

CHEM 1066 Syllabus

Instructor Information

There is a team of people, including your instructor, who administer your laboratory course. The team can be reached at genchem@umn.edu with any questions you may have about your lab course, or to report issues with your TA.

Your Instructor

Professor Michelle Driessen is the final authority on any policy questions, curriculum decisions, extensions, disability-related accommodations, and final course grades. She is assisted by support staff, including the head TA. A member of the team will respond to your email questions and periodically check in on your laboratory meeting.

Class Background Information


Required Course Materials

- Internet capable laptop or tablet*
- Course content provided through the class Canvas site and LabArchives (~\$20 automatically charged to your account and special email link sent - no manual to purchase at the bookstore)
- Approved splashproof goggles are required**

*You should protect your device from spills/contamination by purchasing a protective envelope (for tablets) or a keyboard cover for your laptop. These protective items should be removed when you leave lab so that you do not contaminate any of your other belongings. An alternative is to use disposable plastic wrap that is available in lab to wrap your device.

**The bookstore has several options available. If you purchase them somewhere else, they must be marked with this code: ANSI Z87.1-1968.

Student learning outcomes addressed in this course include:

- Can identify, define, and solve problems
- Can locate and critically evaluate information
- Has mastered a body of knowledge and mode of inquiry
-  Can communicate effectively

General Chemistry

You must be wearing approved safety goggles and have all skin covered from the chest down in order to participate in the laboratory; in addition, you must wear closed toe shoes (no sandals or toes peeking out). If you do not come to lab dressed appropriately, with goggles, you will be asked to leave and will not have the opportunity to make-up the experiment. Please see the full dress code and safety goggle information posted on the lab website.

Safety

Each student is expected to read and follow all safety protocols/information found in the class site. In addition, each student must sign the safety contract in the Canvas site before they will be allowed to participate in any experiment.

Any student found performing unauthorized experiments or behaving in an unsafe manner in the laboratory may be removed from the laboratory at any time. Whether or not behavior is unsafe is at the discretion of the instructors, and this includes failure to properly respond to instructions in a timely manner. Removal from the laboratory may be for a period of time as short as the remainder of the current lab period or as long as the remainder of the course itself, depending on the circumstances.

Safety Commitment

The University of Minnesota Department of Chemistry is committed to the safety for all of our students, faculty, staff, and post-doctorates, both inside and outside of our laboratories. TA's are encouraged to discuss a safety related issue during the every lab and always ask if anyone has any concerns. If for some reason you are uncomfortable talking with the TA your instructor is another great source. The Department is considered a national safety leader and the student led Joint Safety Team (jst.umn.edu) and the department safety committee are both very interested in addressing safety concerns. Contact information is available at <https://chem.umn.edu/safety>.

Canvas Site

There are multiple methods for finding the laboratory Canvas site. You may use the myU portal or login directly at <https://canvas.umn.edu>. Login and select the link for your lab course. You will find many useful links here AND your posted scores for each experiment.

To Prepare for Each Lab

- Read the project description before lab.
- Look over any techniques or concepts that you are unfamiliar with prior to lab.
- Attend your TA's office hour or a tutor hour if you have questions on any techniques, concepts or the project.
- Bring your U Card to lab each week. You will need it to check out lab equipment or for any extra charges you incur during the term.
- Listen carefully to your TA's instructions.
- IF you are more than 15 minutes late to your lab meeting, it will be considered an absence, though you are encouraged to participate as much as you are able.



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Grades

Grades are meant to demonstrate your ability to meet groups of specific learning objectives. The tasks you perform in lab and the assignments for which you earn credit are designed to help you meet these learning objectives. The level at which you meet these learning objectives is tied directly to your course grade as described below. Each learning objective is assessed by at least one assignment as indicated (numbered in the Grade Specifications Table).

Learning Objectives

Students will:

- Demonstrate preparedness to learn by showing up on time and consistently participate in lab work (D1)
- Demonstrate safe laboratory habits, including proper use of personal protective equipment and waste handling (C1)
- Manage lab time effectively to obtain and properly record experimental results in a laboratory notebook (C2)
- Work effectively in a group to complete tasks (C3)
- Demonstrate understanding of chemical principles, techniques, and safety involved in lab projects (A2)
- Demonstrate proper use of common laboratory glassware and instruments (C2 & C4)
- Self reflect on the learning process while rating group members (peer evaluations) (C3)
- Design experimental protocols to test a hypothesis (C4)
- Develop analytical thinking skills by trouble-shooting experiments (C4 & C5)
- Effectively communicate scientific information and key chemical concepts in an oral format (B3)
- Effectively analyze experimental results (A1, B1, B3)
- Effectively communicate experimental results and key chemical findings in written format with structured guidance (B1, B2)
- Effectively communicate experimental results and key chemical findings in written format with little guidance. (A1)

Your final lab grade will be determined using the Grade Specifications Table. Each grade category consists of one or more assignments and shows the number of assignments for which you must earn credit in order to meet the criteria for that particular grade. For example, a D grade is earned by missing one or fewer lab meetings.

