

CHM 126: Introductory Organic Chemistry Laboratory
Spring 2024 Syllabus

Lab Director: Justin S. Pantano, Ph.D. (he/him/his)
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Student Hours in Beapre 117E:
Available via Starfish

Laboratory Instructors

- Sections 5/14: Maggie Bernish, mbernish@uri.edu
- Sections 10/12: Solaleh Farnia, solaleh_farnia@uri.edu
- Sections 7/9: Danielle Jacoby, djacoby@uri.edu
- Sections 2/13: Sam Katz, sdkatz@uri.edu
- Sections 1/3: Anuradha KC, anuradha.kc@uri.edu
- Sections 8/11: Miyuru Madusanka, mmiyurumadusank@uri.edu
- Sections 4/6: Amanda Pepler, amanda_pepler@uri.edu

Required Laboratory Materials

- CHM 126 Laboratory Manual (will be uploaded to Brightspace)
- RAM Account and URI ID card, for purchases at the Stockroom (Beapre 180)
- Safety equipment: safety glasses, knee-length lab coat (both can be purchased at the Stockroom), nitrile gloves, shoes that fully enclose your feet
- A scientific calculator capable of log and exponential functions (*NOT* a cell phone)
- Access to the Brightspace site

*Please note that safety equipment purchased off campus must be approved by the Stockroom Manager before use in this course.

Course Description and Attendance Policy

CHM 126 is the laboratory course that accompanies the CHM 124 lecture. As such, credit for or concurrent enrollment in CHM 124 is required. Students should be aware that the CHM 124 lecture and CHM 126 lab are separate courses and while the lab is intended to complement the lecture by illustrating many of the lecture concepts, the timing of these concepts may or may not be synchronized with the lecture presentation. The lab may also include some additional concepts not covered in the lecture.

It is recognized that several students enrolled in the CHM 126 lab have previously completed the CHM 124 lecture in a previous semester or previous academic year. As such, each of the experiments in the laboratory manual is written as a complete lesson, and supplemental materials are available on Brightspace. It is intended that any student who does a thorough job studying the provided course materials, preparing for each experiment, practicing the required skills, and utilizing the Study Help Resources should be able to succeed in the course.

CHM 126 is a laboratory course, which requires hands-on experimentation and direct observation of physical and chemical changes. For this reason, students **MUST** be present to conduct each experiment. Attendance is required for the section the student has registered, and under **NO** circumstances are students permitted to attend another section (with the only exception being the mandatory Safety Training during the first meeting).

Students must take responsibility for carefully studying all lab materials and following all study and safety instructions.

The course includes 10 laboratory experiments, and an 11th as a make-up experiment. The course grade is largely based on the successful completion of 9 experiments. Thus, if students miss two in-class labs, they are required to complete the 11th make-up experiment at the end of the semester. Students who do not complete 9 experiments should expect to receive a failing grade in this course. In this instance, “complete” means the student submitted the Pre-Lab Assignment, actively participated in the experiment, and submitted the Report Sheet. Material from the first ten labs should be reviewed even if missed by students, as the final exam for this laboratory course contains material from all ten in-person labs.

Please note: Any student concurrently enrolled in both CHM 124 and CHM 126 must be aware that if CHM 124 is dropped, you must also drop CHM 126.

Departmental Safety Policy

- Students must be wearing their personal protective equipment (PPE: lab coat and safety glasses) before they enter the laboratory. (Nitrile gloves do not need to be donned until students begin working their experiment.)
- No student is permitted to enter a chemistry lab unless they are wearing BOTH a lab coat and safety glasses. These items MUST be worn at all times while students are in a chemistry lab and are not to be removed until AFTER students have safely exited the laboratory.
- Chemistry department personnel are prohibited from loaning safety glasses by State of Rhode Island health and hygiene regulations. Students who forget their safety glasses should not ask to borrow any and must purchase a new pair at full cost from the Stockroom.
- Any student who comes to lab without the required PPE are NOT permitted to conduct the experiment and will receive a zero for that experiment. NOTHING is more important than the personal safety of the occupants of the lab.
- Any student who deliberately or carelessly disregards safety instruction (either written or verbal) can be expelled from the laboratory and receive a zero for the experiment. Any student expelled twice for safety violations will automatically receive a failing grade in the course. Careless disregard of safety instruction includes (but is not limited to):
 - Any improper disposal of chemical waste, such as chemicals down the sink or into a garbage can.
 - Any student not wearing complete PPE, which includes safety glasses, knee-length lab coat, nitrile gloves, closed-toe shoes, and socks.
 - Any student who has not completed the Pre-Lab Assignment, which indicates the student has not effectively prepared for the experiment.
 - Any student who uses a cell phone without permission for any purpose, aside from a laboratory emergency.
 - Students who need to use their phones for a personal emergency should step into the hallway.

