

Course Syllabus

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Chaminade
University
OF HONOLULU

Course Number: BI 216

Section: 04

Course Title: Cellular and Organismal Biology II

Department Name: Biology

School of Natural Sciences and Mathematics

Term: Spring 2025

Course Credits: 3

Class Meeting Days: Mon, Wed, Fri

Class Meeting Hours: 10:30 - 11:20am

Class Location: Henry Hall 207

Professor: Michael Dohm, PhD

Email: mdohm[at]chaminade.edu

Phone: 808-739-8543

Office Location: Wesselkamper Science Center (WSC), Room 108

Open Office Hours: Tues 9 – 11:30am, Wed & Fri 9: - 10:00am, or by appt (please use CANVAS messaging for all correspondence with the Professor about this course)

Office class syllabus posted at syllabus archive: <https://syllabus.chaminade.edu/> 

[\(https://syllabus.chaminade.edu/\)](https://syllabus.chaminade.edu/)

University Course Catalog Description

Introduction to the cell biology of prokaryotic and eukaryotic organisms, with particular reference to the relationships between structure and functions, the cell cycle and mitosis, organization of cells, and the roles of cell signaling and extracellular environment in establishing structures in animals and plants.

Course Overview

This course has been designed to:

- Prepare the students for further education in advanced biology courses, or related fields.
- Introduce the student to the cellular biology of prokaryotes and eukaryotes.
- To help the student on their road to becoming a competent and educated professional.
- To examine and analyze specific content areas, such as molecular or cellular biology, evolution, genetics, physiology, and related areas of biochemistry and biophysics.

Course Prerequisites

Concurrent registration BI 216L required. Cross-listed with BC 216

Required Learning Materials

Urry, Cain, Wasserman, Minorsky and Reece. *Campbell Biology*, Pearson Education, Inc. 11th or more recent edition acceptable

If purchasing digital textbook, purchase the eBook ISBN 978-013-5858141 -- we do not use the electronic product version in this section of BI216.

Hardin, J., Bertoni, G., and Lewis Kelinsmith, L. *Becker's World of the Cell*, Pearson Education, Inc. 9th or more recent edition acceptable

If purchasing digital textbook, purchase the eBook ISBN 978-013-5832318 -- we do not use the electronic product version in this section of BI216.

CANVAS: <https://chaminade.instructure.com/courses/37674>

[\(https://chaminade.instructure.com/courses/37674\)](https://chaminade.instructure.com/courses/37674)

Suggested Learning Materials

Bartee, L., Anderson, C. (2018) General Biology I: Survey of Cellular Biology,

<https://open.umn.edu/opentextbooks/textbooks/976> ➞

[\(https://open.umn.edu/opentextbooks/textbooks/976\)](https://open.umn.edu/opentextbooks/textbooks/976)

Bergtrom, G. (2020) Cell and Molecular Biology: What We Know & How We Found Out - 5e,

<https://open.umn.edu/opentextbooks/textbooks/244> ➞






[\(https://open.umn.edu/opentextbooks/textbooks/244\)](https://open.umn.edu/opentextbooks/textbooks/244)

LeClair, R. (2021) Cell Biology, Genetics, and Biochemistry for Pre-Clinical Students,

<https://open.umn.edu/opentextbooks/textbooks/967> ➞

[\(https://open.umn.edu/opentextbooks/textbooks/967\)](https://open.umn.edu/opentextbooks/textbooks/967)

Technical Assistance for Canvas Users:

- Search for help on specific topics or get tips at [Canvas Students](https://community.canvaslms.com/groups/students/pages/home)  (<https://community.canvaslms.com/groups/students/pages/home>)
- Live chat with [Canvas Support for students](https://cases.canvaslms.com/liveagentchat?chattype=student)  (<https://cases.canvaslms.com/liveagentchat?chattype=student>)
- Canvas Support Hotline for students: +1-833-209-6111
- Watch this [video](https://community.canvaslms.com/docs/DOC-18585-getting-started-with-canvas-as-a-student)  (<https://community.canvaslms.com/docs/DOC-18585-getting-started-with-canvas-as-a-student>) to get you started
- [Online tutorials](https://community.canvaslms.com/community/answers/guides/video-guide#jive_content_id_Students)  (https://community.canvaslms.com/community/answers/guides/video-guide#jive_content_id_Students): click on “Students” role to access tutorials
- Contact the Chaminade IT Helpdesk for technical issues: helpdesk@chaminade.edu or call (808) 735-4855
- Connect to Chaminade's WI-FI: <https://metaaccess.myweblogon.com:8443/>  (<https://metaaccess.myweblogon.com:8443/>)

Assessment

Course grade assessed from successful completion of exams, quizzes, homework, readings, and participation. A total of 500 points, weighted by category.

