



School of Natural Science and Mathematics

Chemistry

CH 254 – Survey of Organic and Bioorganic Chemistry for Nursing

Credits: 3 | Term: Fall 2026

Section: 01 | Hale Hoaloha 302; TR 8:30 - 9:50 a.m.

Section: 03 | Henry Hall 104; TR 1:00 - 2:20 p.m.

Instructor Information

Instructor	David Shinsato
Email	david.shinsato@chaminade.edu
Office Location	Eiben 207D
Office Hours	To be announced; OR by appointment

Communication

The best way to contact me is by email. When contacting me, please use your CUH (chaminade.edu) email account and indicate which class you are inquiring about (ex. CH 203). I will reply to emails within 24 hours during the week, and within 48 hours on weekends and holidays. Feel free to contact me at any time if you have any questions or concerns. *Please check CANVAS Announcements and your CUH email account **at least** once per day to check for communications from me, and to stay up-to-date with the most current information for our class!*

School & Department

School	School of Natural Science and Mathematics
Location	Wesselkamper 115
Phone	(808) 440-4204
Questions?	Contact your instructor or the School of Natural Science and Mathematics

Course Description & Materials

Catalog Description

An introductory course with a focus on biological systems from a molecular point of view. Prerequisites: CH-201 or consent of instructor, BI-151, BI-151L, BI-152, BI-152L, MA-100 or equivalent with grade of C or better. Corequisite: CH-254L

Course Overview

This course is designed for nursing students to become more familiar with chemistry concepts that are important to their profession. Emphasis will be focused on General, Organic, and Biological Chemistry concepts that are necessary to understand normal cellular processes.

Course Snapshot

Modality	Face-to-Face
Meeting Location	Section 01: Hale Hoaloha 302 Section 03: Henry 104
Meeting Days/Times	Section 01: TR 8:30 - 9:50 a.m. Section 03: TR 1:00 - 2:20 p.m.
Time Allocation	This is a three credit hour course requiring at least 135 clock hours of engagement, per the official CUH Credit Hour Policy. Students enrolled in this course are expected to spend about 35 hours of in-class meetings, 30 hours completing the course assigned readings and exercises, 40 hours completing the assigned homework problems and quizzes, and 30 hours reviewing materials for quizzes and exams.
Required Materials	• Scientific calculator • Computer and/or smartphone with web/app access to CANVAS and online assignments • Textbook: Smith, Janice Gorzynski, <i>Principles of General, Organic, and Biological Chemistry</i>, 2025 Release, McGraw-Hill Education, 2025: Book with ALEKS 360 Enhanced ◦ Accessing Textbook and Homework, go to: https://www.aleks.com/ ◦ Sign up for a new ALEKS account ◦ Enter in the following Class Code: TO BE ANNOUNCED ◦ Follow the instructions to activate your account
Canvas	Course materials, announcements, and grades will be posted to CANVAS (chaminade.instructure.com).

Learning Outcomes

Program Learning Outcomes (PLOs)

Upon completion of the undergraduate program in Chemistry, the student will be able to:

1. Apply the scientific method as it is used in organic chemistry, inorganic chemistry, analytical chemistry, physical chemistry, and molecular sciences
2. Recognize and explain chemical theory as it applies to the physical world
3. Visualize, evaluate, validate and interpret results of chemical analyses
4. Solve problems using analytical reasoning, professional resources, professional conduct, and ethical behavior
5. Communicate chemical information effectively in oral and written formats

Course Learning Outcomes (CLOs)

Upon completion of CH 254, the student will be able to:

1. Apply the scientific method as it is used in organic and bioorganic chemistry.
2. Apply the basic principles of chemistry relevant to health and medicine.
3. Evaluate chemical concepts for effective decision-making and problem solving.

Marianist Values

An education in the Marianist Tradition is marked by five principles. Reflect on how this course relates to one or more:

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 central to both Marianist and Native Hawaiian culture — both seek transformative, value-centered learning that serves the marginalized. This is reflected in the ‘Ōlelo No‘eau (Hawaiian proverbs) below:

- **Educate for Formation in Faith (Mana):** E ola au i ke akua (‘Ōlelo No‘eau 364) — May I live by God.
- **Provide an Integral, Quality Education (Na‘auao):** Lawe i ka ma‘alea a kū‘ono‘ono (‘Ōlelo No‘eau 1957) — Acquire skill and make it deep.
- **Educate in Family Spirit (‘Ohana):** ‘Ike aku, ‘ike mai, kōkua aku kōkua mai (‘Ōlelo No‘eau 1200) — Recognize others, be recognized, help others, be helped.
- **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.
- **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.

