



Chaminade  
University

## College of Arts and Sciences

Department of Biological and Biomedical Sciences

### BI162L General Microbiology Lab

Friday 2:30-5:20pm

Henry Lab 0

Credits: 1 Term: Fall 2026

#### Instructor Information

**Instructor:** Dr. Mindy McDermott

**Email:** [mindy.mcdermott@chaminade.edu](mailto:mindy.mcdermott@chaminade.edu)

**Office Location:** Wesselkamper Science Center #103

**Office Hours:** By appointment

#### Communication

Questions for this course can be emailed to the instructor at [mindy.mcdermott@chaminade.edu](mailto:mindy.mcdermott@chaminade.edu). Online, in-person and phone conferences can be arranged. Response time will usually take place within 24 hours of receiving your initial correspondence.

#### School & Department Information

**Department of Biological and Biomedical Sciences**

Office Location: Wesselkamper, Room 103

#### Course Description & Materials

##### Catalog Course 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

##### General 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.

## Time Allocation

This is a one-credit hour lab course requiring a minimum of 45 clock hours of student engagement per the official CUH Credit Hour Policy. Students enrolled in this course are expected to spend a minimum of 30 hours in lab. Students should expect to spend a minimum of an additional 1-2 hours per week outside of lab completing pre-lab preparation, written assignments, and laboratory simulations, as well as a minimum of 2.5 hours preparing for each exam (5+ hours total).

## Required 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 e-text**

Microbiology Fundamentals: A Clinical Approach. 4rd Edition. ISBN: 1260786048 Release: 2025

The most economical option is to buy the ACCESS CARD to connect (includes the e-book) from either our bookstore, the McGraw hill link in Canvas, or directly from McGraw Hill at [McGraw Hill Higher Education \(mheducation.com\)](https://mheducation.com)

Additional material will be supplied as needed using canvas.

**(Note: for two weeks you can start by using free access to connect.)**

## Recommended Items

McGraw Hill Connect

### Canvas

<https://chaminade.instructure.com/courses/46523>

## Learning Outcomes

### Program Learning Outcomes (PLOs)

Upon completion of the Biology program, the student will be able to:

1. Explain fundamental biological concepts and their interrelationships across various levels of biological organization, from molecules to ecosystems, including cell biology, genetics, evolution, physiology and ecology.
2. Perform laboratory field and computational techniques relevant to biological research, including accurate data collection, analysis and interpretation.
3. Design and conduct scientific investigations using advanced methodologies, technologies and resources and communicate results effectively to professional and lay audiences.
4. Make ethically informed decisions in biological research and practice, considering bioethics, environmental ethic informed by indigenous and traditional knowledge and practices.
5. Analyze societal challenges related to health and environment through the lens of biological science recognizing how biological knowledge and associated career paths can contribute to studying, addressing and solving these challenges.

## Course Learning Outcomes (CLOs)

Students who successfully complete this course will be able to:

| Course Learning Outcomes                                                                                                                     | PLO   | Marianist Values | Native Hawaiian Values |
|----------------------------------------------------------------------------------------------------------------------------------------------|-------|------------------|------------------------|
| 1. Apply safe laboratory practice3s                                                                                                          | 2     | 2,4              | 2,4                    |
| 2. List, explain and experience the steps of the scientific method.                                                                          | 2     | 2,5              | 2,5                    |
| 3. Use microscopy techniques to observe bacteria and other relevant microorganisms.                                                          | 2     | 2,5              | 2,5                    |
| 4. Experiment with various methods of microbial culture, test various antimicrobial substances and discuss their importance and limitations. | 2,3,4 | 2,4,5            | 2,4,5                  |
| 5. Make use of various techniques to identify microorganisms.                                                                                | 2,3   | 2,5              | 2,5                    |
| 6. Apply laboratory techniques to quantify microorganisms                                                                                    | 2,3   | 2,5              | 2,5                    |

## 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, and integrity of creation.
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

## Alignment of Natural Science Courses with Marianist and Hawaiian Values of the University

The Natural Sciences Division provides an *integral, quality education*: sophisticated integrative course content taught by experienced, dedicated, and well-educated instructors.

- We *educate in family spirit* – every classroom is an *Ohana* and you can expect to be respected yet challenged in an environment that is supportive, inclusively by instructors who take the time to personally get to know and care for you.
- We *educate for service, justice and peace*, since many of the most pressing global issues (climate change, health inequity, poverty, justice) are those which science and technology investigate, establish ethical parameters for, and offer solutions to.
- We *educate for adaptation and change*. In science and technology, the only constant is change. Data, techniques, technologies, questions, interpretations and ethical landscapes are constantly evolving, and we teach students to thrive on this dynamic uncertainty.

