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**Meeting time:** Scheduled Tuesdays and Thursdays, 4:25–5:40 PM. Our meetings will be in the chemistry conference room, all seminars (check department web page for scheduling) will be in Lafayette L-207.

**Office hours:** Stop by my office as needed or feel free to make an appointment.

**Course description:** This is the capstone experience for chemistry majors. The catalogue text “Oral and written presentation of a subject of current chemical interest” is terrifically accurate. By pulling together information from the literature on a current topic, you leverage your preparation at UVM to produce a short written synopsis and department-wide presentation.

The plan is to use the semester to selected and build your 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 front of the department.

**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. You have undertaken all of these activities in the course of your degree. Therefore, the goal of the course is to execute a more advanced effort in literature searching and analysis, synthesis of data, and written and oral 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 is a significant challenge. 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.

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. However, choosing an exact topic of interest can be a challenge. While the department forbids CHEM 282 presentations to be on your undergraduate research, your personal interest is 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.

**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). 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.

**Write up:** The written component of the course. It summarizes the content of your presentation, contains the thesis of your presentation, and your supporting data. Most students write this document and base their presentation on this paper. That is one valid strategy, but it is not the only one. You are welcome to approach this any way that works for you.

The write up should have several parts:

- 1) A title page with your name, the presentation/paper title, and abstract.
- 2) An abstract that is a 200–300 word summary of your topic and key points. Because your presentation and paper should be based on a main idea and supporting examples and content, that main idea and key support should be presented here.
- 3) The main write up text, which is limited to 10 double-spaced pages, including all figures and references.
- 4) Figures should be rendered legibly with appropriate software. Complex images may be directly copied from source material (with citation), but schemes are usually best reproduced in ChemDraw.
- 5) Referencing and text should conform to ACS style. Consult with the *ACS Style Guide*, which is available digitally through UVM libraries (<http://pubs.acs.org/isbn/9780841239999>), as needed.

**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 and (worse) the faculty.

**Day of your presentation:** It is your responsibility to load your presentation on the computer in the room and ensure it works before the seminar starts. For presentations at 4:25 pm, this may mean checking the evening before as larger lecture rooms, like those in Lafayette, get high use during the day.

**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 and write up (75%).
  - Written paper: 20%
  - Content (scope and depth) from paper, presentation, and Q&A: 40%
  - Presentation mechanics (slides, organization, continuity, clarity, etc.): 40%
- 2) Prospectus & summary on topics: 15%
- 3) Paper drafts: 10%
- 4) Missing any due date will result in a 5% penalty *against your course grade* for any item handed in late. A 5% penalty is a little more than a third of a letter grade (e.g., A to A-). You can *trash* your grade by missing deadlines for the course because there will be six. Does this sound a little hardcore? Well, it is, and for good reason. Students who are late with their topic selection, drafts, etc., invariably give very poor presentations, and I have to attend them. It is benevolent self-interest; I want you to do well—because I will be there.

All items are due in class (at 4:25 pm) unless otherwise noted.

## Course Schedule

<b>Date</b>	<b>Event/speaker</b>	<b>Location</b>
1/19	First meeting: course logistics & semester plan, presentation tips, and plagiarism discussion, and talking about our feelings	Conference room
2/9	Second meeting: Discussion of your ideas for topics Bring your idea in the form of a sentence (or two) on a piece of paper (Deadline 1)..	Conference room
2/23	Third meeting: Topic prospectus and one-paragraph summaries due (Deadline 2).	Conference room
3/15	Fourth meeting: Paper drafts due (Deadline 3).	Conference room
3/22	Fifth meeting: Paper evaluations returned & discussed (Deadline 4).	Conference room
4/12	Draft of power point slides and practice schedule due (5:00 pm EDT, Deadline 5).	n/a
4/19	Write ups submitted to the faculty (5:00 pm EDT, Deadline 6).	n/a
4/26	Speaker #3	L-207
	Speaker #2	
4/28	Speaker #3	L-207
	Speaker #4	
5/3	Speaker #5	L-207
	Speaker #6	
5/5*	Speaker #7	TBA
	Speaker #8	

\*at 11:30 am

Aside from a pressing need (university approved absence or exam on 5/4 or 5/6), we will have a random lottery for presentation dates in late April.

**You are expected to attend all seminars.** At time of writing, there are scheduled seminars on 2/11, 3/3, 3/17, 4/7, 4/19, and 4/21. Anticipate that additional dates will be added and check the department Web page on a routine basis for updates. The department tends to favor Thursdays for seminar, which why we are meeting on Tuesdays.