Alignment of Natural Science Courses with Marianist and Native Hawaiian Values

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 Course Learning Outcomes

	CLO 1	CLO 2	CLO 3
Marianist Values	3, 4, 5	3, 4, 5	3, 4, 5
PLOs	1, 2, 3	1, 2, 4	1, 2, 3
Native Hawaiian Values	3, 4, 5	3, 4, 5	3, 4, 5

Attendance & In-Class Participation

Attendance Policy

The following attendance policy is from the [2026-2027 Academic Catalog](#). 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.

Course Attendance Policy

Attendance will generally be taken at the beginning of every class meeting. If you arrive late to class, it is your responsibility to check in with the instructor at the end of class to confirm your attendance. If you anticipate needing to request an excused absence, please reach out to me beforehand by email outlining the reason for your request. In case of emergency, please contact me as soon as you are able after things have settled down.

In-Class Participation Expectations

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

Students are expected to:

- Come prepared — complete readings and activities before each session.
- Participate actively in discussions and group work, demonstrating critical thinking.
- Engage respectfully and honor diverse perspectives.
- Use personal devices for course purposes only unless otherwise directed.
- Submit work by established deadlines to support course pacing.

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.

Course Activities

Exams (40% of total grade)

There will be four exams given this semester. Exams will be held in-person. Please see the tentative course schedule for all exam dates. Note that the final exam will take place at a different time than the normally scheduled class meetings per the CUH final exam schedule. More detailed information about these exams will be given in class.

Homework / Assignments (30% of total grade)	Online Homework problems will primarily be assigned online via McGraw's online module called ALEKS. The homework will account for a significant portion of your overall grade. Using McGraw ALEKS you will have access to assigned homework, online quizzes, and electronic access to your e-textbook. There are also a lot of other resources such as additional problems and example exam questions to help you succeed in this course. There may also be non-ALEKS based homework assigned as appropriate for our course needs.
Quizzes (20% of total grade)	Expect to have at least roughly one quiz per chapter. Quizzes may be administered in-class, or online. The quiz content will be similar to problems covered during class and/or the online homework in ALEKS. Some quizzes will be announced, but some may occur at unannounced times during class.
Participation (10% of total grade)	You will receive points for participation in this class. These may include class attendance, active participation in class discussion, in-class work, and/or other assignments as appropriate for our course needs.

Course Policies

Late/Make-Up Work	As a general rule, late work and make-up work are not accepted due to the operational needs of the course. However, exceptions may be made with a valid, documentable excuse. What constitutes a "valid" excuse will be determined on a case-by-case basis by the instructor.
Extra Credit	There will be some extra credit opportunities throughout the semester. These may be preassigned or take place unannounced during lecture times.
Incomplete Grade	Students and instructors may negotiate an incomplete grade when there are specific justifying circumstances. This grade is appropriate only if extraordinary conditions beyond the control of the student have led to an inability to complete course requirements. 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.
Syllabus Changes	The instructor reserves the right to modify this syllabus. Changes will be announced in class and posted to CANVAS.

Final Grades

Final grades are submitted to Self-Service (selfservice.chaminade.edu). Grades will be calculated from the Course Activities listed above. Final letter grades are interpreted as follows with the **tentative** percentage cutoffs:

Grade	Percentage Range	
A	90% and above	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	59% and below	Failed to grasp the minimum subject matter; no credit given

Important Information

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, plagiarism, **and unauthorized and/or undisclosed AI usage**, in addition to more obvious dishonesty. See catalog section *Student Use of Artificial Intelligence in Academic Work* for further information.

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

AI (Artificial Intelligence) Statement

Chaminade University recognizes the increasing role of artificial intelligence (AI) technologies in academic and professional environments. AI encompasses, but is not limited to, generative AI platforms, automated writing or content generation software, coding assistants, and similar tools. Students must ensure all submitted work genuinely reflects their knowledge and effort. Using AI to produce or significantly complete graded assignments, exams or other academic tasks – defined as use that substitutes for or substantially replaces a student’s own analysis, reasoning or written expression – without explicit instructor approval is considered academic misconduct and will be dealt with according to the University’s Academic Honesty Policy.

