



Course Syllabus: BI216/BC216
Organismal and Cellular Biology II
[Chaminade University Honolulu](http://www.chaminade.edu)
3140 Waialae Avenue - Honolulu, HI 96816
www.chaminade.edu

Instructor: Dr. Chelsea Saito Reis	Email: Chelsea.saitoreis@chaminade.edu
Class Term: Spring 2021 (3 credits)	Class Days: Tuesday & Thursday
Class Meeting Hours: 8:30-9:50 AM	Class Location: Hale Hoaloha, Room 201
Office Hours: By appointment	Office Location: Henry Hall 123C

University Course Catalog Description

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

Course Overview

- Prepares the student for further education in advance biology courses or related fields.
- Introduce the student to the cellular biology of prokaryotes and eukaryotes.
- Develop skills in critical thinking by reviewing scientific journal articles.

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 (‘Ōlelo 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 (‘Ōlelo No‘eau 203) All knowledge is not taught in the same school

Learning Outcomes

Course Learning Outcomes

1. Understanding of the cell as the basic unit of life.
2. Description of the physiological processes of the cell.
3. Understanding scientific writing.
4. Understand and present knowledge gained outside of lecture content.

Biology Program Learning Outcomes

1. An understanding of the scientific method and the ability to design and test a hypothesis.
2. The ability to visualize, statistically evaluate, validate and interpret scientific data, and to communicate science effectively both orally and in writing.
3. The ability to acquire and comprehend information from published scientific literature and to employ computational resources in the resolution of biological problems.
4. An understanding of the chemical and physical principles that unite all life forms, and of biological organization at the molecular, cellular, tissue, organ, organism and system levels.
5. The ability to 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. An understanding of the etiology of major human disease burdens in terms of pathophysiological mechanisms, epidemiology within populations and possible therapeutic approaches.
7. An understanding of the entry requirements, career pathways and progression for the major post-graduate fields of research, education and health professions.

Alignment of Learning Outcomes

	CLO 1	CLO 2	CLO 3	CLO 4
Marianist Values	2, 5	2, 5	2, 5	2, 5
Program Learning Outcomes	4	4	1,2,3,7	1,2,3,7

Course Prerequisites

Prerequisites for Biology Majors: BI215/BI215L, B1210L must be taken either prior or concurrently with BI216.
Prerequisites for Forensic Sciences and Biochemistry majors: BC215/BI215L.

Required Learning Materials

- Jane Reece, Lisa Urry, Michael Cain, Steven Wasserman, Peter Minorsky & Robert Jackson. Campbell Biology, 11 edition. (2016), Pearson Education Inc.
- Jeff Hardin, Gregory Bertoni and Lewis Kelinsmith. Becker’s World of the Cell, 9 edition. (2016), Pearson Education Inc.

Course Website:

Course website is located on Canvas titled, "Cellular & Organismal BIO II BI-216-05-1" for the 2020-2021 Spring Winter Eve (2021SP) semester.

Technical Assistance for Canvas Users:

- Search for help on specific topics at help.instructure.com
- [Chat live with Canvas Support 24/7/365](#)
- Watch this [video to get you started](#) with online guides and tutorials
- Contact the Chaminade IT Helpdesk for technical issues: helpdesk@chaminade.edu, or call (808) 735-4855

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/>) 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.

Evaluation of Student Performance

1. Lecture topics are outlined in the attached calendar. Additional assignments may be given.
2. Each student will be expected to complete 3 summaries of articles published in scientific journals. Articles will be relevant to the material taught in class that week. These articles will be provided by the instructor TWO weeks before the assignment is due. Each summary will consist of a 500 word summary based on the criteria listed below.
3. Weekly quizzes will be given every Tuesday or Thursday of material taught from the previous week (see class schedule). There will be a total of 10 throughout the semester. At the end of the semester, the seven highest quiz scores will be used to determine the quiz portion of the grade.
4. There will be four lecture exams outlined in the attached calendar. Missed exams can only be made up for valid excuse (determined by instructor) In case of illness, a physician's note is necessary. The final exam will be a two hour exam that will cover material from the entire course.
5. Attendance is expected and will be recorded each class. Unexcused absences (more than 3) may result in reduction in grade by one grade level. Please let me know by email ahead of time if you know you will be missing a class. Unexcused absence for two weeks may result in the student being withdrawn from the course without notice. The student is responsible to catch-up on all topics/material covered during their absence.