Grading Policy

The course grade will be calculated as follows:

Lab Reports (9% each)	81%
Lab Safety	5%
Lab Final Exam	14%
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Total	100%

Grades in CHM 126 are earned by demonstration of mastery/proficiency in the required skills; these include not only organic chemistry laboratory techniques, but also *problem-solving*, *critical thinking*, and the ability to apply organic chemistry concepts to relevant laboratory scenarios (for example, predicting physical and chemical properties from a study of molecular structure).

Each student's grade is determined by the quality of that student's performance on the CHM 126 work items (described in detail below). The grade is determined by the quality of the student's performance on the course work items described in detail below. The grade is **not** open to negotiation and is **not** dictated by what is needed to progress in the student's chosen program of study. The grade must be **earned** by achieving proficiency in (and ideally, mastery of) the skills identified as essential to ongoing success in the student's degree program.

Be mindful that the TA assigned to your section will do all the grading for the course. Students should not compare graded work from other sections, as there may be variance from one TA to another. Should there be issues with the grading of work, students should contact their TA immediately. If the issues are not resolved through discussions with the TA, contact the course director. After one week has passed since the graded material was returned, there will be no grade changes.

Students should expect the standard grading scale to be applied, as follows:

90%+ = A- / A; 80-89% = B- / B / B+; 70-79% = C- / C / C+; 60-69% = D / D+; < 60% = F

Remember, you need a C- to move forward to other courses within the Chemistry department.

Course Work Items

Pre-Lab Assignments

Each laboratory experiment includes a Pre-Lab Assignment for students to demonstrate that they have thoroughly prepared for their experimental work. This Pre-Lab Assignment may be in the form of an online "skills check" through Brightspace, or as a worksheet. Pre-Lab Assignments administered via Brightspace should be attempted at least one time before you meet for your laboratory section for that week, as it is a critical part of your preparation for the experiment. Pre-Lab Assignments that are worksheets are *required* to be completed prior to your lab section meeting and must be submitted at the beginning of your meeting, or you will not be allowed to participate in the experiment.

Report Sheets

Each laboratory experiment also includes a Report Sheet. Students must print these files from Brightspace prior to their lab meeting, as these files must be used for their experiment. ***Students should not expect copies to be provided to them in the lab.*** Each Report Sheet has two parts: **1)** A laboratory notebook, where data and observations are recorded while working the experiment, and **2)** A more formal results and conclusions section, complete with post-lab discussion questions. These Report Sheets must be completed in *ink*, and students

should have their lab instructor to review their data and observations and sign their notebook pages prior to leaving lab.

The post-lab portion of the Report Sheet is completed after experimentation is done, and after calculations are worked and results are interpreted. This part of the Report Sheet serves as the final, formal presentation of each student's experimental work. The completed Report Sheet is due at the *NEXT* lab meeting the student attends and must be submitted at the *START* of that lab session. **Report Sheets submitted late are subject to a ten-point reduction per business day late, so that a Report Sheet submitted a week late will be worth zero points.**

Final Exam

The CHM 126 Final Exam is comprised of questions covering concepts from the first ten lab experiments and the lab safety activity. The format of the lab final will be discussed in greater detail towards the end of the semester.

Billing Policy

Each student is responsible for the equipment provided in their assigned drawer. At the beginning and end of every lab meeting, each student should thoroughly inspect the contents of their drawer, as the equipment is shared by students in multiple sections. Students are charged for any equipment they break during their own lab section, as well as any items reported missing or broken by the student who inventories that drawer next.

Students must take responsibility for checking the Chemistry Stockroom website (link on Brightspace) to determine whether they have an outstanding lab bill. The deadline to pay bills at the stockroom is the close of business at the end of Final Exam week. Any student who has an unpaid stockroom bill at that point will have a hold placed on their e-Campus account, which may prevent students from registering for classes, obtaining a transcript, or obtaining a diploma.

