UNIVERSITY of HAWAIʻI
WINDWARD COMMUNITY COLLEGE
Ke Kulanui Kaiāulu o ke Koʻolau

Ono Cooking & Food Science
BIOC 106
SYLLABUS

BIOC 106, Ono Cooking & Food Science
Fall 2026
3 credits, Sec 62285

* This syllabus and/or our Course Schedule is subject to change at any time. I will notify you of any changes via class announcement. Mahalo!

ABOUT WINDWARD COMMUNITY COLLEGE

MISSION STATEMENT

ʻO keia ka wā kūpono e hoʻonui ai ka ʻike me ka hoʻomaopopo i kō Hawaiʻi mau hoʻoilina waiwai. Aia nō hoʻi ma ke Kulanui Kaiāulu o ke Koʻolau nā papahana hou o nā ʻike ʻake akamai a me nā hana noʻeau. Me ke kuleana koʻikoʻi e hoʻohiki ke Kulanui e kākoʻo a e hoʻokumu i ala e hiki kē kōkua i ka hoʻonui ʻike a nā kānaka maoli. Na mākou nō e hoʻolako, kākoʻo a paipai i nā Koʻolau a kō Oʻahu aʻe me nā hana noʻeau ākea, ka hoʻonaʻauao ʻoihana a me ka hoʻonui ʻike ma ke kaiāulu— hōʻaʻano a e hoʻoulu i nā haumāna i ka poʻokela.

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

ʻĀina

Windward Community College is located in the ahupuaʻa of Kāneʻohe and Heʻeʻia in the moku of Koʻolaupoko on the island of Oʻahu. Both ahupuaʻa are directly connected to the moʻo ʻōlelo of Pāpa and Wākea, who are seen as the ancestors of the Hawaiian nation. The campus sits beneath the puʻu of Keahiakahoe, which is also connected to many moʻo ʻōlelo of this ʻāina. Because wind names and rain names are associated with specific ʻāina, the rain name of Kāneʻohe is known as the ʻĀpuakea and the rain name of Heʻeʻia is the Ulumano.

INSTRUCTOR INFORMATION

ABOUT YOUR INSTRUCTORS:

Martine Bissonnette:
I have been teaching chemistry at UH Community Colleges since 2016. My previous work were in the areas of chemical spill emergency response, training, environmental management, and health and safety programs. I love teaching chemistry and helping students understand the connections between science and our everyday environment. Outside of work, I enjoy cooking (and the chemistry of it), surfing and sewing.

Michelle Smith:
I have been with WCC for 20 years teaching biology, anatomy, oceanography and environmental science. I have published a Hawaii-based oceanography textbook for *Science of the Sea* course. I also like combining art and science.

HOW TO CONTACT YOUR INSTRUCTOR:
Martine Bissonnette & Michelle Smith, Lecturers, Biochemistry, Natural Sciences

EMAIL:
To email your instructors, select **Classlist** from the task bar at the top and select both Instructors.

VIRTUAL OFFICE HOURS:
Office hours are usually posted on Sunday, so be sure to check your announcements. Log on to the link at the designated time. If no one shows within 15 minutes the office closes. However, if you need to meet with us, send an email and make an appointment instead

Asking Course Questions
Please use course Q&A in Lamakū Discussions for all general course questions about content, activities, due dates, how work will be graded, etc. We will check Q&A weekly and provide follow-up information there.

Email specific grading questions and/or personal matters, per FERPA, to keep your information protected. Please use Lamaku Email instead of UH Gmail or other email.
* While Lamakū has an Instant Message feature, we prefer email. Please feel free to use Instant Message to communicate with your BIOC 106 classmates if you like.

Contingency Plan
If there is an outage, weather situation, or family emergency on our end, we will do our best to find a way to communicate an update as soon as possible about our return to the course. Mahalo in advance for your understanding and we hope you will do the same.

Course Format & Structure
- This course is offered in a16-week time frame.
- It is online and asynchronous. There are weekly optional office hours on Zoom.
- Please note that this is not a self-paced course; our course schedule is provided in this syllabus.

Regular Substantive Interaction

Online courses at Windward Community College follow the college's RSI Definition for ensuring quality instruction. You can expect me to communicate with you frequently (and in a timely fashion) about our coursework in the following ways during our 16-week course.

1. **Weekly announcements** are usually posted Sunday. However, more announcements may be posted during the week. With Brightspace pulse App students will be notified if an announcement has been posted.
2. **Weekly Office hours** are to address any concerns. Additionally, appointments can be made for
   individual meetings.
3. Timely grading of **Food Journal** (Padlet), **Forum Discussions**, or other assignments will be provided with feedback.

