



UNIVERSITY of HAWAII®
WINDWARD
COMMUNITY COLLEGE

Windward Community College

Outline of Course Objectives

BIOL 106 'Ono Cooking and Food Science, S-focused

Fall 2022

INSTRUCTORS: Martine Bissonnette & Michelle Smith

OFFICE HOURS: Scheduled weekly and by appointment

EMAIL: To email your instructors, select the **email icon** on the left task bar, select **Roles**, and select **Instructor**. This will provide your questions to both instructor's.

ZOOM Meetings: link provided weekly

CREDITS: 3

WINDWARD COMMUNITY COLLEGE MISSION STATEMENT

'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.

Catalog Description

BIOL 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.

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

LEARNING RESOURCES

Required Instructional Materials:

- Instructor-provided resources
- Lulima class website

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

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.
- Research proposal. Students are required to write a research proposal for the independent research project they conduct during the final 4 weeks of the semester.
- Final presentation on the research project. In lieu of a final exam, students make oral presentations on their independent research project via video-conference.

MATERIAL REQUIRED FOR CLASS (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 15%

Final Exam: 30%

Participation in online forums (5) 25%

Final Grade: 100%

Grading Scale:

Total Points Grade

100-90% A

89-80% B

79-70% C

69-60% D

59- 0% F

QUIZZES ON LAULIMA (30%)

Twelve quizzes will be administered weekly on Laulima. They are open for 1 week during 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. 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 ON LAULIMA (15%)

At the end of each module you will need to complete the food journal assignment. Journal your thoughts on this weeks lecture, video or article links.

PARTICIPATION IN ONLINE FORUMS (25%)

The student will actively engage in five 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 Laulima 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. Plastics: discussion on plastics, purpose in food industry, plastic ban, alternatives.
3. Diet and health
4. The food, the bad, and the ugly (effects of microbes on crops and cooking)
5. Toxins in the food chain (mercury in fish, microplastic, ciguatera)

Final Exam (30%)

FINAL EXAM: The final exam will be posted on Lualima 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

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/Academics/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. Extended time in a distraction-free environment is an appropriate accommodation based on a student's disability. If you do have a disability and have not voluntarily disclosed the nature of your disability and the support you need, you are invited to contact Ann Lemke at 235-7448, lemke@hawaii.edu, or you may stop by Hale 'Akoakoa 213 for more information.
3. 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.

For those students who receive financial aid and fail to attend the first week of classes without making arrangements with the instructor, the instructor will submit the student's name to the Financial Aid Office. The student will be denied financial aid for the class he/she is not attending. In addition, it is solely the student's responsibility to withdraw from the class or attend the class and pay the tuition.

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:

UH CONFIDENTIAL ADVOCATE

UH Confidential Advocate

Phone: (808) 348-0663

Email: advocate@hawaii.edu

TITLE IX COORDINATOR

Karla K. Silva-Park, Title IX Coordinator

Phone: (808) 235-7468

Email: karlas@hawaii.edu

Office: Hale Kāko'o 128

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

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

TWO-WAY COMMUNICATION DEVICES

These devices are not allowed in the classroom. Please see to it that these devices are turned off while in class.

UH POLICY ON EMAIL COMMUNICATION

The electronic communications policy adopted in December 2005 establishes the University of Hawai'i Internet service as an official medium for communication among students, faculty, and staff. Every member of the system has a hawaii.edu address, and the associated username and password provide access to essential Web announcements and email. You are hereby informed of the need to regularly log in to UH email and Web services for announcements and personal mail. Failing to do so will mean missing critical information from academic and program advisors, instructors, registration and business office staff, classmates, student organizations, and others.