



UNIVERSITY of HAWAII  
WINDWARD COMMUNITY COLLEGE

Ke Kulanui Kaiāulu o ke Ko'olau

## HWST 155L Nā Limu Hawai'i Lab: Hawaiian Seaweeds and their Uses

Fall 2024

1 Credit | CRN 64433 | Hale A'o 102 and Uluwehi

### Windward Community College Mission Statement

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'O keia ka wā kūpono e ho'onui ai ka 'ike me ka ho'omaopopo i kō Hawai'i mau ho'oilina waiwai. Aia nō ho'i ma ke Kulanui Kaiāulu o ke Ko'olau nā papahana hou o nā 'ike 'akeakamai a me nā hana no'eau. Me ke kuleana ko'iko'i e ho'ohiki ke Kulanui e kāko'o a e ho'okumu i ala e hiki kē kōkua i ka ho'onui 'ike a nā kānaka maoli. Na mākou nō e ho'olako, kāko'o a paipai i nā Ko'olau a kō O'ahu a'e me nā hana no'eau ākea, ka ho'ona'auao 'oihana a me ka ho'onui 'ike ma ke kaiāulu — hō'a'ano a e ho'oulu i nā haumāna i ka po'okela.

*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 O'ahu's Ko'olau region and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence*

### Instructor Information

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#### How to Contact Your Instructor

Brianna Ornelas

Office: Hale A'o 202 [ Phone # to be provided later ]

Office Hours: by appointment, just email me and we can work out a time to meet!

Email: bornelas@hawaii.edu

#### About

Aloha kākou! Welcome to HWST 155L. I am excited to be your instructor this semester for this newly developed course. My classroom is one built on respect and reciprocity; all are welcome here. I expect students to complete their own work and respect all students' insights and viewpoints. My overall goal is to get you guys to like limu even just a little bit and for you 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.

## 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

## Course Information

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### Catalog Description

Students will study the various morphologies of local limu species and learn basic limu hatchery and farming techniques such as tumble culture or attached cultivation methods. Hands-on experience in the cultivation, and instruction in the equipment necessary to monitor and manage the cultivation system will take place in the hands-on laboratory. Students are introduced to media preparation, sterile technique, various Limu cultivation methods, and stereomicroscopy. Students will learn seeding techniques for re-planting Limu in critical habitats. Additionally, some lab skills such as DNA extraction/sequencing, and lipid extractions will be covered. Prerequisites: Grade of C or better or concurrent enrollment in HWST 155.

### Student Learning Outcomes

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

1. Identify Hawaiian Limu through keying out species based on morphology.
2. Demonstrate the use of basic lab equipment to analyze culture systems such as stereomicroscopy and biomass measurements.
3. Use DNA sequencing to definitively identify Limu.
4. Apply knowledge to potential limu cultivation and conservation practices in hands on experiential learning. Identify and describe the diversity of Hawaiian limu.

### Required Materials

This book is not a required purchase but could be helpful for learning the material in this class.

*Huisman, J. M., I. A. Abbott & C. M. Smith. 2007. Hawaiian Reef Plants.*

*University of Hawai'i Sea Grant 2nd edition.*

The UH SeaGrant Publications Office has offered to sell books to HWST 155 students at a discounted price. Arrangements will be made to sell books during the second week of class.

## Course Format

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This course is offered in a 16-week time frame. Please note that this is not a self-paced course, the class schedule provided will be followed. In addition, this is a face-to-face course, attendance is expected. It is your responsibility to make prior arrangements with Bri, if you know that you will miss class.

## Course Technology

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### Laulima Learning Management System

- We will use Laulima for most class activities: Course lecture materials, handouts and papers will be posted as pdfs on the course Laulima site.

### Personal Technology

Students are expected to come to class prepared to engage fully in the learning process, which includes refraining from using phones or other personal technology. The use of such devices can be distracting and detract from the educational experience for both you and your peers. If you use writing tablets or laptops for note taking, please discuss with Bri first.