Incomplete Policy

Incomplete grades cannot be assigned except in the case of a real emergency. Any grade of Incomplete must be approved by the department chair and the dean. In order to receive an Incomplete, a student's coursework must have been passing and the student must have completed at least half of the coursework for the semester. Students receiving a grade of Incomplete should make the necessary arrangements with the instructor to complete the remaining work prior to the following mid-semester. If an Incomplete is not made up prior to the two-year grade change deadline established by the University, the Incomplete will be replaced with a standard letter grade calculated for the student based on the work completed and including zeroes for any work not completed.

Academic Integrity

Students are expected to be honest in all academic work. A student's name on any written work, exam, or quiz is regarded as assurance that the work is the result of the student's own effort, thought, and study. The university policy on academic integrity is strictly enforced. Any evidence of academic dishonesty, as defined by the policies outlined in the URI Student Handbook, will result in any of the following: a score of zero for the assessment in question, a failing grade in the course, and/or formal notification to the Dean of Students.

The following are some examples of academic dishonesty:

- Using material, directly or paraphrasing, from published or web sources without appropriate citation. This includes using AI generators, such as ChatGPT or similar.
- Claiming disproportionate credit for collaborative work.
- Unauthorized possession of or access to exams.
- Unauthorized communication during exams.
- Unauthorized use of another's work or preparing work for other students.
- Taking an exam for another student.
- Altering or attempting to alter grades.
- The use of notes or electronic devices to gain an unauthorized advantage during exams.
- Facilitation or aiding of another's academic dishonesty.

Academic Integrity specific to CHM 126

Each student's Pre-Lab Assignment and Report Sheet MUST be completed on an individual basis. Students submitting work that is clearly the same as another's are in violation of the university's Academic Integrity policies, and will be held accountable accordingly. As such, no portion of a student's submitted work can be identical (or nearly so) to that of another without proper attribution. If a student's work is the same (or nearly so) as another source (such as other students' work, provided lab materials, TA explanations, information on the internet, etc.), it will be regarded as plagiarism.

Academic dishonesty in any form is considered a serious offense, and disciplinary action will be taken immediately.

How to Succeed in CHM 126

Chemistry Teaching Assistant Help Office, Beaupre 115

The Chemistry Help Office is a place where students can gather to study and work problems, either alone or in small groups, and get help on an as-needed basis by Teaching Professors and Graduate TAs that staff the office regularly throughout the week. The Graduate TAs staffing this office are the TAs that teach these lab courses, so they are the most familiar with specific experiments and expectations. A complete schedule of TA office hours is available via a link on Brightspace. TAs listed as teaching CHM 126, CHM 226, or CHM 292 will be most familiar with content in CHM 126.

Assistance from Prof. Pantano, during student hours or via email

My weekly schedule is available via Starfish. You are always welcome to schedule an appointment with me or drop in when you notice I am available. All email communication (including Brightspace announcements) will be through your URI email, so be sure to regularly check it. Please be aware that I receive a substantial number of emails daily. To ensure any of your emails will be seen and answered, please adhere to the following:

- Put the course number (CHM 126) in the subject line.
- Be concise and descriptive in the subject line.
- Ensure clarity in your message. If I cannot interpret your message, I will not address it.

Any emails received after 5pm may not be reviewed until the next business day, and generally addressed within 48 hours. A response may be in the form of a direct email or an announcement on Brightspace.

Important Spring 2024 Semester Deadlines

Last updated: 1/17/2024

Last day of e-Campus open add period: Sunday, January 28

Last day of e-Campus add with permission number: Sunday, February 4

Last day for students to drop courses via e-Campus with no transcript designation: Monday, February 12

Last day for students to drop courses via e-Campus with drop (W) designation: Monday, March 4

Mid-term progress reports posted in e-Campus: Tuesday, March 19

Viral Illness Precautions Statement

The University is committed to delivering its educational mission while protecting the health and safety of our community. Students who are experiencing symptoms of viral illness should NOT go to class/work. Those who test positive for COVID-19 should follow the [isolation guidelines](#) from the Rhode Island Department of Health and CDC.

If you are unable to attend lab due to illness, please notify your laboratory instructor by email, and cc the course director at jpantano@uri.edu. Please use that time to focus on rest and recovery.

Excused Absences

Absences due to serious illness or traumatic loss, religious observances, or participation in a university sanctioned event are considered excused absences. Students are responsible for work missed during an excused absence but will not be penalized by grading or assignment/exam make-up policies. Students should notify faculty in advance of absences due to religious observance or university-sanction events, and as soon as possible for other absences See [University Manual sections 8.51.11-8.51.14](#) for details.