The study of science and technology can be formative, exploring human creativity and potential in the development of technologies and scientific solutions, the opportunity to engage in the stewardship of the natural world, and the opportunity to promote social justice. We provide opportunities to engage with the problems that face Hawai'i and the Pacific region through the Natural Sciences curriculum, in particular, those centered around severe challenges in health, poverty, environmental resilience, and erosion of traditional culture. The Marianist Educational Values relate to Native Hawaiian ideas of *mana*, *na'auao*, *ohana*, *aloha* and *aina*. We intend for our Natural Sciences programs to be culturally-sustaining, rooted in our Hawaiian place, and centered on core values of *Maiau*, be neat, prepared, careful in all we do; *Makawalu*, demonstrate foresight and planning; *`Ai*, sustain mind and body; *Pa`a Na`au*, learn deeply.

## Alignment of BI162L with Marianist and Hawaiian Values of the University

- BI162/L Cellular and Organismal Biology II lecture and lab provides an *integral quality education* as it is an introductory science course which provides students a foundation that will be necessary to be successful in several upper division science courses. To be successful and utterly understand biology one needs to understand how it relates to the bigger nursing and scientific community.
- This course also focuses on *educating in the family spirit*. This is done by emphasizing that science is not done in a vacuum. Collaboration is encouraged through small lab groups and students are strongly encouraged to work with their peers to find and discuss the answers to these questions. This is done to not only support students in learning the subject matter but to encourage them to build relationships within the peer groups.

## Grading

Assignments and Quizzes will be assigned weekly. A description of all course activities can be found in the BI162L Canvas Course.

**10% Attendance and Participation**

**20% Assignments and Quizzes**

**35% Midterm Exam**

**35% Final Exam**

## Course Policies

### Attendance

- Presence in class is mandatory & necessary for a student to fully grasp concepts. Students are expected to attend regularly all courses for which they are registered. Students should notify their instructors when illness or other extenuating circumstances prevent them from attending class and make arrangements to complete missed assignments. 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.
- If you miss a lab you will receive a zero for that lab, unless arrangements have been made with the instructor ahead of time or within 24 hours of the missed lab. The student is still responsible for all content taught in the missed lab. It is **the student's** responsibility to ask the instructor or classmates for the information that was missed and to pick up any handouts that may have been distributed.
- 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.
- Makeups labs are not provided unless a student has contacted the instructor within 24 hours of the missed class period to discuss the circumstances surrounding the absence. If absence is due to illness and doctor's written excuse may be required.
- IF another lab section is available, the student may be allowed, with permission to makeup the lab in another instructor's section.

### In-Class Participation Expectations

Active, respectful engagement is essential. Students are expected to come prepared and contribute meaningfully to discussions, activities, and collaborative work.

### Late Work

- Assignments must be submitted by the due date. In case of issues, contact the instructor as soon as possible.
- Any missed work that is turned in late without previous discussion with instructor may receive up to a one grade deduction. So, if the assignment was graded as A work, due to being late it may be decreased to a B.

- Any missed work that is turned in late without any prior discussion with the instructor will not be accepted and will be given a score of zero.

## Grades of Incomplete

Students and instructors may negotiate an incomplete grade when there are specific justifying circumstances. When submitting a grade the “I” will be accompanied by the alternative grade that will automatically be assigned after 90 days. These include IB, IC, ID, and IF. If only an “I” is submitted the default grade is F. The completion of the work, evaluation, and reporting of the final grade is due within 90 days after the end of the semester or term. This limit may not be extended.

## Final Grades

Final grades are submitted to [Self-Service](#):

A = 90% and above

D = 60-69%

B = 80-89%

F = 59% and below

C = 70-79%

## Important Information

### Academic Honesty

#### Academic Conduct Policy

The success of the Honor Code is made possible only with the acceptance and cooperation of every student. Each student is expected to maintain the principles of the Code. Example of Honor Code violations include, but are not limited to:

- Giving or receiving information from another student during an examination;
- Using unauthorized sources for answers during an examination;
- Illegally obtained test questions before the test;
- Any and all forms of plagiarism – submit all or part of someone else’s work or ideas as your own;
- The destruction and/or confiscation of school and/or personal property.