Category	Item	How many/often?	Points per item	Weight
Exams	Unit exams	4	50	40%
	Cumulative final exam	1	70	14%
Quizzes	Chapter quizzes	10	6	12%
Homework	Worksheets	10	6	12%
Readings	Journal articles	4	16	13%
Attendance & Participation	<ul style="list-style-type: none"> • Attend class, • Participate in group and individual work, • Weekly (minimum) CANVAS activity 	daily	a total of 46 points for semester	9%
				100%

Grading Scale


Letter grades are given in all courses except those conducted on a credit/no credit basis. They are interpreted as follows:

Letter grade	Percentage range	Criteria *
A	90 -- 100%	Outstanding scholarship and an unusual degree of intellectual initiative
B	80 -- 89%	Superior work done in a consistent and intellectual manner
C	70 -- 79%	Average grade indicating a competent grasp of subject matter
D	60 -- 69%	Inferior work of the lowest passing grade, not satisfactory for fulfillment of prerequisite course work
F	< 60%	Failed to grasp the minimum subject matter; no credit given

* From [University Course Catalog](#) 

<https://catalog.chaminade.edu/generalinformation/academicaffairs/undergraduate/academicinformation/gra>

Tutoring and Writing 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 (<https://chaminade.edu/advising/kokua-ike/>  <https://chaminade.edu/advising/kokua-ike/>) for the latest times, list of drop-in hours, and information on scheduling an appointment. Free online tutoring is also available via Smarthinking. Smarthinking can be accessed 24/7 from your Canvas account. Simply click Account – Notifications – Smarthinking. For more information, please contact Kōkua 'Ike at tutoring@chaminade.edu or 808-739-8305.

Schedule of lectures, assignments, and exams

Click here to view [BI216 schedule \(https://chaminade.instructure.com/courses/37674/pages/bi216-schedule?wrap=1\)](https://chaminade.instructure.com/courses/37674/pages/bi216-schedule?wrap=1)

Exam01	24 Jan 2025
Exam02	14 Feb 2025
Exam03	14 Mar 2025
Exam04	11 Apr 2025
Final exam	11am - 1pm 1 May

Program Learning Outcomes

Upon completion the program in Biology, a graduating student will demonstrate the following competencies:

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, summarize, and synthesize 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. Evaluate the etiology of major human disease burden in terms of, pathophysiological mechanisms, epidemiology within populations and possible therapeutic approaches
7. Integrate an awareness of bioethical issues to positively influence the application of science to service, justice and peace in the solution of societal problems

Course Learning Outcomes and Linkage to Program Learning Outcomes

Students who successfully complete this course will be able to:

Course Learning Outcomes	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7
1. Explain why the cell is the basic unit of life as well as identify and describe the structure and function of prokaryotic and eukaryotic cellular components and organelles.				X			
2. Identify and explain transmembrane and cellular transport mechanisms				X			
3. Compare and contrast plant and animal cell structures as well as how each cell type produces and harvests chemical energy.				X			
4. List and describe each phase of the cell cycle and how it is regulated.				X	X		

Course Learning Outcomes	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7
5. Identify the biological macromolecules of the cell, describe their structures and function and what roles each play in cellular processes such as metabolism, bioenergetics, respiration, photosynthesis, etc				X	X		

Alignment of Natural Sciences 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 BI216 with Marianist and Hawaiian values of the University

BI216/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, including but not limited to BI320/L, BI321/L, BI411L and BI471/L. As each new topic is introduced throughout the semester, a point is made to link the current subject matter with those future biology courses. Additionally, it is highlighted how the subject matter may be integrated with other sciences like chemistry and physics so that students understand that this BI216 course, as well as biology in general, is not a standalone course. To be successful and utterly understand biology one needs to understand how it relates to the bigger 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. Throughout the semester there are several small group projects/presentations both within the lecture and the lab. These are designed to not only assist student in learning the subject matter but to encourage them to build relationships within the peer groups. In order to foster collaborative learning homework assignments are given such that students are instructed to answer in their own words; however students are strongly encouraged to work with their peers to find and discuss the answers to these questions.

Course and University policies

Tutoring and Writing 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.

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](https://chaminade.edu/student-success/kokua-ike/)** (<https://chaminade.edu/student-success/kokua-ike/>) 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](https://chaminade.edu/student-success/kokua-ike/)** (<https://chaminade.edu/student-success/kokua-ike/>) via email at [ada\[at\]chaminade.edu](mailto:ada[at]chaminade.edu) each semester if changes or notifications are needed.