Anti-Bias Syllabus Statement

We respect the rights and dignity of each individual and group. We reject prejudice and intolerance, and we work to understand differences. We believe that equity and inclusion are critical components for campus community members to thrive. If you are a target or a witness of a bias incident, you are encouraged to submit a report to the URI Bias Response Team at www.uri.edu/brt. There, you will also find people and resources to help.

Land Acknowledgement

The University of Rhode Island occupies the traditional stomping ground of the Narragansett Nation and the Niantic People. We honor and respect the enduring and continuing relationship between the Indigenous people and this land by teaching and learning more about their history and present-day communities, and by becoming stewards of the land we, too, inhabit.

Student Resources

Academic Enhancement Center

The Academic Enhancement Center (AEC) offers face-to-face and online services to undergraduate students seeking academic support beginning **xxxx**. Services are based out of Roosevelt Hall, the Carothers Library room LL004, and online. Peer tutoring is available for STEM & BUS-related courses through the Drop-In Center and small-group tutoring. The Writing Center peer consultants offer feedback focused on supporting undergraduate writers at any stage of a writing assignment. The UCS 160 course and one-to-one Academic Skills Consultations offer strategies for improving studying and test-taking skills. Complete details about each of these programs, up-to-date schedules, contact information, and self-service study resources are all available on the AEC website, uri.edu/aec.

- [STEM & BUS Tutoring](#) helps undergraduate students navigate a variety of 100 and 200 level STEM & BUS courses through free peer tutoring in-person and online. Students can select **occasional or weekly tutoring sessions** through the TracCloud system or visit the Drop-In Center, located in the Carothers Library lower level room LL004. The TracCloud application is available through [URI Microsoft 365](#) single sign-on and more detailed information and instructions can be found at uri.edu/aec/tutoring.
- [Academic Skills Development](#) programs teach students to develop and apply metacognitive thinking strategies to improve their time management, problem solving and study skills. **UCS 160: Success in Higher Education** is a 1-credit course on planning and managing work and studying in college. **UCS 161: Becoming a Self Directed Student** teaches strategies for identifying and overcoming challenges in academic work and life. **Academic Consultations** are 1 to 1 in-person or online consultations that help students to directly address individual academic challenges. Students can schedule sessions with [Peer Academic Consultants on TracCloud](#) or with [Dr. David Hayes on Starfish](#). Finally, [Study Your Way to Success](#) is a self-guided web portal connecting students to tips and strategies on studying and time management related topics. For information or help with scheduling, contact Dr. Hayes directly at davidhayes@uri.edu.
- [The Undergraduate Writing Center](#) provides peer writing support to students in any class, at any stage of writing: from understanding an assignment and brainstorming ideas, to developing, organizing, and revising a draft. Writing consultations are available through: 1) 25- or 50-minute **in-person appointments**, 2) synchronous **online appointments**, and 3) asynchronous **written feedback**. Students can view availability and book online through [URI Microsoft 365](#) single sign-on via the WOnline (Undergrad) app. For more information, visit uri.edu/aec/writing.

Disability, Access, and Inclusion Services

Your access to this course is important. Please send me your Disability, Access and Inclusion (DAI) accommodation letter early in the semester so we have adequate time to discuss and arrange your approved academic accommodations. If you have not yet established services through DAI, please contact them to engage in a confidential conversation about the process for requesting reasonable accommodations in the classroom. DAI can be reached by: calling (401)874-2098; visiting web.uri.edu/disability; or emailing dai@etal.uri.edu. We are available to meet with students enrolled in courses at both the Kingston and Providence campuses.

Basic Needs Resources

Food insecurity affects up to 30% of college students. That means you might not have enough food to get through a day or week, you don't have money to purchase groceries or personal products, or you are primarily eating foods that don't provide a lot of nutrition because they're all you can afford. This can all impact your academic success.

[Rhody Outpost](#) provides URI students who are food insecure with emergency food services and resources. The Outpost is housed at the Dining Services Warehouse at [10 Tootell Road](#), between Flagg Road and West Alumni Avenue. We are open every Friday from 3-5:30. Any student in need is welcome to visit the Outpost after filling out a brief [request form](#).

If you have questions about food or housing insecurity, contact Barbara Sweeney, Coordinator of Food Security Outreach, at barbara_sweeney@uri.edu, or 401-874-5633. We want to help all students succeed and make URI a place with #NoRamHungry.