#### Violations of Academic Integrity: Violations of the principle include, but are not limited to:

- Cheating: Intentionally using or attempting to use unauthorized materials, information, notes, study aids, or other devices in an academic exercise.
- Fabrication and Falsification: Intentional and unauthorized alteration or invention of any information or citation in an academic exercise. Falsification is a matter of inventing or counterfeiting information for use in any academic exercise.
- Multiple Submissions: The submission of substantial portions of the same academic work for credit (including oral reports) more than once without authorization.
- Plagiarism: Intentionally or knowingly presenting the work of another as one’s own (i.e., without proper acknowledgment of the source).

- Abuse of Academic Materials: Intentionally or knowingly destroying, stealing, or making inaccessible library or other academic resource materials.
- Complicity in Academic Dishonesty: Intentionally or knowingly helping or attempting to help another to commit an act of academic dishonesty.

**Plagiarism includes, but is not limited to:**

- Complete or partial copying directly from a published or unpublished source without proper acknowledgement to the author. Minor changes in wording or syntax are not sufficient to avoid charges of plagiarism. Proper acknowledgement of the source of a text is always mandatory.
- Paraphrasing the work of another without proper author acknowledgement.
- Submitting as one's own original work, however freely given or purchased, the original exam, research paper, manuscript, report, computer file, or other assignment that has been prepared by another individual.
- Use of generative artificial intelligence (AI) without permission by instructor. Sentences, paragraphs, or entire papers written by AI are not original work.

*\*Students are encouraged to utilize change tracking and history functions of their word processing software to help document that a work is original to the student.*

**Consequences of academic honesty violations:**

From the [Chaminade University catalog](#)

(<https://catalog.chaminade.edu/generalinformation/academicaffairs/policies/academichonesty>) :

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.

*\*Additional information on student conduct can be found in the student handbook.*

**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. For pregnant and parenting students, I am also obligated to provide you with similar resources for support and protections available to you. My goal is to make sure that you are aware of the range of options available to you and have access to the resources and support you need.

Contact information and reporting options: [chaminade.edu/titleix/nondiscrimination/](https://chaminade.edu/titleix/nondiscrimination/). File a report via the [Campus Incident Report Form](#).

## Nondiscrimination Policy & Notice of Nondiscrimination

The university is committed to comply with all State and Federal statutes, rules, and regulations which prohibit discrimination. The university is committed to a policy of nondiscrimination on the basis of race, sex, gender identity and expression, age, religion, color, national origin (including shared ancestry and ethnic characteristics), ancestry, citizenship, disability, genetic information, marital status, breastfeeding, arrest and court record (except as permissible under State law), sexual orientation, or status as a covered veteran. Inquiries about Title IX or general Civil Rights concerns 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 [HERE](#). *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](#).

## Assessment for Student Work

Chaminade University may use student work anonymously to assess achievement of course, program, and institutional learning outcomes as part of ongoing quality improvement efforts.

## Student with Disabilities Statement

Kōkua 'Ike

Accessibility Services recognizes disability as a valued aspect of diversity and ensures equal access to the educational environment in accordance with Section 504 of the Rehabilitation Act; the Americans with Disabilities Act, as amended; and the principles and professional standards of the Association on Higher Education and Disability.

Access is supported through reasonable accommodations and referrals to campus and community resources.

Appointments with the Accessibility Services Coordinator are available through Stellic at <https://chaminade.stellic.com> and may be held virtually or in person. Drop-in appointments are also welcome.

Students seeking support must meet with the Accessibility Services Coordinator as early as possible, even if they are unsure whether they have appropriate documentation of their disability or its impacts. The Accessibility Services Coordinator prioritizes listening to students' experiences and will discuss any documentation needs during the initial intake meeting. Students may seek support at any time.

Learn more at <https://chaminade.edu/ada-accommodations>.

Learn more at <https://chaminade.edu/career-services>.



## Campus Resources & Support Services

The following resources are available to all Chaminade students. Reach out early — these services exist to support your success.