Each grade is earned by meeting the requirements specified, in addition to those for each grade below it. For example, an A grade requires that a B, C, and D grade have also been earned, in addition to the A criteria.

Grading Philosophy

Each task/assignment in lab will be graded on a credit/no credit basis. This does not mean your work must be perfect, but merely adequate. If your work meets the adequate/credit level for each item in the appropriate rubric, you will be awarded full credit for the work. If your work does not meet the adequate/credit level for any item in the rubric, you will earn no credit for the work. There will be no partial credit or opportunities to redo the work, with the exception of the items indicated in the Grade Specifications Table. If the first submissions of these specific assignments do not earn credit, students will have the opportunity to redo the work and resubmit for full credit. See the lab schedule for the resubmission deadlines. Generally, resubmissions are due one week after getting the work back from your TA. Please note that the ability to resubmit assignments is an opportunity to learn from your initial mistakes with no negative consequences for your grade.

This grading scheme is meant to be different from others you have likely experienced. It should:

- Encourage your best work and attention to detail on every assignment.
- Allow you to decide the grade you want to aim for, and clearly articulate what you need to do.
- Encourage you to reflect on how your work can be improved to meet expectations upon the next submission
- Allow you to skip assignments in the upper grade categories if you don't have the time or desire.
- Reward higher levels of scientific analysis with higher grades (lab reports and discussions demonstrate higher levels of individual mastery than work contained in the C or D grade categories)

You can resubmit the first two plans and summaries of the semester for full credit. We want you to understand the credit/no credit rubric requirements and demonstrate that you can complete them successfully. Allowing resubmissions early helps you practice this without a negative impact on your grade. You will find detailed grading rubrics that describe the expectations for each assignment in the LabArchives lab site.

Grade Specifications Table. *Italicized items indicate group work.*



These items will be posted as 0 or 1 in the gradebook in our class website. A "1" indicates credit for the work.

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(Required Completion)		Assignments	
A* (Credit for FR #2) Must also meet the B, C, & D criteria	A1. Formal Report #2*	1	Yes, 1
B (Credit for FR #1 and 3 of the remaining assignments) Must also meet the C, & D criteria	B1. Formal Report #1 B2. Draft & Peer Review of Report #1 B3. <i>Discussion/Presentations</i>	1 1 3	Yes, 1 (or 2) NO NO
C (Credit for at least 18 assignments)	C1. Safety Objective C2. Notebook Pages C3. Peer Evaluations C4. <i>Plans</i> C5. <i>Summaries</i>	1 5 3 8 7	NO NO NO Yes, 2 (First two) Yes, 2 (First two)
D (11/12 Days)	D1. Attendance (Can not miss the last day without documentation)**	1/day	NO

*Report #2 may not be attempted if report #1 does not earn credit upon second submission. In this situation, a third submission of report #1 is allowed instead. A second submission of report #2 will not be accepted if an initial submission was not made by the deadline.

**If a student misses the last day of lab without proper documentation/clearance from the course instructor, the final grade will be reduced by one full letter grade. For example, if the student had earned an A in lab, but skipped the last day, a final grade of B would be earned.

Your TA should post your grades by the lab meeting following the one when the work was submitted. If you do not see your score posted, please discuss this with your TA immediately and notify the General Chemistry Team (genchem@umn.edu) if the situation is not rectified. Any grade disputes should be taken up directly with your TA and advanced to the instructor if not resolved. Grade disputes must be lodged with the instructor within one week of the returned assignment in order to gain full consideration.

Each student will be allotted one "token" to be used as credit on one assignment toward the lowest grade category where the requirements have not been met. At the end of the semester, the instructor will apply the one token where needed, first to the D, then the C category. The token will not be applied as credit for either A or B grade categories.