Mental Health and Wellness

We understand that college comes with challenges and stress associated with your courses, job/family responsibilities and personal life. URI offers students a range of services to support your [mental health and wellbeing](#), including the [URI Counseling Center](#), [MySSP](#) (Student Support Program) App, the [Wellness Resource Center](#), and [Well-being Coaching](#).

Center for Career and Experiential Education:

The [Center for Career and Experiential Education](#) (CCEE) supports undergraduate students with career preparation through [one-on-one advising](#), [24-7 online resources](#), [career education courses](#), and [career events](#) that prepare you for life after graduation and connect you with employers and community partners. Your [Career Education Specialist](#) (CES) is available to meet with you all year long, as early as your first-year, both in-person and virtually, to assist with exploring your career options, resume and cover letter writing, interview preparation, job and internship search, and more. We use [Handshake](#) to connect you to on and off campus jobs and internships and [RhodyServes](#) to connect you with volunteer opportunities in RI. Our team on the first floor of Roosevelt Hall can help you learn how to use Handshake effectively to find amazing opportunities. For more information or to meet with a CES, go to uri.edu/career.

Spring 2024 Laboratory Schedule*

*This schedule and syllabus are subject to change by the instructor at any time.

Week	Dates	Learning Event	Week	Dates	Learning Event
1	M 1/22 T 1/23 W 1/24 R 1/25 F 1/26	no labs meet CHM Lab Safety and Check-In CHM Lab Safety and Check-In CHM Lab Safety and Check-In CHM Lab Safety and Check-In	8	M 3/11 T 3/12 W 3/13 R 3/14 F 3/15	Spring Break - no labs meet Spring Break - no labs meet Spring Break - no labs meet Spring Break - no labs meet Spring Break - no labs meet
2	M 1/29 T 1/30 W 1/31 R 2/1 F 2/2	no labs meet Lab 1: Structures, Isomers, Naming Lab 1: Structures, Isomers, Naming Lab 1: Structures, Isomers, Naming Lab 1: Structures, Isomers, Naming	9	M 3/18 T 3/19 W 3/20 R 3/21 F 3/22	no labs meet Lab 7: Esters and Soaps Lab 7: Esters and Soaps Lab 7: Esters and Soaps Lab 7: Esters and Soaps
3	M 2/5 T 2/6 W 2/7 R 2/8 F 2/9	no labs meet Lab 2: Thin-Layer Chromatography Lab 2: Thin-Layer Chromatography Lab 2: Thin-Layer Chromatography Lab 2: Thin-Layer Chromatography	10	M 3/25 T 3/26 W 3/27 R 3/28 F 3/29	no labs meet Lab 8: Nylon Synthesis Lab 8: Nylon Synthesis Lab 8: Nylon Synthesis Lab 8: Nylon Synthesis
4	M 2/12 T 2/13 W 2/14 R 2/15 F 2/16	no labs meet Lab 3: Distillation Lab 3: Distillation Lab 3: Distillation Lab 3: Distillation	11	M 4/1 T 4/2 W 4/3 R 4/4 F 4/5	no labs meet Lab 9: Functional Groups Lab 9: Functional Groups Lab 9: Functional Groups Lab 9: Functional Groups
5	M 2/19 T 2/20 W 2/21 R 2/22 F 2/23	Presidents' Day - no labs meet Lab 4: Dehydration of Cyclohexanol Lab 4: Dehydration of Cyclohexanol Lab 4: Dehydration of Cyclohexanol Lab 4: Dehydration of Cyclohexanol	12	M 4/8 T 4/9 W 4/10 R 4/11 F 4/12	no labs meet Lab 10: Carbohydrates Lab 10: Carbohydrates Lab 10: Carbohydrates Lab 10: Carbohydrates
6	M 2/26 T 2/27 W 2/28 R 2/29 F 3/1	no labs meet Lab 5: Recrystallization Lab 5: Recrystallization Lab 5: Recrystallization Lab 5: Recrystallization	13	M 4/15 T 4/16 W 4/17 R 4/18 F 4/19	no labs meet Lab Exam Lab Exam Lab Exam Lab Exam
7	M 3/4 T 3/5 W 3/6 R 3/7 F 3/8	no labs meet Lab 6: Aspirin Synthesis Lab 6: Aspirin Synthesis Lab 6: Aspirin Synthesis Lab 6: Aspirin Synthesis	14	M 4/22 T 4/23 W 4/24 R 4/25 F 4/26	no labs meet Lab Make-up and Check-Out Lab Make-up and Check-Out Lab Make-up and Check-Out Lab Make-up and Check-Out