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Meeting time: Fridays, 2:20–3:10 PM, Lafayette L-102

Office hours: Mondays and Thursdays between 1:00–2:30 PM. You can easily book times via Navigate or contact me to make an appointment.

Inclusion in science: In the Department of Chemistry, we have agreed that sharing our thoughts on inclusive science is important as a part of our on-going commitment to equity in access and diversity throughout our field.

Here are my thoughts: First, you are welcome and belong in this class and in chemistry. Science *should* be inclusive for too many good reasons to list here. Sadly, that is not true because people do science, and our disciplines have been built on privilege that has impacted access to education, information, resources, opportunity, and voice.

My education is a result of privilege and came at a time when science successfully dismissed inclusion (i.e., ‘science is blind’ baloney). Therefore, I am on a steep learning curve for creating and supporting an inclusive scientific enterprise. Nevertheless, I value all identities including race, ethnicity, sex, gender identity, ableness, nationality, sexual orientation, religion, economic status, age, among others, and I value how diverse groups of people and perspectives enrich our lives and, more germane, science.

I am committed to doing right by you and making this class welcoming and supportive of all. Please share with me directly or through an ally, if you need to be anonymous, if that is not the case. I am prepared to learn and do better, and I will not tolerate deliberate exclusion. UVM provides us a starting point for an inclusive environment in Our Common Ground.

Course description: We are spending the semester addressing a key skill for chemistry majors—the presentation of data in oral form. Whether it is your data or not, it is important that you can place some value on that information for your audience.

It is critical that everyone can share ideas and are respectful of each other and different opinions and interpretations. Everyone’s contribution is of value. So much of science is interpretation rather than being right—all voices must be heard.

The plan is to use the semester to select, research, and build a presentation. This requires ample outside reading early in the semester as well as some discussion. Additionally, significant effort is required to produce (and practice!) a presentation in public.

Learning goals: The goal of this course is for students to perform some critical analysis of the chemical literature and disseminate that analysis in both written and oral form. Therefore, we need to have students

1. Practice skills in literature searching.
2. Synthesize important ideas from multiple sources.
3. Evaluate literature with respect to the quality of conclusions and their potential impact.
4. Summarize data into less formal short presentations.
5. Execute a formal colloquium-type presentation.

The department has retained this exercise for decades because these skills are essential. It is routine that individuals in any job sector are required to present on relevant topics, use appropriate resources to support ideas or plans, and provide succinct reports. These are skills that get jobs and lead to promotions.

Selection of topics: Topic selection for a presentation is a critical. These are my three major thoughts on this subject.

1. Your topic should be current, which would be demonstrated by significant activity in the last five years.
2. Your topic must be chemical. This would appear to be obvious, but it is easy to get trapped in overly extensive background or applications. The litmus test of how chemical a presentation is come from asking, “does this topic primarily deal with the physical properties of molecular substances?”
3. Your topic should be sufficiently broad but not overly so. For example, “chemotherapeutics” is much too broad, representing hundreds of compounds and decades of research. Topics of too narrow focus like, “the rotational spectrum of...” are equally problematic. Ultimately, your topic should be defined by thesis, or an argument of some kind, rather than a topic statement. It is easier to find that balance of depth and breadth when you are proving a point.

Topics *must* be approved by the instructor in advance.

Section of topics, nitty gritty: It is a big chemical universe, and lots of interesting things are going on out there. Therefore, this topic will be different from the one you pursued in CHEM 181. However, choosing an exact topic of interest can be a challenge. Your personal interest should be a deciding factor. Good places to start looking are *Chemical and Engineering News* or *Chemistry World*. These are the trade journals of the American Chemical Society (ACS) and Royal Society of Chemistry, respectively, which often present topics of broad interest. If you have a better idea of where to start, looking at review articles, like those in *Chemical Reviews*, *Accounts of Chemical Research*, or *Chemical Society Reviews* are good sources. Of course, many journals present review articles as well as their primary source content. One of the pitfalls about review articles is that the content can, even in a few years, become dated. A valid strategy to avoid that is to start with a slightly older review article (say, 4–8 years old) and follow how the subject has advanced since then using primary literature. That also allows you to develop easily proven theses like “the field has moved in [insert your analysis here] direction” in the last several years. Like a good paper, presentations frame well on proving a point.

Topic round robin: Your first “presentation” will merely be sharing your nascent topics. To get the job done well, you should share the general area of your topic and an anticipated thesis for your presentation. This should only take a few minutes, and no visual aids will be needed. Everyone will be prompted to provide feedback to help make sure topics are appropriate and provide any suggestions or other input.