If an instructor has reasonable grounds to question whether submitted work genuinely reflects a student’s own knowledge, authorship, or mastery of course material — or whether it meets the course’s expectations for AI use — the instructor may require the student to provide additional or alternative evidence of authorship and content mastery. Such evidence may include drafts, notes, revision history, source materials, process explanations, oral discussion, in class work, or completion of an alternative assessment. A student’s refusal or inability to provide such evidence may be considered, along with other available information, in evaluating whether the work meets course requirements and stated learning outcomes. Instructors will not rely solely on AI detection software or other automated tools in making grading or academic integrity determinations. Such determinations will be based on the totality of the available information and handled in accordance with applicable University policies and procedures. See the catalog section *Student Use of Artificial Intelligence in Academic Work* for further information.

Title IX and Nondiscrimination

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/. File a report via the [Campus Incident Report Form](#).

Nondiscrimination Policy and 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](#).

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's 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>

Assessment of 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.

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
Accessibility Services (Kōkua 'Ike)	Accommodations under Section 504 and ADA. Contact early — appointments via Stellic, virtual or in person.	ada@chaminade.edu chaminade.edu/ada-accommodations
Tutoring & Academic Coaching (Kōkua 'Ike)	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.	chaminade.edu/tutoring-academic-coaching-services
Career Services	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.	chaminade.edu/career-services
Basic Needs Resources	Support for food insecurity, housing instability, and other basic needs.	chaminade.edu/basic-needs/
Title IX / Nondiscrimination	Reporting and support for sex discrimination and gender-based violence. Campus Incident Report Form available online.	chaminade.edu/titleix/resources-and-support/
Hazing Prevention	Confidential support, crisis intervention, and reporting for any type of abuse including hazing.	hazingpreventionnetwork.org/athlete-helpline/
Campus Safety / SafeSwords	Security escort service for anyone who feels unsafe walking alone on campus at any time of day. Call security and a professional will escort you to your destination.	chaminade.edu/student-life/security/campus-safeswords-program/
CUH Alert Emergency Notification	Emergency text system. Register your cell number via the Chaminade portal and confirm the text to complete enrollment.	chaminade.edu

TENTATIVE Weekly Course Schedule

Note: The instructor reserves the right to modify this schedule. Changes will be announced in class and posted to CANVAS.

Wk of	Theme	Topics / Readings
8/18	Matter and Measurements	T: CH 1 (Sections 1-3) R: CH 1 (Sections 4-10)
8/25	Atoms and the Periodic Table	T: CH 2 (Sections 1-4) R: CH 2 (Sections 5-8)
9/1	Ionic and Covalent Compounds	T: CH 3 (Sections 1-6) R: CH 3 (Section 7-12)
9/8	Gases; Nuclear Chemistry	T: CH 6 (Sections 1-5) R: CH 9 (Sections 1-3)
9/15	Exam 1 Energy and Matter	T: Exam 1 (CH 1, 2, 3, 6, 9) R: CH 4
9/22	Energy (cont.); Chemical Reactions	T: CH 4 R: CH 5
9/29	Chem Reactions (cont.); Solutions	T: CH 5 (cont.) R: CH 7
10/6	Acids and Bases	T: CH 7 (cont.); CH 8 R: CH 8 (cont.)
10/13	Fall Wellness Week	Class Activity TBA
10/20	Exam 2 Intro to Organic Molecules	T: Exam 2 (CH 4, 5, 7, 8) R: CH 10
10/27	Unsaturated Hydrocarbons; Organic Compounds with O, H, S	T: CH 10 (cont.); CH 11 R: CH 12
11/3	Carboxylic Acids, Esters, Amines, Amides	T: CH 12 (cont.); CH 13 R: CH 13 (cont.)
11/10	Exam 3 Carbohydrates	T: Exam 3 (CH 10-13) R: CH 14
11/17	Lipids; Amino Acids, Proteins, Enzymes	T: CH 15 R: CH 16
11/24	Nucleic Acids and Protein Synthesis	T: CH 17 R: Thanksgiving (NO Class)
12/1	Energy and Metabolism	T: CH18 R: Review Overall Course Material
12/7	Final Exam MONDAY (CH 14-18, and cumulative)	Section 01: 8:30 - 10:30 a.m. Section 03: 1:15 - 3:15 p.m.