All course activity due dates are listed in Lamakū on the Calendar. Please check your UH email often and set your Lamakū Notifications (both email and D2L Brightspace Pulse App) to receive course notices, such as grading updates, announcements, and activity reminders. I will keep our Lamakū course Grades as current as possible; grading turnaround times and modes of feedback and evaluation are stated in our course Grades, as well as on each activity.

Participation Verification

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). Effective fall 2021, 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.

COURSE INFORMATION

Catalog Description

BIOC 106 'Ono Cooking and Food Science is an online course designed to integrate the science of food with the chemical, physical, and biological nature of food. It will incorporate Hawaiian resources and sustainability. The overall goal of this course is to enhance students' understanding of the science of food using the home kitchen to demonstrate the principles of chemistry, biology, and physics of food through videos, online meetings, inquiry-based activities, and a student-designed research project.

STUDENT LEARNING OUTCOMES

The student will be able to:

1. Describe the fundamental molecules that provide the structure, function, and chemical/physical properties of foods.
2. Describe the microbiology and biotechnology in food systems.
3. Apply food science principles.
4. Describe the local resources that can be used in preparing or preserving food.

TOOL USED FOR ASSESSMENT OF LEARNING OUTCOMES

- Weekly quizzes (these are designed to test students' understanding of and preparation for the week's activity).
- Online forums.
- Food Journals
- Final exam that is cumulative on course content.

Prerequisite(s): Credit for high school chemistry and algebra, or instructor's consent.

COURSE MATERIALS & TECHNOLOGY

LEARNING RESOURCES

Required Instructional Materials:

- Instructor-provided resources
- Lamakū class website
- Brightspace Pulse App

Recommended Reading:

J. Kenji López-Alt (2015). The Food Lab: Better Home Cooking Through Science. W. W. Norton & Company; 1st edition. ISBN-10: 0393081087; ISBN-13: 978-0393081084
Available at WCC Library The Food Lab; The Science of Cooking (ebook); Science and Cooking.

Provost, et al. (2016). The Science of Cooking: Understanding the Biology and Chemistry Behind Food and Cooking 1st Edition. Wiley Pub. ISBN-13: 978-1118674208; ISBN-10: 9781118674208
Available at WCC Library Science and cooking : physics meets food, from homemade to haute cuisine

Brenner et al. (2020). Science and Cooking: Physics Meets Food, From Homemade to Haute Cuisine
ISBN-10: 0393634922
ISBN-13: 978-0393634921

Lamakū Learning Management System (https://lamaku.hawaii.edu/d2l/home)

Learn about the Hawaiian meaning of the word "lamakū": Lamakū Pronunciation, Meaning, and Importance.

- UHCC Lamakū Student Resources (how-to videos)
- Contact UH ITS for 24/7 Lamakū assistance.
- Keeping Accessibility and UDL in Mind
    - If you find any course content that needs remediation and/or updating, please kindly share and I will immediately work to make the content accessible.

- Lamakū courses will appear 5 days before the first day for the academic term and will become inactive (no longer be available to access) 3 weeks after the end of the term.
  Be sure to save any coursework you may need from Lamakū *during* the term.

- Lamakū automatically logs you out *if it does not detect activity for three hours*. A warning message will appear, notifying you of the lack of activity. Activity is defined as clicking a button in Lamakū, such as "Save Draft" or "Next" (in a test), clicking on a course tab, or taking an action that sends information to the server.

Other Technology

D2L Brightspace, the parent company of Lamakū, recommends users choose the latest versions of Google Chrome, Mozilla Firefox, Microsoft Edge, or Apple Safari as their internet browser.

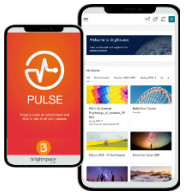
We recommend that students update their internet browser at the start of each term, search how to allow pop-up windows, adjust their cookies, and clear device history. Also, fully restart your computer and/or device from time-to-time to optimize performance.

Review the privacy/security policies before using the technologies we will be using in this class. Contact me if you would like to discuss the use of alternate options or technologies.