## Participation Verification

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Campuses are required by federal regulations to verify the participation of students in their classes. In accordance with [Executive Policy 7.209](#), all students in the University of Hawai'i system are required to establish "participation" to ensure that they are not dropped from their class(es). Students who fail to participate by the late registration period for a class will be administratively dropped from that class. Students may also be dropped from dependent prerequisite and/or corequisite classes if both courses do not establish participation.

## Grading Policy

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Participation/Attendance: 32.98% (10 points x 16 weeks) = 160 points)

Weekly Assignments: 8.2% (20 points x 2 assignments = 40 points)

Research presentation: 15.46% (75 points)

Draft Research paper: 12% (30 points x 2 assignments = 60 points)

Final Research paper: 30.92% (150 points)

Total points for course = 485

Your grade will be based on your participation and performance in completing the above tasks. Corresponding letter grades are as follows:

A = 100 – 90

B = 89 – 80

C = 79 – 70

D = 69 – 60

F = 59 and below

Please refer to the WCC College Catalog for audit, withdrawal, and incomplete options.

### Late policy

Late assignments will result in a 2 point deduction per day that it is late.

Please email Bri if you think you will not be able to turn an assignment in on time.

### Assessment Tasks and Grading

Participation/Attendance: Attendance will be verified either through sign in sheet or an in-class activity.

Weekly Assignments: Throughout the semester you may have a few assignments to complete that support the topics discussed that week. They will be due the following class meeting.

Research Paper: This semester you will conduct a limu aquaculture experiment. This is a group project. You will use the scientific methods (by all definitions) to develop a question, experimental methodology, and then execute said experiment. A corresponding research paper will summarize your findings. This assignment is equivalent to your final exam.

Drafts of Research Paper: To keep you on track with your assignment and aid in your writing abilities, drafts of your research paper will be due throughout the semester.

Research presentation: At the end of the semester, you will present your experimental findings with your group.

### Semester Schedule

Date	Topics	Assignments
Week 1 8/26 -8/30	Syllabus, Lab safety,	E ho mai practice
Week 2 9/2-9/6	Waikalua field trip	
Week 3 9/9-9/13	Kilo activity, Herbarium demo & cyanobacteria slides	
Week 4	Tentative field trip to Kako'o 'Oiwi	

Date	Topics	Assignments
9/16-9/20		
Week 5 9/23-9/27	Early green limu, start research projects	Kulana Noi'i reading
Week 6 9/30-10/4	Guest lecturer (Invasive limu and photosynthesis)	
Week 7 10/7-10/11	End of greens, key practice, herbarium or research project	
Week 8 10/14-10/18	Waikalua research day	Draft of intro and Methods
Week 9 10/21-10/25	Guest lecturer (Limu & dna sequencing - tentative)	
Week 10 10/28-11/1	Dna extraction	
Week 11 11/4-11/8	Dna sequencing	
Week 12 11/11-11/15	Reds & dichotomous key practice	
Week 13 11/18-11/22	Brown limu	

Date	Topics	Assignments
Week 14 11/25-11/29	Waikalua research work day	Draft of Results and Conclusion
Week 15 12/2-12/6	Herbarium or research project work day	
Week 16 12/9-12/12	Research presentations	
Finals 12/16/24	Research paper due Wednesday Dec 18 by 11:55 pm	

### Other important dates

9/03/24 - Last day to register, Last day to receive 100% tuition refund

9/17/24 - Last day to receive 50% tuition refund, Last day to drop (No "W" on transcript)

11/04/24 - Last day to withdraw from class ("W" on transcript)

### Academic Integrity

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Work submitted by a student must be the student's own work. The work of others should be explicitly marked, such as through the 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.

[Windward CC Student Conduct Information](#)

[UH System Student Conduct Policy EO 7.208](#)

In this course, students must be the primary and majority authors of text, code, analysis, images, graphics, and all course work products and assignments. Students are ONLY permitted to use AI to generate outlines or polish text they have drafted (ex. Rewording a sentence). Any other use of AI applications is considered academic dishonesty.

