



UNIVERSITY of HAWAII®
WINDWARD
COMMUNITY COLLEGE

[OCN 201, Science of the Sea]

[3 Credits (CRN 61471)]

Mondays 2:44 to 3:15; Wednesdays 1:55 to 3:55

INSTRUCTOR: Derek Esibill

OFFICE: [Hale Uluwehi B104]

OFFICE HOURS: [Tuesdays and Thursdays 3:00-5:00]

TELEPHONE: [(808) 264-6388] **EMAIL:** [esibill@hawaii.edu]

EFFECTIVE DATE: Fall 2023

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

OCN 201 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. This course offers a research experience in science, technology, engineering, and/or mathematics, emphasizing the application of the scientific method to a specific project. The Experiential Learning in Environmental Sciences course for youth in Hawai'i and the communities of O'ahu, will focus on utilizing a hands-on educational approach in an effort to provide Hawai'i's high school students with a depth of knowledge and understanding that will support them in making relevant and informed decisions with respect to the environment. This course will consist of a clearly defined focus on stewardship through discussions on concepts and information led by scientists and professionals in the areas of environmental science, marine science, meteorology, biology, chemistry, creative writing, scientific writing, art, technology, and Hawaiian culture, focusing these disciplines as they pertain to oceanography. These participating scientists, professionals, and staff will provide the students with hands-on training on techniques and equipment use to establish a solid knowledgebase and skill set in environmental science. Students will engage in ridge to reef expeditions that quantify ecosystem functionality along with stewardship activities that aid in the restoration of ecosystem functionality and human well-being.

Activities Required at Scheduled Times Other than Class Times

We will be having 4 field trips to engage with ocean and issues involving ocean processes and anthropogenic climate change. You will need to spend out of class time working on your final research paper and presentation. Those times will be posted in Google Classroom and communicated over email, as well as in our evolving syllabus schedule. Students are expected

to familiarize themselves with the WCC Library via the web link
<https://library.wcc.hawaii.edu/home>

STUDENT LEARNING OUTCOMES

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

1. Explain the process and philosophical basis of scientific inquiry.
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 seafloor spreading, subduction, and continental drift.
4. Describe the major processes that cause the deep and shallow circulation of water in the oceans.
5. Understand the causes of rising sea level and its impacts on coastal areas, including erosion and beach loss.
6. 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.
7. Describe the types of interactions that occur among organisms in the marine food web and between organisms and their environment.
8. Identify the major pathways of chemicals to the oceans and the effect that biological processes have on redistributing and removing chemicals from the oceans.
9. Evaluate current environmental issues and problems including the solutions and management practices that have been used or offered to address these issues and problems.
10. List the course's student learning outcomes as they are listed in the current catalog.]

COURSE TASKS

[The Experiential Learning in Environmental Sciences course at Windward Community College focuses on utilizing hands-on, experiential education approaches and discussions by Hawaii's scientists and professionals in an effort to support and provide Hawaii high school students with a depth of knowledge and understanding that will allow them to make relevant and informed decisions regarding environmental stewardship and career choices. Students enrolled in this course will be evaluated through attendance and active participation, written exercises, quizzes that review scientific concepts and applications, laboratory/field reports, a formal scientific paper, a final examination, and a symposium presentation.

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

Active Participation & Attendance	200	points
Daily Written Exercises	50	points
Laboratory/Field Reports	150	points
Formal Scientific Paper	200	points
Final Examination	200	points
Symposium Presentation	200	points
TOTAL	1000	points

Letter grades will be assigned as follows:

A	90% or above in total points.
B	80-89.9% of total points.
C	70-79.9% of total points.
D	60-69.9% of total points.
F	Below 60% of total points or informal or incomplete official withdrawal from course or unacceptable attendance (<85% of scheduled days and activities).
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).

COURSE CONTENT. (This section is optional)

Concepts or Topics

- Plate Tectonics
- Deep Time
- Oceanic Circulation
- Anthropogenic Climate Change

Skills or Competencies

1. Create and enter data into a data table in excel
2. Create and interpret charts in excel
3. Basic statistical analysis
4. Develop a scientific research question and investigate it.

ADDITIONAL INFORMATION

- [Students are expected to be present in class. I understand the occasional absence and family situations. As this is a hands on project based face to face class attendance is critical. Likewise, being an active learner and engaged in class is critical.]
- Students should come to class with a notebook, pencil, and laptop.
- Cell phones are an essential part of our 21st century lives and they can be quite the distraction. If they are a distraction in class, they will be removed.
- 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 Accessibility Counselor to discuss reasonable accommodations that will help you succeed in this class. Roy Inouye can be reached at (808) 235-7448, royinouye@hawaii.edu, or you may stop by Hale Kāko‘o 106 for more information.

SEX DISCRIMINATION AND GENDER-BASED VIOLENCE RESOURCES (TITLE IX)

Windward Community College is committed to providing a learning, working, and living environment that promotes personal integrity, civility, and mutual respect and is free of all forms of sex discrimination and gender-based violence, including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence, and stalking.

If you or someone you know is experiencing any of these, WCC has staff and resources to support and assist you. To report an incident of sex discrimination or gender-based violence, as well as receive information and support, please contact one of the following:

Leslie Cabingabang, Confidential Advocate
 Phone/Text: ((808) 348-0432 or (808) 341-4952
 Email: advocate@hawaii.edu
 Office: Hale Kāko‘o 107

Desrae Kahale, Mental Health Counselor & Confidential Resource
 Phone: (808) 235-7393
 Email: dkahale3@hawaii.edu
 Office: Hale Kāko‘o 101

Karen Cho, Deputy Title IX Coordinator
 Phone: (808) 235-7404
 Email: kcho@hawaii.edu
 Office: Hale ‘Alaka’i 120

As a member of the University faculty, I am required to immediately report any incident of sex discrimination or gender-based violence to the campus Title IX Coordinator. Although the Title IX Coordinator and I cannot guarantee confidentiality, you will still have options about how your case will be handled. My goal is to make sure you are aware of the range of options available to you and have access to the resources and support you need.

For more information regarding sex discrimination and gender-based violence, the University’s Title IX resources and the University’s Policy, Interim EP 1.204, go to manoa.hawaii.edu/titleix/

ACADEMIC INTEGRITY (This section is optional)

[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. The use of artificial intelligence (AI), such as Chat GPT to author a paper or academic work is not the student’s own work and is considered academic dishonesty.]

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: Alaka'i 121
- Phone: (808) 235-7422