Formal Lab Reports

The draft of formal report #1 is expected to be a complete and thorough attempt at following the rubric and writing the report. Anything less will earn no credit. We strongly encourage you to take the draft process seriously so peer feedback received is helpful in revising the document. A Word or .pdf file of the draft must be uploaded to the TurnItIn link, in the lab Canvas site, one hour in advance of your lab meeting, on the day it is due. You must bring a paper copy to your lab meeting in order to earn credit for the draft peer review process.

Typed formal reports (Word or .pdf file) must be turned in to the TurnItIn link found in the course Canvas site. Your TA will likely require a paper copy of the final report for grading, but each lab report submission must be uploaded to the TurnItIn link, in advance, to be accepted.

Late Work

In general, late work will NOT be accepted. However, under extreme circumstances late work MAY be accepted with penalty if cleared with Dr. Driessen (genchem@umn.edu). Approval for late work must be requested by the day following the work due date. Please note that simply needing more time or having a busy work schedule does not qualify as an extreme circumstance. There is an absolute deadline for ALL lab work at the end of the term and there will be absolutely NO work accepted after this deadline. See lab schedule for the date of this deadline.

Attendance

Attendance and full participation in lab, for the entire lab period, is required. Missing more than 15 minutes of a lab period will be considered an absence.

During the semester, each student will be allowed one absence from one lab period with no questions asked, excluding the last day. When the first absence is for an allowed excuse as defined by university policy (<https://policy.umn.edu/education/makeupwork>), students should be sure to properly

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Your lab group is counting on you and you should do your best not to miss any lab. It should be noted that missing lab does not excuse you from turning in a lab report, a draft, or a peer evaluation on time. Students should contact their TA as soon as possible about an absence so any questions about makeup work can be addressed immediately. If you miss the last lab meeting, you must request an excused absence. See details below.

A second absence may be excused, if proper documentation for BOTH the first and second absences can be provided. The request to excuse a second absence is not automatic and may be denied, depending on the situation. An example of a situation where a second absence would be excused would be a student who is diagnosed with mono and has a doctor's note to excuse them from two consecutive lab meetings. An example of a situation where a second absence would NOT be excused would be when a student has already missed one lab meeting for a vacation and then has a funeral or illness that causes a second absence. Students should think carefully about the consequences of using their "one-time" absence, and how they choose to use it.

To obtain an excused absence, students must contact the instructor (genchem@umn.edu) as soon as circumstances allow. The student should provide their lab course number, TA name, date of absence, and attach a photo of their documentation. If approved, the missing assignments for the day will be replaced by completing a similar activity, as described below under makeup work. No one will be excused from more than two lab meetings, as it represents too large a portion of the course content. See the University absence policy here: <http://policy.umn.edu/education/makeupwork>

Accruing more than two absences (excused or unexcused) will result in a failing grade in the course.

Late Registration

Please note that joining the course after the first lab meeting does not excuse you from attendance or any work collected and graded. Any lab period missed after the start of the semester due to late registration will be treated as an absence, outlined above.

Makeup Work

If a student has an excused absence (freebie, or proper documentation for two), they will have a chance to earn back the points missed in lab on the day(s) they were absent. Each item that was due will be made up as described. Makeup work is due prior to arriving at the lab meeting following an absence, unless there are extenuating circumstances and Professor Driessen clears an extension in advance.

Plan

The student will look at the project prompts and turn in an individual plan for the missed day.

Summary

The student will be given access to the notebook pages of their group members for the missed day and will write a summary of the day's experiments to be submitted and graded.

Discussion

If a student participated in creating the group slides for discussion, they will be asked to submit a critical question, and answer two questions on the discussion project from their TA (oral quiz). If the student did not participate in creating the discussion slides, they will complete this task based on the group's data and turn in for grading, in addition to submitting a question and completing the oral quiz.

Peer Review

The student will be given a draft report of another student in their TA's section on which to perform the peer review and submit back to the TA.

Notebook Pages

If notebook pages were graded on the date of the absence, the notebook pages from another lab date will be graded.

Multilingual Students

SELS (Student English Language Support) is an on-campus service that offers free, 45-minute consultations to international undergraduate students to help develop their English skills. During a consultation, students can work with trained consultants on any English language skill, including reading, writing, speaking, listening, pronunciation, and cultural adaptation. SELS also offers walk-in hours twice a week, and online consultations on select evenings and weekends. For more information or to make an appointment, please visit the SELS website at: <https://ccaps.umn.edu/eslhelp>. You can also email SELS at: eslhelp@umn.edu



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University Athletes and Military Personnel

If you are a member of a varsity team at the University and will be traveling during the semester, or will have military duty that conflicts with more than 1 lab period, you are responsible for contacting the instructor or staff in Smith 115 **during the first week of classes** in order to be permanently moved to a lab section that minimizes scheduling conflicts.

