



Chaminade
University
OF HONOLULU

Course Syllabus

[Chaminade University Honolulu](http://www.chaminade.edu)

3140 Waialae Avenue - Honolulu, HI 96816

www.chaminade.edu

Course Number: BI-162L-03-1

Course Title: General Microbiology laboratory.

Department Name: Biology

College/School/Division Name: NSM

Term: Spring 25

Course Credits: 1

Class Meeting Days: Tuesday

Class Meeting Hours: 02:30PM - 05:20PM,

Class Location: Henry Hall, Room L6

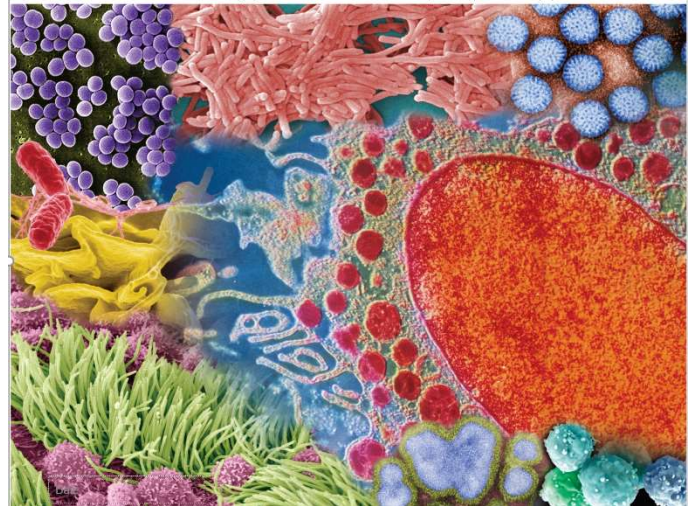
Instructor: Frederique Kandel, PhD.

Email: frederique.kandel@chaminade.edu

Phone: 808.739.8376

Office Location: Henry Hall 7

Office Hours: Wed 1:30 pm to 2:20pm and by appointment.



University Course Catalog Description

Laboratory course to accompany BI 162. Examination, cultivation, and identification of microorganisms pertinent to human health. Techniques covered include asepsis, isolation, culturing, and identification of microorganisms. Materials intensive fee applies

Course Overview

Introduction to microbiology laboratory with an emphasis on clinical approach relevant to health professionals. The laboratory is designed to provide you with hands-on applications of the concepts explored in class. In addition, computer simulations will provide opportunities to reinforce, and at times to go beyond, the techniques explored in the lab.

Marianist Values

This class represents one component of your education at Chaminade University of Honolulu. An education in the Marianist Tradition is marked by five principles and you should take every opportunity possible to reflect upon the role of these characteristics in your education and development:

1. Education for formation in faith
2. Provide an integral, quality education
3. Educate in family spirit
4. Educate for service, justice and peace
5. Educate for adaptation and change

Native Hawaiian Values

Education is an integral value in both Marianist and Native Hawaiian culture. Both recognize the transformative effect of a well-rounded, value-centered education on society, particularly in seeking justice for the marginalized, the forgotten, and the oppressed, always with an eye toward God (Ke Akua). This is reflected in the 'Olelo No'eau (Hawaiian proverbs) and Marianist core beliefs:

1. Educate for Formation in Faith (Mana) E ola au i ke akua ('Olelo No'eau 364) May I live by God
2. Provide an Integral, Quality Education (Na'auao) Lawe i ka ma'alea a kū'ono'ono ('Olelo No'eau 1957) Acquire skill and make it deep
3. Educate in Family Spirit ('Ohana) 'Ike aku, 'ike mai, kōkua aku kōkua mai; pela iho la ka nohana 'ohana ('Olelo No'eau 1200) Recognize others, be recognized, help others, be helped; such is a family relationship
4. Educate for Service, Justice and Peace (Aloha) Ka lama kū o ka no'eau ('Olelo No'eau 1430) Education is the standing torch of wisdom
5. Educate for Adaptation and Change (Aina) 'A'ohe pau ka 'ike i ka hālau ho'okahi ('Olelo No'eau 203) All knowledge is not taught in the same school

Learning Outcomes

Biology program learning outcome

1. Apply the scientific method in the design and testing of hypotheses
2. Transform and display, statistically evaluate, validate, and interpret scientific data and communicate the results of such analyses effectively both orally and in writing.
- 3.. Acquire and comprehend information from published scientific literature, databases and bioinformatics software to extract and interpret biological data
4. Recognize the chemical and physical principles that underlie all life forms, and the biological organization at the molecular, cellular, tissue, organ, organism, and system levels that emerge from these principles
5. Define the components and processes of genetic and epigenetic information transmission, and their determinant effects on the adaptive and evolutionary processes that they drive
6. Integrate an awareness of bioethical issues to positively influence the application of science to service, justice and peace in the solution of societal problems