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 \(https://chaminade.edu/compliance/contact-information/\)](https://chaminade.edu/compliance/contact-information/). On-campus Confidential Resources may also be found here at [CAMPUS CONFIDENTIAL RESOURCES \(https://chaminade.edu/compliance/contact-information/\)](https://chaminade.edu/compliance/contact-information/).

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> (<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 \(https://cm.maxient.com/reportingform.php?ChaminadeUniv&layout_id=0\)](https://cm.maxient.com/reportingform.php?ChaminadeUniv&layout_id=0). Chaminade University of Honolulu prohibits sex discrimination in any education program or activity that it operates. The [NOTICE of NONDISCRIMINATION \(https://chaminade.edu/compliance/title-ix-nondiscrimination-policy/\)](https://chaminade.edu/compliance/title-ix-nondiscrimination-policy/) 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.

Canvas "grading"

Canvas "grades" are tentative and not official. Canvas scores available to students are not official until the instructor announces such to the class. Official grading is done by the instructor and records are kept on the instructor's computer.

Instructor and Student Communication

Please ask questions during class -- interrupt the lecture, it's OK!

Weekly discussions are available, too. Please post and do respond to classmate postings!

Outside of class, use CANVAS Messaging to communicate with the instructor, not CUH email.

Questions about assignments, but not grade challenge for assignments should be asked during class time. All questions for this course can be posted to the instructor via CANVAS Messaging. Online (e.g., Zoom) and in-person conferences can be arranged. Most messages to Canvas will be replied within 24 hours between Monday and Friday; messages sent to instructor on Friday will be replied to on Monday. Please note that questions or communication about the course sent to instructor's chaminade.edu e-mail may take up to 7 days for response. In general, the reply will not answer the question but will request you repost at the proper venue (CANVAS Messaging).

Graded materials will generally be returned within 7 - 10 days.

CANVAS allows Comments and the instructor will use this feature to add context to grading of assignments. If you have questions or are instructed to follow up based on Comments, please communicate via CANVAS Messaging, not by adding to the assignment comments.

Attendance Policy

The following attendance policy is from the [Chaminade University Undergraduate Catalog \(https://catalog.chaminade.edu/generalinformation/academicaffairs/policies/attendance\)](https://catalog.chaminade.edu/generalinformation/academicaffairs/policies/attendance): 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 ADA 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.

Online Attendance

During the first three weeks (subject to change), this course is primarily online. Attendance for this course during the online phase is based on the (1) timely submission of assignments and/or (2) logging onto the course at least once per week. Students will receive credit for 'attending' the class each time a weekly assignment is submitted and/or each time student signs on to the course and navigate to at least one page or module removed from the home page within the Canvas system for the course. Some weekly lessons require the submission of one assignment, some require two. Each lesson will indicate when it is complete. The student is responsible for pressing the 'submit' button each time he or she has completed an assignment. If the page indicating that the assignment has been submitted does not appear, then the assignment has not been submitted.

Late Work Policy

There are no make-ups for quizzes, unless a physician's note documents your absence during quizzes. Journal article presentations CANNOT be made-up. Quizzes and assignments are due by 8:59am HST on the assigned date. Up to 10% grade reduction will be assessed for each 12 hour late assignment. All quizzes and assignments close by 3 days post the due date.

Grades of "Incomplete"

Students and instructors may negotiate an incomplete grade when there are specific justifying circumstances. An Incomplete Contract (available from the Divisional Secretary and the Portal) must be completed. When submitting a grade, the "I" will be accompanied by the alternative grade that will automatically be assigned after 30 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 30 days after the end of the semester or term. This limit may not be extended.

Writing Policy

Instructions for the writing assignments are detailed for each individual assignment on the canvas course page.

Potential resources for writing assignments:

- Google Scholar
- Pubmed
- Sullivan Library

Cell phones, tablets, and laptops

Instructor policy: Students are encouraged to use personal digital devices during class provided such use does not distract others or interfere with class activities.

University policy. Music Devices and Cellular Phones: *Unless specifically permitted by your instructor* [emphasis by instructor], use of music devices and cell phones is prohibited during all Natural Science and Mathematics classes, as it is discourteous and may lead to suspicion of academic misconduct. Students unable to comply will be asked to leave class. 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.

Recording of lecture material

Students may not record audio or video of lectures conducted by the instructor nor of any media presented during the lecture without prior permission from the instructor. All materials presented in class by the instructor will be made available to students.

Academic honesty

Academic integrity is the commitment by all members of the academic community -- educators, researchers, scholars, and students -- to act with honesty, trust, fairness, respect, and responsibility. 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.

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 original work (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.
- Use of generative artificial intelligence (AI) without permission by instructor. Sentences, paragraphs, or entire papers written by AI is 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.
- 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.

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