Students with Disabilities

The University of Minnesota views disability as an important aspect of diversity, and is committed to providing equitable access to learning opportunities for all students. The Disability Resource Center (DRC) is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations.

If you have, or think you have, a disability in any area such as, mental health, attention, learning, chronic health, sensory, or physical, please contact the DRC (612.626.1333, <https://disability.umn.edu/>) to arrange a confidential discussion regarding equitable access and reasonable accommodations. Students with short-term disabilities, such as a broken arm, can often work with instructors to minimize classroom barriers. In situations where additional assistance is needed, students should contact the DRC as noted above.

If you are registered with the DRC and have a disability accommodation letter dated for this semester or this year, please contact your instructor (not your TA) as early in the semester to review how the accommodations will be applied in the course.

Scholastic Dishonesty

While you are encouraged to work, collect data, and study with your lab team members, all work that is turned in **MUST** be your own, individual work. Otherwise, identical papers are always assumed to indicate copying, and each identical paper will receive a grade of zero for all or part of the work. See detailed information in the class Canvas site.

Problems

Your TA will be happy to discuss questions and concerns with you. However, if there is an issue that you do not feel you can discuss with your TA, please contact the General Chemistry Team (genchem@umn.edu) and they will help resolve the issue.

Miscellaneous

Refer to your registration information for the location of your laboratory. Look for your name on the blackboards in the lab to find your TA section on the first day of lab.

You must attend the first lab meeting **AND** be on time to guarantee your place in lab. If you do not attend the first day, your spot may be forfeited and given to someone waiting to get into the course. If you are waiting to get into the course, see the staff in Smith 115 (624-0026) for more details.



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Overlapping & Back-to-Back Courses

Enrolling in overlapping or back-to-back courses that does not allow enough travel time to arrive at our class meetings on time is prohibited. For more information, please see:

<http://policy.umn.edu/Policies/Education/Education/OVERLAPPINGCLASSES.html>

Student Conduct Code

As a student at the University you are expected to adhere to Board of Regents Policy: Student Conduct Code. To review the Student Conduct Code, please see:

http://regents.umn.edu/sites/default/files/policies/Student_Conduct_Code.pdf

Scholastic Dishonesty

You are expected to do your own academic work and cite sources as necessary. Failing to do so is scholastic dishonesty. Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering, forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis. (Student Conduct Code:

http://regents.umn.edu/sites/default/files/policies/Student_Conduct_Code.pdf) If it is determined that a student has cheated, they may be given an "F" or an "N" for the course, and may face additional sanctions from the University.

The Office for Student Conduct and Academic Integrity has compiled a useful list of Frequently Asked Questions pertaining to scholastic dishonesty:

<http://www1.umn.edu/oscai/integrity/student/index.html>

Artificial intelligence (AI) language models, such as ChatGPT, and online assignment help tools, such as Chegg®, are examples of online learning support platforms: they can not be used for course assignments except as explicitly authorized by the instructor. The following actions are prohibited in this course [remove bullets as necessary]:

- Submitting all or any part of an assignment statement to an online learning support platform;
- Incorporating any part of an AI generated response in an assignment;
- Using AI to brainstorm, formulate arguments, or template ideas for assignments;
- Using AI to summarize or contextualize source materials;
- Submitting your own work for this class to an online learning support platform for iteration or improvement.

If you are in doubt as to whether you are using an online learning support platform appropriately in this course, I encourage you to discuss your situation with your instructor. If you have additional questions, please clarify with the instructor for the course. Your instructor can respond to your specific questions regarding what would constitute scholastic dishonest in the context of a particular class-e.g., whether collaboration on assignments is permitted, requirements and methods for citing sources, if electronic aids are permitted or prohibited during an exam.