Prospectus: You will present to me and your peers in the class what your topic is. These should be about five minute presentations (two or three slides) and include some citations. The goal is to convey the thesis of your presentation, what it is that you will be trying to prove. To compel the group you are presenting a valid thesis, you would want to state two to four supporting key ideas, which derive from the literature. Naturally, your peers may have some questions when you’re done.

One-paragraph summary: This is pretty self-explanatory. To supplement your prospectus, please write a one-paragraph summary. To be effective, this document would state your thesis and main points to support that idea.

Presentation Pick-apart: The group will look at presentations the selection of which will be determined in class to analyze what was effective and what was not. The product of this activity will be a list of effective and less effective practices developed in class.

Presentations: The presentation is the core of the course. It is the major product of your work, and it is the greatest component your evaluation for the course. Presentations need to be chemistry-centered, exhibit both breadth and depth, well organized, and polished. It is a tall order, but you have all semester to work on it. We will talk a lot about presentation structure, style tips, and dos/don’ts throughout the semester. However, part of the reason this is attached to the department seminar series is for you to watch those presentations with the critical eye about what you might emulate that is good and what you would avoid that is ineffective.

Presentations are limited to a half hour total, which we divide into 25 minutes of presentation and reserve five minutes for questions. That 25 minute number is an important target. Running significantly short suggests too little content and running significantly longer will unleash the ire of your peers.

Your presentation will have an accompanying, brief write-up. Details on the write up will be discussed in class. The write up and the drafts of the document are my way of helping you to hone in on content and let you focus on developing a high-quality presentation. For assessment purposes, this is the place where you catalog your references

Peer critiques: To better understand your own presentation, we will consider not only the content of each other’s presentations but the mechanics as well. While you are not grading your peers, you are providing them feedback, which they will see. Therefore, we will develop criteria that we will consider together and agree how that is delivered.

Plagiarism: We will have a group discussion on the idea of plagiarism in class. While we are looking for you to provide some critical analysis, it is essential that you cite all ideas, content,

and images that are used in your presentation and write up, which are not your own, and that you conform to UVM standards for academic honesty.

Grading: Your performance in this course will depend on four factors (in order of importance):

- 1) The quality and completeness of your presentation (60%).
 - Presentation mechanics (slides, organization, continuity, clarity, etc.): 70%
 - Content (scope and depth) from presentation, paper, and Q&A: 30%
- 2) Prospectus, pick-apart, & summary of topics: 20%
- 3) Peer critiques: 20% Depending on the number of students, you will be required to submit critiques for approximately half of the presentations.

All items are due in class (at 2:20 pm) unless otherwise noted.

Course Schedule (tentative)

Date	Topic/assignment
1/21	Presentation basics; topic selection
1/28	<i>Topic round robin</i>
2/4	<i>Topic round robin, cont'd</i>
2/11	<i>Presentation pick-apart</i>
2/18	<i>Topic prospectus presentations</i>
2/25	<i>Topic prospectus presentations, cont'd</i>
3/4	<i>Topic prospectus presentations, finish (as needed); Peer-critique lesson</i>
3/11	No class—spring break
3/18	<i>Drafts of slides due, presentation feedback</i>
3/25	<i>Presentation pick-apart, part II</i>
4/1	Student presentations
4/8	Student presentations, <i>peer critiques for current talks due</i>
4/15	Student presentations, <i>peer critiques for current talks due</i>
4/22	Student presentations, <i>peer critiques for current talks due</i>
4/29	Student presentations, <i>peer critiques for current talks due</i>
5/6	Student presentations, <i>peer critiques for current talks due</i> , analysis of group
5/9	Registrar-scheduled final exam time: <i>Final write-ups & peer critiques due (4:30 pm)</i>

You should try to attend all department seminars. These are most often on Tuesdays and Thursdays (10:05 am). Please check the department Web page for scheduling.

Department seminars are informative for their content, but this is a time for you to see what is being done in scientific presentations and decide what you think is a helpful practice and what is not.

CHEM 182 Supplement: Support information and policies

Spring 2022

Technical support for students

Please read this technology check-list to make sure you are ready for classes.

<https://www.uvm.edu/it/kb/student-technology-resources/>

Our class does not use specialty software, but routine internet access on an updated browser and MS Teams are essential.

Students should contact the Helpline (802-656-2604) for support with technical issues.

Attendance Policy and Classroom Environment Expectations:

Students are active participants in class. Those who chose not to attend or participate suffer in their learning, which typically translates to lower performance in the course. Therefore, I do not measure active participation in class or attendance. However, if significant absence or non-participation occurs or those choices adversely impact the learning environment, I reserve the right to impose academic penalty.

