

Course Syllabus

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MARIAN UNIVERSITY

Indianapolis

CHE 108 Elements of General and Biological Chemistry Lab 1 Credit

Semester and Year: First Five-Weeks, Summer 2025

Email: Contact via Canvas email

Required Textbook(s):

We will use from Hands On Lab kit: LP-2454-CK-02

Student URL:

- [How do I order my kit through HOL Cloud? \(https://urldefense.proofpoint.com/v2/url?u=https-3A__holstudenthelp.screenstepslive.com_m_90733_l_1132195-2Dhow-2Ddo-2Di-2Dorder-2Dmy-2Dkit-2Dthrough-2Dhol-2Dcloud&d=DwMFAG&c=rhXotFx3UTYAnEG06vzqqw&r=WmzJpVkZQAIHwFPQCoMNH4yz2S6QeCNl4RKcxGidwKfvRh_zvo&e=\)](https://urldefense.proofpoint.com/v2/url?u=https-3A__holstudenthelp.screenstepslive.com_m_90733_l_1132195-2Dhow-2Ddo-2Di-2Dorder-2Dmy-2Dkit-2Dthrough-2Dhol-2Dcloud&d=DwMFAG&c=rhXotFx3UTYAnEG06vzqqw&r=WmzJpVkZQAIHwFPQCoMNH4yz2S6QeCNl4RKcxGidwKfvRh_zvo&e=))
- [How do I activate my kit code? \(https://urldefense.proofpoint.com/v2/url?u=https-3A__holstudenthelp.screenstepslive.com_m_90733_l_1195435-2Dhow-2Ddo-2Di-2Dactivate-2Da-2Dkit-2Dcode&d=DwMFAG&c=rhXotFx3UTYAnEG06vzqqw&r=WmzJpVkZQAIHwFPQCoMNH4yz2S6QeCNk3bch0HFvU&e=\)](https://urldefense.proofpoint.com/v2/url?u=https-3A__holstudenthelp.screenstepslive.com_m_90733_l_1195435-2Dhow-2Ddo-2Di-2Dactivate-2Da-2Dkit-2Dcode&d=DwMFAG&c=rhXotFx3UTYAnEG06vzqqw&r=WmzJpVkZQAIHwFPQCoMNH4yz2S6QeCNk3bch0HFvU&e=))

Note: Students enrolled in CHE 100 only are not required to purchase a lab kit. This is only for students enrolled in CHE 108.

Please be aware that the lab kits come from an outside vendor. Most orders require up to 5 business days for order production and processing in addition to shipping time. Students should plan ahead and order the kit accordingly. If you have any questions or concerns regarding your order, please call the

Hands-On Labs' Customer Service Department at 866-206-0773 ext. 3 or email them at info@holscience.com.

Note: If eligible, degree seeking students at Marian University may utilize financial aid to purchase this lab kit through the MU Book Store.

Lab Kit - Student Ordering Process

- 1) Using the course enrollment link, create an account on the HOL Cloud. *(Please use Firefox, Google Chrome, Apple Safari for you Internet browser only)*
- 2) Once created, select the course you would like to order your lab kit for. Ex. (CHEM 108)
- 3) Once you have selected the course, click the **orange button labeled “Purchase Kit”** at the top right hand corner.
- 4) Complete Shipping Information.
- 5) Review your order, choose a shipping option and place the order.
- 6) Upon placing your order, you must accept the terms and conditions of our return policy.
- 7) Input credit card info and click **“Pay”**
- 8) You will receive your order confirmation and a receipt via email
- 9) You will also receive a UPS tracking number, your order history and your course prerequisites **(Getting Started & Laboratory Safety)** should now be unlocked.

[Directions pdf \(https://marian.instructure.com/courses/1971494/files/164392540/download?wrap=1\)](https://marian.instructure.com/courses/1971494/files/164392540/download?wrap=1) 
 [\(https://marian.instructure.com/courses/1971494/files/164392540/download?download_frd=1\)](https://marian.instructure.com/courses/1971494/files/164392540/download?download_frd=1) 
 [\(https://marian.instructure.com/courses/1971494/files/164392540/download?wrap=1\)](https://marian.instructure.com/courses/1971494/files/164392540/download?wrap=1)

Students are required to purchase the items listed above prior to the start of the course. Look into all of your options - new, used, rental or e-books. If you choose a rental option, be sure to understand the policies and the due dates for the returns. While you have the option to obtain your course materials from any source, ordering from the MU Book Store can be a convenient option. Please note that you can also charge bookstore purchases to your student account or use your MU financial aid if applicable. Visit www.bkstr.com/marianustore/home.