- Adobe Reader is used to read course files (Adobe Accessibility statement, Adobe privacy policy)
- Google Drive is UH-provided cloud storage (Google accessibility statement, Google privacy policy)
- Google Docs is used to create documents (Google accessibility statement, Google privacy policy)
- Google Sheets is used to create assignment and reference worksheets (Google accessibility statement, Google privacy policy)
- Google Slides is a presentation authoring software provided by UH (Google accessibility statement, Google privacy policy)
- Padlet is used for some of the discussion activities (Padlet accessibility statement, Padlet privacy policy)
- YouTube is used for delivering some of the course content (YouTube accessibility statement, YouTube privacy policy)
- Zoom is used for the virtual office (Zoom accessibility statement, Zoom privacy policy)

Recommended: Brightspace Pulse App

Mobile phone and iPad users: Go to your app store and download **Brightspace Pulse**. Select Hawaii (University of Hawaii) and enable notifications. This will allow you to manage your course and receive notifications when I post an announcement.



OPTIONAL MATERIAL FOR CLASS RECIPES (PURCHASE):

- Must have access to home kitchen
- pH meter
- Food thermometer
- Basic cooking supplies: bowls, measuring cups and spoons, pots & pans, spoons and spatulas, cookie sheet, oven, microwave, etc...

STUDENTS RESPONSIBILITIES

If the student has an allergy to a food or any special dietary considerations please inform your instructor prior to the activity. They will do their best to find an alternative.

ASSESSMENT TASKS AND GRADING

Grading:

Quizzes (12):	30%
Food Journal	25%
Final Exam:	30%
Participation in online forums (3)	15%
Final Grade:	100%

Grading Scale:

Total Points Grade

100-90%	A
89-80%	B
79-70%	C
69-60%	D
59- 0%	F

QUIZZES (30%)

Fifteen quizzes will be administered on Lamakū. They are open for the specified time period listed on your class schedule. These quizzes will address the detailed content and major concepts presented in the lectures, readings, and activities. A **study guide** is available in Lamakū in Course Resources: Quizzes. Click on the Study Guide link. Since these quizzes may be taken using home computers connected to the Internet, students may refer to instructional resources (lecture notes, etc.) while taking the quizzes. However, each quiz will be timed, the student having only 30 minutes to complete it. No make-up quizzes for missed quizzes.

FOOD JOURNAL (25%)

At the end of each module, you will need to complete the food journal assignment. Journal your

thoughts on this week's lecture, video or article links.

PARTICIPATION IN ONLINE FORUMS (15%)

The student will actively engage in **three online forums** during the semester. These forums, which are meant to entice interest in food science, will involve posting your research or reaction about the specific topic (with a link to any reference). Science Daily is a good place to start looking for an article.

This is posted on the **FORUMS** page on the class Lamakū site. Each forum topic will be open for limited periods of time (typically 1 week) and students will only be able to comment/respond during these open periods.

It should be a few paragraphs in length. For full credit you will also need to comment on another student's post in a respectful manner. A sentence consisting of 'I really like your post' doesn't count as a valid response.

Forum Topics

1. GMOs in food
2. Diet and health
3. The food, the bad, and the ugly (effects of microbes on crops and cooking)

Final Exam (30%)

FINAL EXAM: The final exam will be posted on Lamakū at the end of the semester. There will be 50 multiple choice questions. You will have 1 hour 50 minutes to complete it. You are allowed a 2-sided hand-written note sheet. Please look over the quiz study guides, it covers the same material.

Common sense cooking safety

- Do not cross contaminate veggies by chopping them on a cutting board previously used for meat
- Do not rinse poultry
- Take extra care when preparing foods that contain raw egg, such as homemade mayonnaise, tiramisu and eggnog. Bacteria present on eggshells and inside the egg can contaminate these types of food and cause food poisoning.
- Clean surfaces by washing with warm soapy water; spray tables with standard cleaner with bleach.
- Replace dish sponge often

Schedule

The schedule is subject to change. Should changes occur, you will be notified by email and in announcements. The due dates are Sunday evenings at 11:59, except for the final exam, which has specific times.

Week	Start Date	Due Date	Module/Lab	Topic
1	24 Aug	30 Aug	1	Introduction
2	31 Aug	6 Sept	2	Basic chemistry
3	7 Sept	13 Sept	3	Molecules in biological systems
4	14 Sept	20 Sept	4	Nutrition
5	21 Sept	27 Sept	5	Exploring Meat
6	28 Sept	4 Oct	6	Exploring Eggs
7	5 Oct	11 Oct	7	Exploring Dairy
8	12 Oct	18 Oct	8	Exploring Sugar
9	19 Oct	25 Oct	9	Exploring Flours
10	26 Oct	1 Nov	10	Beasties
11	2 Nov	8 Nov	11	Alcohol
12	9 Nov	15 Nov	12	Food in Hawai‘i: cooking and food security
13	16 Nov	22 Nov	13	Food preservation
14	23 Nov	29 Nov	14	Food Flavors: Taste & Smell, and Chemistry
15	30 Nov	6 Dec	15	Molecular gastronomy
		11 Dec		Final Exam

NATURAL SCIENCES DEPARTMENT POLICY ON WITHDRAWALS AND INCOMPLETE

1. WITHDRAWALS (W GRADES) –

It is the student's responsibility to know the last day of withdrawal, found on academic calendar list: https://windward.hawaii.edu/campus-life/events-calendar/academic-calendar/

Students who no longer attend class and who DO NOT OFFICIALLY WITHDRAW from the course will receive "F" grades.