Grading

1. The grade of the course will be determined in the following manner:

Best 7 out of 10 quizzes	10%
3 article summaries	15%
1 st lecture exam	12.5%
2 nd lecture exam	12.5%
3 rd lecture exam	12.5%
4 th lecture exam	12.5%
Attendance	5%
Final Exam	20%

2. Scale:

A= 90%

B= 80%

C= 70%

D= 60%

F=below 60%

3. Extra credit opportunities maybe available during the course of the semester.

Course Policies

Instructor and Student Communication

Questions for this course can be emailed to the instructor at chelsea.saitoreis@chaminade.edu. Office hours are listed above. Please email me ahead of time if you plan to stop by to ensure that I am not meeting with another student. Students are also encouraged to set up meetings with me if my listed office hour times do not fit within current course schedule.

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.

ADA Policy

Statement from the [New Student Handbook](#)

Pursuant to federal and state laws, including the Americans with Disabilities Act of 1990 as amended by the ADA Amendments Act of 2008 and Section 504 of the Rehabilitation Act of 1973, all qualified students with disabilities are protected from discrimination on the basis of disability and are eligible for reasonable accommodations or modifications in the academic environment to enable them to equal access to academic programs, services, or activities. If a student would like to determine if they meet the criteria for accommodations, they should contact the Counseling Center in the Student Support Services Building, Room 101, by phone at (808) 735-4845 or email: counselingcenter@chaminade.edu for further information. Web: studentaffairs.chaminade.edu/counseling-center/counseling-services

Title IX Compliance

Chaminade University of Honolulu recognizes the inherent dignity of all individuals and promotes respect for all people. Sexual misconduct, physical and/or psychological abuse will NOT be tolerated at CUH. If you have been the victim of sexual misconduct, physical and/or psychological abuse, we encourage you to report this

matter promptly. As a faculty member, I am interested in promoting a safe and healthy environment, and should I learn of any sexual misconduct, physical and/or psychological abuse, I must report the matter to the Title IX Coordinator. If you or someone you know has been harassed or assaulted, you can find the appropriate resources by visiting Campus Ministry, the Dean of Students Office, the Counseling Center, or the Office for Compliance and Personnel Services.

Attendance Policy

The following attendance policy is from the 2018-2019 Academic Catalog (p. 57-58). Instructor attendance policy outlined above under “evaluation of student performance”.

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.

Academic Conduct Policy

From the 2018-2019 Undergraduate Academic Catalog (p. 42):

Any community must have a set of rules and standards of conduct 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.

For further information, please refer to the Student Handbook: <https://chaminade.edu/wp-content/uploads/2019/08/NEW-STUDENT-HANDBOOK-19-20-Final-8.20.19.pdf>

Course Schedule

Every effort has been made to insure that the material in this syllabus is accurate and complete. The instructor reserves the right to make any changes in the contents of this syllabus that she deems necessary.

Week	Dates	Topic	Assignments
1	Feb 2	Introduction/Syllabus	
	Feb 4	Chemistry of the Cell	
2	Feb 9	Macromolecules	Quiz #1
	Feb 11	Macromolecules	
3	Feb 16	Cells and Organelles	Quiz #2
	Feb 18	Cells and Organelles	1st research article handout
4	Feb 23	EXAM #1	
	Feb 25	Bioenergetics	
5	March 2	Enzymes	Quiz #3
	March 4	Membranes	Summary #1 Due
6	March 9	Transport Across Membranes	Quiz #4
	March 11	EXAM #2	
7	March 16	Glycolysis and Fermentation	
	March 18	Cellular Respiration	Quiz #5
8	March 23	Photosynthesis #1	Quiz #6, 2nd research article handout
	March 25	Photosynthesis #2	
9	March 30	Endomembrane System #1	Quiz #7
	April 1	Endomembrane System #2	
10	April 6	EXAM #3	Summary #2 Due
	April 8	Cytoskeletal Systems	
11	April 13	Cellular Movement	Quiz #8
	April 15	Cell adhesion/junctions and ECM	3rd research article handout
12	April 20	Structural Basis of Information: DNA	Quiz #9
	April 22	EXAM #4	
13	April 27	Cell Cycle	
	April 29	Review	Quiz #10, Summary #3 Due
Final Exam Cumulative: May 4, 8:30-10:30AM			

Cell Biology Research Article Summaries

1. Each student is to submit a summary of the scientific article provided by the instructor **TWO** weeks before the summary is due. The objective of this summary is to expose and engage the student into reading and understanding scientific literature. Student's are expected to submit individually written summaries.
2. There will be three summaries due during the semester. The summaries will count as a total of 15% of your grade (5% each).
3. Summaries must be typed or word processed (use 12-point font). University writing standards are expected. Summaries should be 500 words.
4. Submission of summaries are due in class or by email to Professor by the start of class. Submission dates are outline in the syllabus.
5. Late submission policy: Late submission of up to 24h will result in one letter grade reduction in your grade, submissions less than 48h will result in two letter grades deduction. Submission more than 48h will result in a 0 for the assignment.