BI 162L learning outcomes

Upon Completion of this laboratory course, students will be able to:		In alignment with:		
		Program outcome link.	Marianist values	Hawaiian values
1	Apply safe laboratory practices	1, 2	2,3,4,5	2,3,4,5
2	List, explain and experience the steps of the scientific method	1	2,3,4,5	2,3,4,5
3	Use microscopy techniques to observe bacteria and other relevant microorganisms.	1, 4	2,3,4,5	2,3,4,5
4	Experiment with various methods of microbial culture and test various antimicrobial substances. Discuss their importance and limitations	1, 4, 6	2,3,4,5	2,3,4,5
5	Make use of various techniques to identify microorganisms	1,3, 4, 5	2,3,4,5	2,3,4,5
6	Apply laboratory techniques to quantify microorganisms	2, 3, 4	2,3,4,5	2,3,4,5

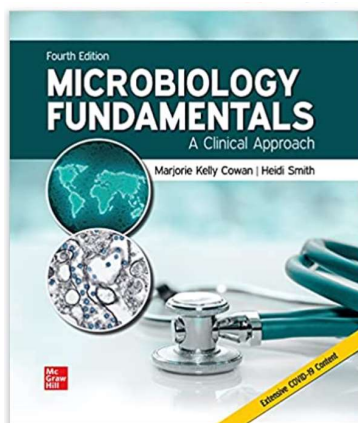
Course Prerequisites

Prerequisites: priority will be given to students accepted in the CUH Nursing Major.

Required Learning Materials

This laboratory course will use the material required for the class BI162. If you are not taking the class, you still will need to purchase the access to McGraw-Hill "Connect" with the text Microbiology Fundamentals: A Clinical Approach. 4rd Edition .

The most economical option is to buy the ACCESS CARD to connect (includes the e-book) from either our bookstore (**ISBN10:** 126078603X | **ISBN13:** 9781260786033) or directly from McGraw Hill at [McGraw Hill Higher Education \(mheducation.com\)](https://www.mheducation.com) or by clicking the McGraw Hill link in Canvas (**ISBN10:** 1260786048 | **ISBN13:** 9781260786040.) Additional material will be supplied as needed using canvas. (Note: for two weeks you can start by using free access to connect.)



Course Website:

<https://chaminade.instructure.com/courses/35954>

Technical Assistance for Canvas Users:

- Search for help on specific topics or get tips in [Canvas Students](#)
- [Live chat with Canvas Support for students](#)
- Canvas Support Hotline for students: +1-833-209-6111
- Watch this [video to get you started](#)
- [Online tutorials](#): click on “Students” role to access tutorials
- Contact the Chaminade IT Helpdesk for technical issues: helpdesk@chaminade.edu or call (808) 735-4855

Kōkua ‘Ike: Tutoring & Learning Services

Chaminade is proud to offer free, one-on-one tutoring and writing assistance to all students. Tutoring and writing help is available on campus at Kōkua ‘Ike: Center for Student Learning in a variety of subjects (including, but are not limited to biology, chemistry, math, nursing, English, etc.) from trained Peer and Professional Tutors. Please check [Kōkua ‘Ike’s](#) website for the latest times, list of drop-in hours, and information on scheduling an appointment. Free online tutoring is also available via TutorMe. Tutor Me can be accessed 24/7 from your Canvas account. Simply click on Account > TutorMe. For more information, please contact Kōkua ‘Ike at tutoring@chaminade.edu or 808-739-8305.

Assessment

	% Of Grade	Due Date
Assignments/Quizzes	25	~Weekly
Midterm	32.5	2/18/2025 (tentative date)
Final	32.5	4/22/2025
Attendance/participation	10	Ongoing evaluation
Total	100	

Grading Scale

Letter grades are given in all courses except those conducted on a credit/no credit basis. Grades are calculated from the student's daily work, class participation, quizzes, tests, term papers, reports and the final examination. They are interpreted as follows:

- A Outstanding scholarship and an unusual degree of intellectual initiative
- B Superior work done in a consistent and intellectual manner
- C Average grade indicating a competent grasp of subject matter
- D Inferior work of the lowest passing grade, not satisfactory for fulfillment of prerequisite course work
- F Failed to grasp the minimum subject matter; no credit given

Course Policies

Late Work Policy

Assignments must be submitted by the due date. In case of issues, contact the instructor as soon as possible.

Grades of "Incomplete"

As per catalog policy, under exceptional circumstances the instructor can grant an incomplete grade. The work will have to be completed within 90 days.

Instructor and Student Communication

Please use your Chaminade email or canvas to communicate with the instructor via email outside the class. Response time will be within four business days. In-person and Zoom conferences can be arranged.