| Resource                                             | Description                                                                                                                                                                                                                                                                                                               | Contact / Website                                                                                                                                                                                         |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Accessibility Services (Kōkua 'Ike)</b>           | Accommodations under Section 504 and ADA. Contact early, appointments via Stellic, virtual or in person.                                                                                                                                                                                                                  | <a href="mailto:ada@chaminade.edu">ada@chaminade.edu</a><br><a href="https://chaminade.edu/ada-accommodations">chaminade.edu/ada-accommodations</a><br><br><a href="#">Accessibility Services Sign up</a> |
| <b>Tutoring &amp; Academic Coaching (Kōkua 'Ike)</b> | Tutoring and Academic Coaching Services support students' progression toward their academic, personal, and professional goals with clarity and intention. Services include individualized support in English, math, nursing, sciences, and social sciences, as well as guidance in developing goals and study strategies. | <a href="https://chaminade.edu/tutoring-academic-coaching-services">https://chaminade.edu/tutoring-academic-coaching-services</a>                                                                         |
| <b>Career Services</b>                               | Career Services supports students throughout their career journeys. Services include individualized job search strategy coaching, resume reviews, job interview coaching, and access to career-related resources and opportunities.                                                                                       | <a href="https://chaminade.edu/career-services">chaminade.edu/career-services</a>                                                                                                                         |
| <b>Basic Needs Resources</b>                         | Support for food insecurity, housing instability, and other basic needs.                                                                                                                                                                                                                                                  | <a href="https://chaminade.edu/basic-needs/">chaminade.edu/basic-needs/</a>                                                                                                                               |
| <b>Title IX / Nondiscrimination</b>                  | Reporting and support for sex discrimination and gender-based violence. Campus Incident Report Form available online.                                                                                                                                                                                                     | <a href="https://chaminade.edu/titleix/resources-and-support/">chaminade.edu/titleix/resources-and-support/</a>                                                                                           |
| <b>Hazing Prevention</b>                             | Confidential support, crisis intervention, and reporting for any type of abuse including hazing.                                                                                                                                                                                                                          | <a href="https://hazingpreventionnetwork.org/athlete-helpline/">hazingpreventionnetwork.org/athlete-helpline/</a>                                                                                         |

| Resource                                        | Description                                                                                                                                                                                                                                                                                                                                                                                                 | Contact / Website                                |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| <b>CUH Alert<br/>Emergency<br/>Notification</b> | Emergency text system. Register your cell number via the Chaminade portal and confirm the text to complete enrollment.                                                                                                                                                                                                                                                                                      | <a href="http://chaminade.edu">chaminade.edu</a> |
| <b>Campus Safety/<br/>SafeSwords</b>            | A program for students, faculty and staff, who may feel uncomfortable or unsafe walking alone on campus, at any time of the day. Call security, and a security professional will meet you at your location on campus. The security professional will escort you to your residence hall, car, etc. Students may utilize this when walking to and from night classes around campus or after late night events | <a href="#">SafeSwords Webpage</a>               |

## Course Schedule (subject to change as instructor deems necessary)

| Wk | Date         | Lab topic                                                       | Assignments |
|----|--------------|-----------------------------------------------------------------|-------------|
| 1  | Wk of Aug 17 | Introduction/lab safety                                         | See Canvas  |
| 2  | Wk of Aug 24 | Basic microscopy-Intro to lab simulations                       | See Canvas  |
| 3  | Wk of Aug 31 | Simple stains+                                                  | See Canvas  |
| 4  | Wk of Sep 7  | Gram stain+ selective and differential agar setup               | See Canvas  |
| 5  | Wk of Sep 14 | Endospore staining + Selective and differential agar results    | See Canvas  |
| 6  | Wk of Sep 21 | Biochemical testing and Bacteria identification+Virus worksheet | See Canvas  |
| 7  | Wk of Sep 28 | Eukaryotes part 1 Fungi- and Review                             | See Canvas  |
| 8  | Wk of Oct 5  | <b>MIDTERM</b>                                                  | See Canvas  |
| 9  | Wk of Oct 12 | <b>Fall Wellness Week</b>                                       | See Canvas  |
| 10 | Wk of Oct 19 | Eukaryotes part 2 Protists; Kirby-Bauer setup                   | See Canvas  |
| 11 | Wk of Oct 26 | Kirby-Bauer results-COVID-19 tests: how do they work?           | See Canvas  |
| 12 | Wk of Nov 2  | Bacterial enumeration setup                                     | See Canvas  |

|    |              |                                                            |            |
|----|--------------|------------------------------------------------------------|------------|
| 13 | Wk of Nov 9  | Bacterial enumeration results & Eukaryote part 3-helminths | See Canvas |
| 14 | Wk of Nov 16 | <b>REVIEW</b>                                              | See Canvas |
| 15 | Wk of Nov 23 | <b>Thanksgiving Holiday - No Lab</b>                       | See Canvas |
| 16 | Wk of Nov 30 | <b>FINAL EXAM</b>                                          | See Canvas |

*\*While the provisions of this syllabus are as accurate and complete as possible, your instructor reserves the right to change any provision herein at any time. Every effort will be made to keep you advised of such changes, and information about such changes will be available from your instructor.*