Student Mental Health and Stress Management

As a student, you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. University of Minnesota Services are available to assist you with addressing these and other concerns you may be experiencing. You can learn more about the broad range of confidential mental health services available on campus via

<http://www.mentalhealth.umn.edu/>

Teaching & Learning

The materials provided in this course are intended only for the students officially enrolled in this section and are to be used to learn and practice the course material. Disseminating class notes, videos, exams, etc... beyond the classroom community or accepting compensation (in the form of cash or trade, such as access to a study website) undermines instructor interests in their intellectual property while not substantially furthering instructor and student interests in effective learning. Such actions violated shared norms and standards of the academic community and are not allowed. For additional information, please see: <https://sites.google.com/umn.edu/general-chemistry/chem-1066-syllabus?pli=1>

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Sexual Harassment

https://regents.umn.edu/sites/regents.umn.edu/files/policies/Sexual_Harassment_Sexual_Assault_Stalking_Relationship_Violence.pdf

Equity, Diversity, and Equal Opportunity

We welcome to this course individuals of all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, ability, and other visible and invisible differences. Instructors, teaching assistants, and students are expected to contribute to a respectful, welcoming and inclusive environment for every other member of the class. This is in agreement with university policy:

http://regents.umn.edu/sites/regents.umn.edu/files/policies/Equity_Diversity_EO_AA.pdf

For information on the Diversity and Inclusion Committee in the Chemistry Department, see:

<https://sites.google.com/umn.edu/chemintranet/diversity-inclusion>

Collaboration among people of all cultures and backgrounds enhances our experiences and contributes to excellence in teaching, learning, and research. We strive for a climate that celebrates our differences and strengthens our department by embracing and working to increase diversity, equity, and inclusion.

For the Gender and Sexuality Center for Queer and Trans Life, see:

<https://gsc.umn.edu/>

For gender-neutral restrooms in Smith and Kolthoff Halls and elsewhere on campus, see:

<https://sites.google.com/umn.edu/chemintranet/accessible-gender-neutral-restrooms>

Disability Resource Center

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CHEM 1066 Lab Schedule

Summer 2023

All lab meetings & due dates refer to your specific lab meeting time during the week listed.

Italicized assignments indicate group work. All other items are individual assignments.

In addition to the graded items listed below, there will be 4 additional lab notebook page checks and a safety objective.

Lab Meeting	Date	Project & What's Due
1	June 5	No Lab Meetings
2	Jun 7	Lab Syllabus & Expectations, Lab Groups, Plan Deicer (DI) Project What's Due: Safety Contract (online), <i>DI Plan</i>
3	June 12	Perform DI Project, Plan DI Day 2 What's Due: DI Notebook Pages, <i>DI Day 1 Summary, DI Day 2 Plan</i>
4	June 14	Perform DI Day 2, Plan DI Day 3 What's Due: <i>DI Day 2 Summary, DI Day 3 Plan</i>
5	June 19	Holiday NO LAB MEETINGS
6	June 21	Perform DI Day 3 What's Due: <i>DI Day 3 Summary</i>
7	June 26	DI Discussion, Peer Review Lab Report, Plan Rate of Reaction (Rate) Project Day 1 What's Due: DI Complete Formal Report Draft (paper copy) & Canvas upload (word or .pdf file), DI Draft Peer Review, <i>DI Discussion</i> (slides due 24 hours prior to lab meeting), <i>Rate Day 1 Plan</i> , DI Peer Evaluations (48 hours after lab)
8	June 28	Perform Rate Day 1, Plan Rate Day 2 What's Due: DI Formal Lab Report - 1st Submission (Canvas upload), <i>Rate Day 1 Summary, Rate Day 2 Plan</i> , Mid-semester TA Evals
9	July 3	Holiday

		NO LAB MEETINGS
10	July 5	Perform Rate Day 2, Plan Rate Day 3 What's Due: <i>Rate Day 2 Summary, Rate Day 3 Plan</i>
11	July 10	Perform Rate Day 3 What's Due: <i>Rate Day 3 Summary, DI Formal Lab Report - 2nd Submission (Canvas upload)</i>
12	July 12	Rate Discussion, Plan Acid Project What's Due: <i>Rate Peer Evaluations (48 hours after lab), Rate Discussion, Acid Project Day 1 Plan</i>
13	July 17	Perform Acid Day 1, Plan Acid Day 2 What's Due: <i>DI Report - 3rd Submission (if needed) OR Rate Formal Lab Report - 1st Submission (Canvas upload), Acid Day 1 Summary, Acid Day 2 Plan</i>
14	July 19	Perform Acid Day 2 What's Due: <i>Acid Day 2 Summary</i>
15	July 24	Acid Discussion & TA Evaluations What's Due: <i>Acid Discussion*, Acid Peer Evaluations (48 hours after lab), Rate Report - 2nd Submission (if needed), TA Evaluations</i>

*Participation in this last discussion is required of ALL students to earn attendance/participation credit for this lab meeting.

ALL LAB WORK is due by the END of your last lab period. There will be NO late work accepted past this deadline for any reason.