Cell phones, tablets, and laptops

Out of consideration for your classmates, please set your cell phone to silent mode during class. Students are encouraged to bring laptops or tablets to class as the instructor will assign online activities and readings that will require the use of a laptop or tablet. Laptops and tablets should not be misused, such as checking distracting websites. Use your best judgment and respect your classmates and instructor.

Disability Access

If you need individual accommodations to meet course outcomes because of a documented disability, please speak with me to discuss your needs as soon as possible so that we can ensure your full participation in class and fair assessment of your work. Students with special needs who meet criteria for the Americans with Disabilities Act (ADA) provisions must provide written documentation of the need for accommodations from Kōkua 'Ike: Center for Student Learning by the end of week three of the class, in order for instructors to plan accordingly. If a student would like to determine if they meet the criteria for accommodations, they should contact the Kōkua 'Ike Coordinator at (808) 739-8305 for further information (ada@chaminade.edu).

Title IX and Nondiscrimination Statement

Chaminade University of Honolulu is committed to providing a learning, working and living environment that promotes the dignity of all people, inclusivity 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. 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.

Nondiscrimination Policy & Notice of Nondiscrimination

Chaminade University of Honolulu does not discriminate on the basis of sex and prohibits sex discrimination in any education program or activity that it operates, as required by Title IX and its regulations, including in admission and employment. Inquiries about Title IX may be referred to the University's Title IX Coordinator, the U.S. Department of Education's Office for Civil Rights, or both and contact information may be found at the [Chaminade University Title IX Office Contact Information and Confidential Resources website](#). On-campus Confidential Resources may also be found here at [CAMPUS CONFIDENTIAL RESOURCES](#).

The University's Nondiscrimination Policy and Grievance Procedures can be located on the University webpage at: <https://chaminade.edu/compliance/title-ix-nondiscrimination-policies-procedures/>.

To report information about conduct that may constitute sex discrimination or make a complaint of sex discrimination under Title IX, please refer to the [Campus Incident Report form](#). Chaminade University of Honolulu prohibits sex discrimination in any education program or activity that it operates. The NOTICE of NONDISCRIMINATION can be found here: [Notice of Nondiscrimination](#).

CUH Alert Emergency Notification

To get the latest emergency communication from Chaminade University, students' cell numbers will be connected to Chaminade's emergency notification text system. When you log in to the Chaminade portal, you will be asked to provide some emergency contact information. If you provide a cellphone number, you will receive a text from our emergency notification system asking you to confirm your

number. You must respond to that message to complete your registration and get emergency notifications on your phone.

Assessment for Student Work

With the goal of continuing to improve the quality of educational services offered to students, Chaminade University conducts assessments of student achievement of course, program, and institutional learning outcomes. Student work is used anonymously as the basis of these assessments, and the work you do in this course may be used in these assessment efforts.

Student with Disabilities Statement

Chaminade University of Honolulu offers accommodations for all actively enrolled students with disabilities in compliance with Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, and the ADA Amendments Act (2008).

Students are responsible for contacting Kokua Ike: Center for Student Learning to schedule an appointment. Verification of their disability will be requested through appropriate documentation and once received it will take up to approximately 2–3 weeks to review them. Appropriate paperwork will be completed by the student before notification will be sent out to their instructors. Accommodation paperwork will not be automatically sent out to instructors each semester, as the student is responsible to notify Kokua Ike via email at ada@chaminade.edu each semester if changes or notifications are needed.

Attendance Policy

The following attendance policy is from the 2019-2020 Academic Catalog (p. 54-55). Faculty members should also check with their divisions for division-specific guidelines.

Students are expected to attend regularly all courses for which they are registered. Student should notify their instructors when illness or other extenuating circumstances prevents them from attending class and make arrangements to complete missed assignments. Notification may be done by emailing the instructor's Chaminade email address, calling the instructor's campus extension, or by leaving a message with the instructor's division office. It is the instructor's prerogative to modify deadlines of course requirements accordingly. Any student who stops attending a course without officially withdrawing may receive a failing grade.

Unexcused absences equivalent to more than a week of classes may lead to a grade reduction for the course. **Any unexcused absence of two consecutive weeks or more may result in being withdrawn from the course by the instructor**, although the instructor is not required to withdraw students in that scenario. Repeated absences put students at risk of failing grades.

Students with disabilities who have obtained accommodations from the Chaminade University of Honolulu Tutor Coordinator may be considered for an exception when the accommodation does not materially alter the attainment of the learning outcomes.

Federal regulations require continued attendance for continuing payment of financial aid. When illness or personal reasons necessitate continued absence, the student should communicate first with the

instructor to review the options. Anyone who stops attending a course without official withdrawal may receive a failing grade or be withdrawn by the instructor at the instructor's discretion.