Additional Resources:

The Mother Teresa Hacklemeier Memorial Library at Marian University provides various databases <http://www.marian.edu/library/Pages/default.aspx>

(<http://www.marian.edu/library/Pages/default.aspx>)

- **Marian University requires all work be completed on a laptop or PC; this includes all exams and quizzes.**

Course Description

This course is an introduction to the laboratory principles of general chemistry, organic chemistry, and biochemistry, and is designed for students in the health science areas obtained through in home Chemistry experiments.

This course will explore general chemistry, organic, and biochemistry in an experimental course. There are 8 laboratories to be completed in the course. Plan to complete minimally 1 lab a week. You are encouraged to interact with your instructor with question or other content issues as is needed.

Upon successful completion of this course, students will be able to:

Student Learning Objectives

- 1) To learn about the SI system and how it relates to measurements in mass, length, volume and time.
- 2) To define a solid, liquid, and gas and explore melting points.
- 3) Compare and contrast carbohydrates, lipids, and proteins for energy utilization in the human body.
- 4) Define acids and bases and then explore how a buffer works..
- 5) Carbohydrates and their function in living systems.
- 6) Proteins are made up of amino acids which are linked by peptide bonds.
- 7) To investigate the catalytic activity of enzymes and how the structure of the active site of an enzyme relates to its ability to turn a reactant into a product.
- 8) Differentiate a molecular formula from a structural formula and identify and understand isomers.

Teaching Strategies

Lab activities

Assignments & Assessment Methods:

Methods of Evaluation

Write a narrative of the methods on how you will plan to evaluate the student.

Grading Scale

The grading scale is based upon the Marian University Department of Nursing recommended scale and is included in the *Nursing Student Handbook*.

Grade Scale

GRADE	PERCENTAGE
A	92%
A-	88%
B+	84%
B	80%
B-	77%
C+	74%
C	70%
C-	67%
D+	64%
D	60%
F	<59%


* A grade of 77% is required to pass the course. The School of Nursing policy states that receiving a grade lower than a C+ (77%) in any two nursing courses, results in automatic dismissal from the nursing program; and the student is ineligible for readmission for a period of five (5) years. See *Nursing Student Handbook* for more information.

Course Policies:**Late Policy & Due Date Extensions:**

Assignments will close for submission 72 hours after the due date. Any assignment submitted late in that 72 hour time period will receive a 10% late penalty. For any final exam, paper, etc. that is due the last day of the term/session, the 72-hour late policy does not apply past the date the term or session ends. Late initial posts in discussion boards will receive a 2-point deduction in the rubric.

Further extensions and accommodations, including exams, may be given consideration for unforeseen, documented hardships, such as medical emergencies, documentable technical issues, death of a loved one, travel and weather emergencies, etc. However, simply forgetting, time zone differences, going on vacation, or not performing as well as intended are not acceptable excuses. If you believe an extension or accommodation is warranted, please contact your instructor.

Plagiarism Statement: Plagiarism is using the words or ideas of another as your own without giving credit to the source author. This also includes taking a paper found online and submitting it as one's own paper and/or cutting and pasting from a website and submitting it as your work product.

Plagiarism is defined in detail in the [Code of Student Rights and Responsibilities](https://www.marian.edu/docs/default-source/campus-life/codeofstudentrightsandresponsibilities.docx?sfvrsn=14)  (<https://www.marian.edu/docs/default-source/campus-life/codeofstudentrightsandresponsibilities.docx?sfvrsn=14>) under Section 8: Academic Conduct Procedures, as well as an extended description of academic dishonesty.

The following are some helpful websites for understanding plagiarism, documentation and citation:

- Marian University's library: <https://www.marian.edu/current-students/library>
(<https://www.marian.edu/current-students/library>)
- Plagiarism.org: <https://plagiarism.org/>
(https://urldefense.com/v3/https://plagiarism.org/_:!!DUogwUQ!T_yXRW2Aa1Gbx09gkwJ_Q3X0PNE2)
- Purdue OWL: <https://owl.purdue.edu/>
(https://urldefense.com/v3/https://owl.purdue.edu/_:!!DUogwUQ!T_yXRW2Aa1Gbx09gkwJ_Q3X0PNE2)