## How to Seek Academic or Technical Support

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### Academic Support

- [Windward Community College Library](#)
- [Library eResources](#)
- [Ka Piko Writing Lab](#)
- [Ka Piko Speech Lab](#)
- [Ka Piko Math Lab](#)
- [Evening and Online Learning at Windward Community College](#)
- [STAR Balance](#)

### Technical Support

- [UH ITS Help Desk](#) – email [help@hawaii.edu](mailto:help@hawaii.edu) or call 956-8883 (or 1-800-558-2669) for Lulima and most technology support. Available 24 hours a day, 7 days a week, including holidays.
- Student Tech Support - email [winhelp@hawaii.edu](mailto:winhelp@hawaii.edu), call 808-235-7437, or stop by in person at Hale La'akea 228. Available Monday–Friday from 8:00 am–4:00 pm.
- Lulima – Click on the [Request Assistance](#) link at the bottom of any Lulima Page to fill out and submit a question and get your answer via email.
- [Information Security for Students](#)

## College Policies & Support Services

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### Disabilities Accommodations Statement

The Windward Community College's Disability Student Services Office (WCC-DSSO) is committed to providing equal access to qualified students with disabilities.

If you have a physical, sensory, health, cognitive, or mental health disability that could limit your ability to participate fully in this class, you are encouraged to contact the Disability Specialist Counselor, Roy Inouye, to discuss reasonable accommodations that will help you succeed in this class. The Disabilities Counselor can be reached at 808-235-7448, [wccdsso@hawaii.edu](mailto:wccdsso@hawaii.edu), or stop by the office (Hale Kako'o 105) for more information.

## Basic Needs

Basic needs include food and housing, childcare, mental health, financial resources, and transportation. Student basic needs security is critical for ensuring strong academic performance, persistence and graduation, and overall student well-being. If you or someone you know is experiencing basic needs insecurity, please see the [UH System Basic Needs website](#).

## Mental Health Counseling

Mental Health and Wellness at Windward Community College counseling services and activities on campus to support students' life goals as well as their academic goals. Information about services can be found at the [WCC Mental Health & Wellness website](#).

## UH Alerts

The UH Alert emergency notification system alerts the university community in the event of a natural, health or civil emergency. The information you provide will only be used in the event of an emergency that impacts the health and safety of the UH community or the closure of whole campuses. It will not be shared with others or used for routine UH communications or announcements. To sign up, visit [UH Alerts website](#) for more information.

## Financial Aid

If you are receiving financial aid and are contemplating not completing the course, BEFORE you withdraw, it is highly recommended that you contact the Financial Aid Office at 808-934-2712 or email them at [wccfao@hawaii.edu](mailto:wccfao@hawaii.edu) to discuss the impact this decision may have on your financial aid eligibility.

## Student Conduct Code

Windward Community College follows the University of Hawai'i Code of Student Conduct which defines expected conduct for students and specifies those acts subject to University sanctions. Students should familiarize themselves with the Code of Student Conduct since, upon enrollment at Windward Community College, the student has placed herself/himself under the policies and regulations of the University and its duly constituted bodies. The disciplinary authority is exercised through the Office of the Vice Chancellor for Student Affairs. Copies of the Student Conduct Code are available at the Office of the Vice Chancellor for Student Affairs or [online](#).

## Title IX - Sex Discrimination And Gender-Based Violence Resources

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, UH System Confidential Advocate  
Phone/Text: (808) 348-0432 or (808) 341-4952  
Email: [advocate@hawaii.edu](mailto:advocate@hawaii.edu)  
Office: Hale Kāko'o 107 (Wednesdays)

Mykie E. Menor Ozoa-Aglugub, J.D., Title IX Coordinator  
Phone: (808) 235-7468  
Email: [mozoa@hawaii.edu](mailto:mozoa@hawaii.edu)  
Office: Hale Kāko'o 109

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

Karen Cho, Deputy Title IX Coordinator  
Phone: (808) 235-7404  
Email: [kcho@hawaii.edu](mailto: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 <https://www.hawaii.edu/titleix/>