Attendance and illness/isolation/quarantine:

I fully support you in taking care of yourself and supporting the health of the community. In-person students may need to quarantine, and any student may be unable to attend in-person or virtual class due to illness. I have some mechanisms in place to accommodate for this, but for me to fully accommodate, I need to you to contact me in advance with any challenges in attendance or coursework.

Intellectual Property Statement/Prohibition on Sharing Academic Materials:

Students are prohibited from publicly sharing or selling academic materials that they did not author (for example: class syllabus, outlines or class presentations authored by the professor, practice questions, text from the textbook or other copyrighted class materials, etc.); and students are prohibited from sharing assessments (for example homework or a take-home examination). Violations will be handled under UVM's Intellectual Property policy and Code of Academic Integrity.

Tips for Success:

Course-specific study/preparation tips

Here are a few resources for students on remote/online learning:

- Checklist for success in <https://learn.uvm.edu/about/support-for-students/checklist-online-credit-courses/>
- Academic support for online courses: <https://www.uvm.edu/academicsuccess/online-learning-student-resources-remote-instruction>
- 30-minute webinar on online learning success (Mar 2020): https://www.youtube.com/watch?v=Xp_MYsqQyvE

Helpful resources other than the professor (e.g., [Undergraduate/Graduate Writing Center](#), [Supplemental Instruction](#), [Learning Co-op tutors](#), supplemental course materials)

Student Learning Accommodations:

In keeping with University policy, any student with a documented disability interested in utilizing ADA accommodations should contact Student Accessibility Services (SAS), the office of Disability Services on campus for students. SAS works with students and faculty in an interactive process to explore reasonable and appropriate accommodations, which are communicated to faculty in an accommodation letter. All students are strongly recommended to discuss with their faculty the accommodations they plan to use in each course. Faculty who receive Letters of Accommodation with Disability Related Flexible accommodations will need to fill out the Disability Related Flexibility Agreement. Any questions from faculty or students on the agreement should be directed to the SAS specialist who is indicated on the letter.

Contact SAS:

A170 Living/Learning Center;

802-656-7753

access@uvm.edu

www.uvm.edu/access

Important UVM Policies

Religious Holidays:

Students have the right to practice the religion of their choice. If you need to miss class to

observe a religious holiday, please submit the dates of your absence to me in writing by the end of the second full week of classes. You will be permitted to make up work within a mutually agreed-upon time. <https://www.uvm.edu/registrar/religious-holidays>

Academic Integrity:

The policy addresses plagiarism, fabrication, collusion, and cheating.

<https://www.uvm.edu/policies/student/acadintegrity.pdf>

Grade Appeals:

If you would like to contest a grade, please follow the procedures outlined in this policy:

<https://www.uvm.edu/policies/student/gradeappeals.pdf>

Grading:

For information on grading and GPA calculation, go to <https://www.uvm.edu/registrar/grades>

Code of Student Conduct:

<http://www.uvm.edu/policies/student/studentcode.pdf>

FERPA Rights Disclosure:

The purpose of this policy is to communicate the rights of students regarding access to, and privacy of their student educational records as provided for in the Family Educational Rights and Privacy Act (FERPA) of 1974.

<http://catalogue.uvm.edu/undergraduate/academicinfo/ferparightsdisclosure/>

Promoting Health & Safety:

The University of Vermont's number one priority is to support a healthy and safe community:

Center for Health and Wellbeing:

<https://www.uvm.edu/health>

Counseling & Psychiatry Services (CAPS)

Phone: (802) 656-3340

C.A.R.E. If you are concerned about a UVM community member or are concerned about a specific event, we encourage you to contact the Dean of Students Office (802-656-3380). If you would like to remain anonymous, you can report your concerns online by visiting the Dean of Students website at <https://www.uvm.edu/studentaffairs>

Final Exam Policy:

The University final exam policy outlines expectations during final exams and explains timing and process of examination period. <https://www.uvm.edu/registrar/final-exams>

Alcohol and Cannabis Statement:

The Division of Student Affairs has offered the following statement on alcohol and cannabis use **that faculty may choose to include, or modify for inclusion**, in their syllabus or Blackboard site:

Statement on Alcohol and Cannabis in the Academic Environment

As a faculty member, I want you to get the most you can out of this course. You play a crucial role in your education and in your readiness to learn and fully engage with the course material. It is important to note that alcohol and cannabis have no place in an academic environment. They can seriously impair your ability to learn and retain information not only in the moment you may be using, but up to 48 hours or more afterwards. In addition, alcohol and cannabis can:

- Cause issues with attention, memory and concentration
- Negatively impact the quality of how information is processed and ultimately stored
- Affect sleep patterns, which interferes with long-term memory formation

It is my expectation that you will do everything you can to optimize your learning and to fully participate in this course.