



UNIVERSITY of HAWAII®
WINDWARD
COMMUNITY COLLEGE

BOT 197: Introduction to Algae

3 Credits, CRN: 61463

Online: Start date is August 21, End date is December 10

INSTRUCTOR: Jolie Dollar
OFFICE: Uluwehi B104
OFFICE HOURS: Mondays 12:00 – 1:00 pm or by appointment
TELEPHONE: 808-236-9245 **EMAIL:** jolied@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

This course will cover what algae are, why they are important, and why we are interested in them for both their environmental benefit, as well as their use for products. Students will explore the vast diversity of algae including the characteristics and applications of some of the main types of algae that are in commercial use today. Students will learn about algal ecology and how interactions with the environment, including pest and predators, affect algal productivity. Students will examine the processes of algae bio-manufacturing including production processes, as well as some of the products, benefits, and challenges that impact our ability to make commercially viable products from algae. Repeatable up to 6 credits.

Activities Required at Scheduled Times Other than Class Times

Reading articles and book chapters, watching videos, reflections, assignments, and discussions.

STUDENT LEARNING OUTCOMES

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

1. Identify and describe the major algae groups.
2. Explain algal diversity and ecology.
3. Describe the basics of algae biomanufacturing.
4. Identify and describe the major algae groups used in sustainable commercial applications.

COURSE TASKS

Each week students for 16 weeks will be expected to do the following:

1. Environmental observation – 10%
2. Read relevant article or book chapter – 20%

3. Watch relevant video – 10%
4. Complete reflection assignment – 20%
5. Discuss weekly topic with other students and instructor – 20%
6. Complete end of term assignment for “Adopt an Algae” project – 20%

ASSESSMENT TASKS AND GRADING

See above for course grading breakdown.

COURSE CONTENT

- Week 1: Introductions and Lulima course platform support.
- Week 2: What are algae and why do we want to study them?
- Week 3: Worldwide cultural significance of algae.
- Week 4: History of algology.
- Week 5: Algae classification part 1: Cyanobacteria.
- Week 6: Algae classification part 2: Microalgae.
- Week 7: Algae classification part 3: Macroalgae.
- Week 8: Algae habitats and ecology part 1: Freshwater.
- Week 9: Algae habitats and ecology part 2: Saltwater.
- Week 10: Algae habitats and ecology part 3: Brackish water.
- Week 11: Algae habitats and ecology part 4: Algae in unusual places.
- Week 12: Algae biomanufacturing part 1: Products.
- Week 13: Algae biomanufacturing part 2: Systems.
- Week 14: Algae biomanufacturing part 3: Problems and issues.
- Week 15: Adopt an Algae project preparations and postings.
- Week 16: Adopt an Algae project presentations.

LEARNING RESOURCES

Instructor will provide all learning resources as scanned articles, chapters, and videos.

ADDITIONAL INFORMATION (This may be included here or in an appendix.)

- I look forward to being your instructor for this course. I teach a variety of courses in the Sustainable Agriculture department including: AG 120 Plant Science, AG 202 Agriculture, Environment, & Society, and AG 170: Introduction to Aquaponics and courses through Career & Community Education including: Certified Arborist Exam Prep Course, Advanced Arborist Skills, and Beginning Tree Worker Skills.
- I expect students to complete their own work and respect all students insights and viewpoints.
- I want every student to succeed in this course. Please let me know as soon as possible if you are having difficulties or challenges with the course and/or with life in general. I am willing to work with each student depending on the circumstances.
- I will subtract 2 points for each day an assignment is turned in late unless there is a good, documented explanation.

- 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:

Jojo Miller, Confidential Advocate
 Phone: (808) 348-0663
 Email: advocate@hawaii.edu
 Office: Hale Kāko‘o 110

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.

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