



School of Natural Sciences and Mathematics Chemistry

CH 102L: Chemistry for the Concerned World Citizen Laboratory

Credits: 1 Term: Spring 2026

Section 01

Class Meeting Days: Friday

Class Meeting Hours: 2:30 PM – 5:20PM

Class Location: Henry Lab 7

Instructor Information

Instructor: Seongjin Kim, Ph.D.

Email seongjin.kim@chaminade.edu

Office Location: Henry Hall 123C

Office Hours: Online/In Person TBD

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. 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.

Course Description & Materials

Catalog Course Description

The general theme for this lab course is to demonstrate that chemistry is everywhere. A great majority of the experiments will be carried out using household supplies and equipment. During the last few weeks, a transition to using conventional lab equipment is aimed to help students understand the logic of experimental design. One three-hour laboratory period per week to accompany CH 102.

Corequisite: CH 102

Course Overview

This laboratory course is designed to be taken in conjunction with the CH 102 lecture course. The purpose of this course is that students will develop lab skills and will be able to observe many of the chemistry is fundamental to our day-to-day lives discussed in lecture. This laboratory class aims to provide students with an introductory laboratory experience, establishing competence in basic chemistry laboratory techniques.

Time Allocation

This is a one-credit hour course requiring **at least 45** clock hours of engagement, per the official CUH Credit Hour Policy. Students enrolled in this course are expected to spend about;

2.5 hours per laboratory experiment every other week	(Subtotal = 20)
1 hour review/repeat review/memorization per class lab expt.	(Subtotal = 5)
2 hour laboratory report with literature research	(Subtotal = 10)
2 hour quiz preparation/practice per quiz (5 quizzes)	(Subtotal = 10)

Total Hours = 45

Safety Requirements

Students are required to practice safety precautions while performing experiments, including wearing safety glasses, closed-toe full-coverage shoes, and lab coats. Long pants are recommended. In addition, it is recommended you tie it back away from your face if you have long hair. For your safety, food and drink including chewing gum or candy are not allowed in the lab.

Required Materials

- Laboratory coat
- scientific calculator.
- computer and/or smartphone with web/app online access.

Canvas

Section 01

chaminade.instructure.com/courses/45029

Learning Outcomes

Chemistry Mission Statement

Chemistry has justifiably been labeled 'The Central Science'. Training in this discipline is therefore beneficial for all citizens of the modern world. All materials in the universe are made up of chemicals; a knowledge of chemistry is indeed a knowledge of ourselves.

The mission of this program is to:

- Promote molecular literacy (i.e., awareness of the importance of physical, chemical, and biological changes on the atomic and molecular scale)
- Provide hands-on laboratory training using modern chemical techniques and instrumentation
- Engage students in an undergraduate research program
- Enable students to integrate knowledge of the physical world
- Educate about the entry requirements, career pathways, and progression into advanced education in the chemical sciences

Program Learning Outcomes in Chemistry

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

- Apply the scientific method as it is used in organic chemistry, inorganic chemistry, analytical chemistry, physical chemistry, and molecular sciences

- Recognize and explain chemical theory as it applies to the physical world
- Visualize, evaluate, validate, and interpret results of chemical analyses as part of an integral and quality education
- Solve problems using analytical reasoning, professional resources, professional conduct, and ethical behavior
- Communicate chemical information effectively in oral and written formats

Course Learning Outcomes and Linkage to Program Learning Outcomes

After completion of this course, the student will demonstrate the ability to:

Course Learning Outcomes	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
1. Understand the distinction between qualitative and quantitative chemical analysis.		X	x	x	
2. Interpret experimental results and draw reasonable conclusions. Identify sources of error in chemical experiments.		x		x	
3. Learn and understand laboratory safety procedures.				x	x
4. Collaborate with peers in obtaining and interpreting data.		X		x	x

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 ('Ōlelo 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

Course Activities

Lab Notebooks

The lab notebook is where all notes, raw data and calculations for experiments will be documented as well as who participated in the experiment and when the experiment occurred. Lab notebooks must be bound, written in blue or black ink, and have pages numbered (you may number the pages manually). Mistakes happen and are expected; however, they still need to be readable, thus mistakes are only to be crossed out with a single line and NO correction tape/white out should be used. Lab notebooks should not be rewritten to make it look prettier. Scanned or photographed notebooks will be submitted at the beginning of next lab meeting.

Your lab notebook should have the following information:

Each entry for a LAB experiment should include:

- Title
- Name
- Date experiment performed
- Abstract (short paragraph, should be less than about 150 words)
- Introduction (Summarize important **background information** needed by the reader to understand your experiment)
- Procedure Notes / Data Collected (actual data recorded from instruments)
- Calculations (show your work for any calculations here)
- Results/Conclusion

Quizzes:

You may have quizzes at the beginning of labs from topics related to the previous laboratory experiment. Students who arrive late will not be allowed to take the quiz and no makeup quiz will be available; however, students will be allowed to drop their lowest quiz grade.

Final Exam:

There is no final exam for this laboratory course.

Grading Scale

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

A Outstanding scholarship and an unusual degree of intellectual initiative

B Superior work done in a consistent and intellectual manner

C Average grade indicating a competent grasp of subject matter

D Inferior work of the lowest passing grade, not satisfactory for fulfillment of prerequisite course work

F Failed to grasp the minimum subject matter; no credit given

The course grades will be based on the following point total and scale.

Any changes will be announced in class.

Attendance and Participation	10 %
Laboratory Report Sheet and Lab Notebooks	50 %
Quizzes	40 %
Total	100 %

GRADE	PERCENTAGE
A	90-100 %
B	80-89 %
C	65-79 %
D	45-64 %
Fail	below 45 %

Course Schedule Spring 2026

The Professor may modify elements of this syllabus according to the operational needs of the class. Changes to the schedule will be announced in class and via CANVAS or email.

Exp No.	Week of	Experiment/Activity
1	1/12	Introduction and Lab Safety
2	1/19	Measurements
3	1/26	Density
4	2/2	Scientific Method
5	2/9	Chemical Nomenclature

6	2/16	Separation of a Mixture
7	2/23	Hydrates
8	3/2	Physical and Chemical Reactions
9	3/9	Acid-Base Titration Part I
10	3/16	No Lab (Spring Break)
11	3/23	Acid-Base Titration Part II
12	3/30	No Lab (Ester)
13	4/6	Aspirin Synthesis
14	4/13	Soap Synthesis
15	4/20	Plastics and Polymers
16	4/27	Last Day of Instruction & Catch up

Course Policies

Late Work Policy

All overdue assignment not completed or anticipated to be late must have approval from the instructor along with a valid excuse.

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.

Writing Policy

Plagiarism will not be tolerated and will be checked.

Instructor and Student Communication

Questions for this course can be emailed to the instructor at seongjin.kim@chaminade.edu. Online, in-person and phone conferences can be arranged. Response time will take place up to [number of hours or days].

Cell phones, tablets, and laptops

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

Disability Access

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

Title IX 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

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

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

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

Federal regulations require continued attendance for continuing payment of financial aid. When illness or personal reasons necessitate continued absence, the student should communicate first with the instructor to review the options. Anyone who stops attending a course without official withdrawal may receive a failing grade or be withdrawn by the instructor at the instructor's discretion.

Student Conduct Policy

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

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

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

Credit Hour Policy

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

Specific Credit Situations

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