2. INCOMPLETE (I GRADE) – Students must present the "Request for Incomplete" form prior to the last day of instruction. "I" grades will be given only to students who are achieving passing grades and are very close to completing the course. In addition, the student must have a very good reason for not being able to complete all the work on time.

Examples of extreme or unusual circumstances are:

1. a certified medical reason
2. a death in the immediate family

WINDWARD COMMUNITY COLLEGE POLICY

1. Windward Community College is an Equal Opportunity/ Affirmative Action Institution.
2. Students are expected to attend all classes for which they are registered. If a student is unable to attend class, he or she should contact the instructor in advance to give notification of the absence and make necessary arrangements.

Academic Integrity

Windward CC Student Conduct Information

UH System Student Conduct Policy EO 7.208

In general, work submitted by a student must be the student's own, original work. The work of others should be properly acknowledged, explicitly marked and cited, through the use of quotes and/or summarized reference to the original author via the appropriate citation style indicated by your instructor.

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.

Artificial Intelligence (AI)

UH Executive Policy 2.220 Artificial Intelligence

The Windward CC Library AI Essentials Library Guide provides guidance and has helpful resources for both instructors and students.

AI use is permitted in only a limited context.

It can be used to do the following but not in leu of independent research:

- Creating outlines
- Reviewing Grammer and syntax

The discussion (forums) requires human reasoning and using AI will bypass the intended cognitive process essential for this course, thus will be considered academic dishonesty.

Student Kuleana

- Please review our Hawai'i-Style Netiquette, which blends the values of ALOHA with approaches to how we should consider treating each other online.
- Windward CC has Grievance Procedures in place, but I encourage us to try to work together first to see if we can work through any troubles. Mahalo!

How to Seek Academic or Technical Support

- 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 or call 956-8883 (or 1-800-558-2669) for Lamakū and most technology support. Available 24 hours a day, 7 days a week, including holidays.
- Student Tech Support - email 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.
- Lamakū – Click on the Lamakū Help link in the menu bar at the top of the Lamakū homepage to fill out and submit a question and get your answer via email.
- Information Security for Students

College Policies & Support Services

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.

Disabilities Accommodations Statement

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, or stop by the office (Hale Kako'o 106) for more information.

Financial Aid

If you are receiving financial aid and are contemplating not completing the course it is highly recommended that you contact the Financial Aid Office at (808) 934-2712 or email them at

wccfao@hawaii.edu *BEFORE* you withdraw to discuss the impact this decision may have on your financial aid eligibility.

LGBTQ+
The University of Hawai'i system and Windward Community College are committed to building an inclusive community that supports and advocates for all students, staff, and faculty. We welcome all members of our campus community to our campuses: transgender, māhū, and people of all gender identities. All members of our campus community deserve a work and educational environment free from harassment or bullying based on their sexual orientation, gender identity, or expression. For more information, see the University of Hawai'i Commission on LGBTQ+ Equality. Windward Community College Commissioner: Scott Sutherland, scottjks@hawaii.edu

Mental Health Counseling
Mental Health and Wellness at Windward Community College provides counseling services and activities on campus to support students' life goals as well as their academic goals. Information about services can be found at WCC Mental Health & Wellness.

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, they have placed themselves 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.

TRiO Program
The Federal TRiO Programs are educational opportunity outreach programs designed to motivate and support students from disadvantaged backgrounds. TRiO includes six outreach and support programs targeted to serve and assist low-income, first-generation college students and students with disabilities in progressing through the academic pipeline from middle school to post-baccalaureate programs. Information about services can be found at Windward CC TRiO.

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:

Desrae Kahale, UH System Confidential Advocate
Phone: (808) 235-7393
Email: advocate@hawaii.edu
Office: Hale Kākoʻo 101

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

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

Karen Cho, Deputy Title IX Coordinator
Phone: (808) 235-7404
Email: kcho@hawaii.edu
Office: Hale ʻAlakaʻi 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, refer to the University's Title IX resources, and the Universityʻs Policy, EP 1.204.

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 for more information.