up incomplete work. Failure to satisfactorily make up incomplete work within the appropriate time period will result in a grade change for "I" to the contingency grade identified by the instructor (see catalog).
CR	65% or above in total points; the student must indicate the intent to take the course as CR/NC in writing by the end of the 10th week of classes (see catalog).
NC	Below 65% of total points; this grade only available under the CR/NC option (see above and see catalog).
N	NOT GIVEN EXCEPT UNDER EXTREMELY RARE CIRCUMSTANCES (e.g., documented serious illness or emergency that prevents the student from officially withdrawing from the course); never used as an alternative for an "F" grade.
W	Official withdrawal from the course after the third week and prior to the end of the 10th week of classes (see catalog).

Waiver of minimum requirements for specific grades may be given only in unique situations at the instructor's discretion.

LEARNING RESOURCES

Recommended: either *Essentials of Oceanography* by T. Garrison (any edition); or *Oceanography: An Invitation to Marine Science* by T. Garrison (any edition). The course material will be based mostly on these two text books (the two text books have very similar content, and are organized in the same way).

Other useful, and also not required books: *Essentials of Oceanography* by A. Trujillo and H. Thurman; *Introduction to Ocean Sciences* by D. Segar (open source textbook, download at <http://www.reefimages.com/oceansci.php>)

Handouts and selected readings from various texts may also be distributed through the class Laulima site.

STUDENT RESPONSIBILITIES

The student is expected to attend and actively participate in all course lectures and activities, and complete all assignments, quizzes and examinations on time.

The student is expected to be prepared in advance before the class sessions. Being prepared includes the following: having read text materials (e.g., textbook readings and other resources) assigned for that day's activities and bringing required work materials (e.g., textbook, handouts, writing supplies, etc.) to the session.

Any changes in the course schedule, such as examination dates, deadlines, etc., will be announced ahead of time in class and on Laulima. It is the student's responsibility to be informed of these changes.

It is the student's responsibility to be informed about deadlines critical to making registration changes (e.g., last day of erase period and last day for making an official withdrawal).

Students should expect a level of difficulty comparable to other 200-level science classes intended for non-science majors. When difficult concepts and detailed information are presented, it is the student's responsibility to take the appropriate steps to learn and understand these concepts and information.

Science courses at W.C.C. generally require two to three hours of independent private study time for each hour in class. However, because of the nature of the material presented in OCN 201, more study time may be required (depends upon the student's science background). It is the student's responsibility to allocate the appropriate time needed for study in an environment conducive to quality study. The student must budget time efficiently and be realistic about all personal and professional commitments that consume time.

HOW TO SUCCEED IN THIS CLASS

Understanding any science involves understanding many difficult concepts and vocabulary, not just knowing facts. The student should know that the details to these concepts are important. In addition, the student will be introduced to hundreds of new words. In some cases, words that are familiar in a context other than ocean science will be introduced in the context of oceanography. The student will need to understand and use these terms in an oceanographic context.

Students are expected to participate in all lecture activities and complete all course assignments on time.

The student will not succeed in this class without taking careful lecture notes and reading the corresponding material in the textbook. As soon as possible (best if done on the same day), the student should copy over these lecture notes filling in gaps and missing information by referring to the textbook and other resources provided. The student should carefully review these rewritten lecture notes as often as possible.

In addition to copying over lecture notes, study activities should include drawing labeled

diagrams or graphs that illustrate important concepts (e.g., the profile of the ocean floor, temperature change with depth in the ocean, or the main features of a deep-water ocean surface wave). These diagrams need not be works of art, but should clearly illustrate significant information. Before an exam, it would be useful to redraw these labeled diagrams and graphs from memory.

The student should make flashcards for each new vocabulary word presented (refer to textbook and study guides for lists of required terms). The student should use these cards for self-testing as often as possible. The student should also practice using the words to explain oceanographic concepts.

The student should do all of the recommended study guide activities and review all of the Internet resource materials provided.

The textbook and other resources may include useful study questions. The student should write out answers to all of these questions as though they were required assignments. Students could exchange these answers and provide constructive feedback to each other.

The student should read the textbook materials corresponding to a particular lecture before and after that lecture.

Students are recommended to establish study groups and study together. The students in these groups may test each other's knowledge and understanding of the information. They may also take turns teaching each other.

The student should ask the instructor to explain the things that the student does not understand.

MySuccess: Students may be referred for extra help or advising through MySuccess. Students can also explore resources at MySuccess.Hawaii.edu and windward.hawaii.edu/MySuccess

DISABILITIES ACCOMMODATIONS

If you have a physical, sensory, health, cognitive, or mental health disability that could limit your ability to fully participate in this class, you are encouraged to contact the Disability Specialist Counselor to discuss reasonable accommodations that will help you succeed in this class. Ann Lemke can be reached at 235-7448, lemke@hawaii.edu, or you may stop by Hale 'Ākoakoa 213 for more information.

TITLE IX

Title IX prohibits discrimination on the basis of sex in education programs and activities that receive federal financial assistance. Specifically, Title IX prohibits sex discrimination; sexual harassment and gender-based harassment, including harassment based on actual or perceived sex, gender, sexual orientation, gender identity, or gender expression; sexual assault; sexual exploitation; domestic violence; dating violence; and stalking. For more information regarding your rights under Title IX, please visit: [https://windward.hawaii.edu/Title IX/](https://windward.hawaii.edu/Title_IX/).

Windward Community College is committed to the pursuit of equal education. If you or someone you know has experienced sex discrimination or gender-based violence, Windward CC has resources to support you. To speak with someone confidentially, contact Karla Silva-Park, Mental Health Counselor, at 808-235- 7468 or karlas@hawaii.edu or Kaahu Alo, Designated Confidential Advocate for Students, at 808-235- 7354 or kaahualo@hawaii.edu. To make a formal report, contact the Title IX Coordinator at 808-235-7393 or wcctix@hawaii.edu.

ACADEMIC INTEGRITY

Work submitted by a student must be the student's own work. The work of others should be explicitly marked, such as through use of quotes or summarizing with reference to the original author.

Students can upload papers to <http://www.TurnItIn.com> to have papers checked for authenticity, highlighting where the paper potentially fails to appropriately reference sources.

In this class, students who commit academic dishonesty, cheating or plagiarism will have the following consequence(s):

Students will receive a failing grade for plagiarized assignments.

All cases of academic dishonesty are referred to the Vice Chancellor for Student Affairs.

ALTERNATE CONTACT INFORMATION

If you are unable to contact the instructor, have questions that your instructor cannot answer, or for any other issues, please contact the Academic Affairs Office:

Location: Alakai 121

Phone: 808-235-7422

Email: wccaa@hawaii.edu