Student Conduct Policy

From the 2019-2020 Undergraduate Academic Catalog (p. 39): Campus life is a unique situation requiring the full cooperation of each individual. For many, Chaminade is not only a school, but a home and a place of work as well. That makes it a community environment in which the actions of one students may directly affect other students. Therefore, each person must exercise a high degree of responsibility. Any community must have standards of conduct and rules by which it operates. At Chaminade, these standards are outlined so as to reflect both the Catholic, Marianist values of the institution and to honor and respect students as responsible adults. All alleged violations of the community standards are handled through an established student conduct process, outlined in the Student Handbook, and operated within the guidelines set to honor both students' rights and campus values.

Students should conduct themselves in a manner that reflects the ideals of the University. This includes knowing and respecting the intent of rules, regulations, and/or policies presented in the Student Handbook, and realizing that students are subject to the University's jurisdiction from the time of their admission until their enrollment has been formally terminated. Please refer to the Student Handbook for more details. A copy of the Student Handbook is available on the Chaminade website under Student Life.

For further information, [please refer to the Chaminade Catalogue](#).

Academic Honesty

Academic honesty is an essential aspect of all learning, scholarship, and research. It is one of the values regarded most highly by academic communities throughout the world. Violations of the principle of academic honesty are extremely serious and will not be tolerated.

Students are responsible for promoting academic honesty at Chaminade by not participating in any act of dishonesty and by reporting any incidence of academic dishonesty to an instructor or to a University official. Academic dishonesty may include theft of records or examinations, alteration of grades, and plagiarism, in addition to more obvious dishonesty.

Questions of academic dishonesty in a particular class are first reviewed by the instructor, who must make a report with recommendations to the Dean of the Academic Division. Punishment for academic dishonesty will be determined by the instructor and the Dean of Academic Division and may include an "F" grade for the work in question, an "F" grade for the course, suspension, or dismissal from the University.

For the most up to date information, please refer to the Academic Honesty Policy on the Chaminade University Catalog website.

Credit Hour Policy

The unit of semester credit is defined as university-level credit that is awarded for the completion of coursework. One credit hour reflects the amount of work represented in the intended learning outcomes and verified by evidence of student achievement for those learning outcomes. Each credit hour earned at Chaminade University should result in a minimum of 45 hours of engagement, regardless of varying credits, duration, modality, or degree level. This equates to one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester. Terms that have alternative lengths, such as 10 week

terms, should have an equivalent amount of faculty instruction and out-of-class student work to meet each credit hour. Direct instructor engagement and out-of-class work result in total student engagement time of 45 hours for one credit. The number of engagement hours may be higher, as needed to meet specific learning outcomes.

Specific Credit Situations

The minimum 45 hours of engagement per credit hour can be satisfied in fully online, internship, or other specialized courses through several means, including (a) regular online instruction or interaction with the faculty member and fellow students and (b) academic engagement through extensive reading, research, online discussion, online quizzes or exams; instruction, collaborative group work, internships, laboratory work, practica, studio work, and preparation of papers, presentations, or other forms of assessment. This policy is in accordance with federal regulations and regional accrediting agencies.

This is a one-credit hour course requiring 4 clock hours of student engagement, per the official CUH Credit Hour Policy. Students enrolled in this course are expected to spend:

- 30 hours in laboratory,
- 10+ hours of laboratory preparation, study and lab summary writing plus homework including laboratory simulations.
- 2.5+ hours reviewing for exam 1 (You will need more than 2.5 hours if you did not keep up with the material, so please review your data/note after each lab).
- 2.5+ hours reviewing for exam 2.

Schedule (tentative).

Week 1	1/7/2025	Introduction/lab safety
Week 2	1/14/2025	Basic microscopy
Week 3	1/21/2025	Simple stain+ Virus explorer
Week 4	1/28/2025	Gram stain + differential agars setup+ + COVID Part 1
Week 5	2/4/2025	Differential agar results-Endospore staining + COVID part 2
Week 6	2/11/2025	Biochemical testing and Bacteria identification + COVID part 3
Week 7	2/18/2025	MIDTERM
Week 8	2/25/2025	Eukaryotes part 1+Kirby Bauer setup
Week 9	3/4/2025	Kirby Bauer results + Bacterial enumeration setup
Week 10	3/11/2025	Eukaryotes part 2 + Bacterial enumeration results
Week 11	3/18/2025	Spring recess No class
Week 12	3/25/2025	Prince Kuhio Holiday Wed section no lab
Week 13	4/1/2025	Eukaryote part 3
Week 14	4/8/2025	PCR + Introduction to bioinformatic
Week 15	4/15/2025	Review
Week 16	4/22/2025	FINAL EXAM

The instructor may modify elements of this syllabus according to the operational needs of the class.