Adherence to Academic Integrity & Use of AI and Chat GPT: At Marian University, all students are called to uphold academic integrity in all their academic endeavors, including the responsible use of AI tools, reflecting both the institution's commitment to intellectual and moral integrity and its foundational Franciscan values. Students are expected to exemplify honesty, honor, and respect for the truth, demonstrating their intellectual and moral integrity as outlined in the Code of Student Rights and Responsibilities. By embodying these responsibilities, students contribute to a just and flourishing academic community. Students are allowed to use advanced automated tools (artificial intelligence or machine learning tools such as ChatGPT or Dall-E 2) on assignments in this course if that use is properly documented and credited. For example, text generated using ChatGPT-3 should include a citation such as:

"Chat-GPT-3. (YYYY, Month DD of query). "Text of your query." Generated using OpenAI.<https://chat.openai.com/>"

Material generated using other tools should follow a similar citation convention. Decisions are at the discretion of the instructor, so students are encouraged to communicate with their instructors.


Accommodation/Accessibility Statement: Marian University, through policy and practice, is committed to providing equitable access to learning opportunities for all students. If you experience, or anticipate experiencing, barriers to your education due to a disability please contact the Personalized Learning Center by emailing plc@marian.edu (<mailto:plc@marian.edu>) or calling **317.955.6540** to start a conversation.

Although a student may request an accommodation at any time, it is best to initiate the accommodation process as early as possible as it may take time to complete the interactive process and accommodations will not be implemented retroactively. If a reasonable accommodation is determined, a Course Accommodation Letter will be created at the Personalized Learning Center for the student to provide to their faculty members with information related to their accommodations. Faculty will not set up disability-related accommodations without a current semester Course Accommodation Letter.


Faculty, Staff or Student questions or concerns regarding the accommodation process can be sent to plc@marian.edu (<mailto:plc@marian.edu>) or Mandie Greiwe, agreiwe@marian.edu (<mailto:agreiwe@marian.edu>), Director of the Personalized Learning Center.











Diversity & Inclusion Statement: Marian's Adult and Online Programs (MAP) at Marian University is a collaborative academic community committed to fostering a diverse and inclusive community across the intersections of race, ethnicity, religion, sexual orientation, gender identity, age, disability status, socio-economic background, political perspective, culture, immigration status, and national origin. Online programs is committed to creating a safe and just environment of respect for students, faculty, and staff following our shared Franciscan values.


****Any changes to this syllabi will be communicated to the student.**

Please click here to download a [PDF of the syllabus](#).
(<https://marian.instructure.com/courses/7545541/files/318566640?wrap=1>)_ 
(https://marian.instructure.com/courses/7545541/files/318566640/download?download_filed=1)

Course Summary:

Date	Details	Due
Sun May 18, 2025	 Experiment 1: Laboratory Techniques and Measurements (https://marian.instructure.com/courses/7545541/assignments/50198239)	due by 11:59pm

Date	Details	Due
Sun May 25, 2025	 Discussion 1: Laboratory Techniques and Measurements and Caloric Content of Food. (https://marian.instructure.com/courses/7545541/assignments/50198238)	due by 11:59pm
	 Experiment 2: Caloric Content of Food (https://marian.instructure.com/courses/7545541/assignments/50198240)	due by 11:59pm
	 Discussion 2: Melting Points and Using Buffers. (https://marian.instructure.com/courses/7545541/assignments/50198237)	due by 11:59pm
	 Experiment 3: Melting Points (https://marian.instructure.com/courses/7545541/assignments/50198241)	due by 11:59pm
	 Experiment 4: Using Buffers (https://marian.instructure.com/courses/7545541/assignments/50198242)	due by 11:59pm
	 Discussion 3: Stereochemistry and Macromolecules of Life – Sugar and Starches (https://marian.instructure.com/courses/7545541/assignments/50198236)	due by 11:59pm
Sun Jun 1, 2025	 Experiment 5: Stereochemistry 1 (https://marian.instructure.com/courses/7545541/assignments/50198243)	due by 11:59pm
	 Experiment 6: Macromolecules of Life – Sugar and Starches (https://marian.instructure.com/courses/7545541/assignments/50198244)	due by 11:59pm
Sat Jun 7, 2025	 Discussion 4: Macromolecules of Life – Amino Acids and Enzymes: Temperature, pH, and Specificity (https://marian.instructure.com/courses/7545541/assignments/50198235)	due by 11:59pm
	 Experiment 7: Macromolecules of Life – Amino Acids (https://marian.instructure.com/courses/7545541/assignments/50198245)	due by 11:59pm

Date	Details	Due
	 Experiment 8: Enzymes: Temperature, pH, and Specificity (https://marian.instructure.com/courses/7545541/assignments/50198246)	due by 11:59pm