

CHEM 282 – Undergraduate Seminar: Fall 2016

Course Description:

Oral and written presentation of a subject of current chemical interest.

Learning Goals:

1. To apply knowledge of chemical and physical principles
2. To be able to read and critically evaluate the chemical and scientific literature
3. To learn to present scientific data clearly and effectively through both written and verbal communication

Lecture:

Official class time is **Thursday 4:25 - 5:40 pm**, but formal class meetings will be rare. Those that occur will be scheduled to meet in **Cook A229**, and students will be informed in advance by e-mail of the class meetings.

The class time near the end of the semester will be used as the presentation time for each student's seminar. Two seminars will be presented per 75 min class period. The location for the seminars will be **Lafayette L207**. All faculty and students in the Department of Chemistry will be invited to attend these seminars.

Text:

None

Course Instructor:

Dwight E. Matthews: Dwight.Matthews@uvm.edu 656-8114 Cook A121

Office hours:

Scheduled per student need

UVM Policy on Absences:

Religious Holidays: Students have the right to practice the religion of their choice. Students should submit in writing by the end of the 2nd full week of classes their documented religious holiday schedule for the semester if there are any conflicts with the class or laboratory schedule.

Inter-collegiate Athletics: Members of UVM varsity and junior varsity teams are responsible for documenting in writing any conflicts between their planned athletic schedule and the class (& laboratory) schedule by the end of the 2nd full week of classes.

UVM Policy on Academic Integrity:

Offenses against the Code of Academic Integrity are deemed serious and insult the integrity of the entire academic community. Any suspected violations of the code are taken very seriously and will be forwarded to the Center for Student Ethics & Standards for further investigation.

Introduction

The ability to communicate science in a clear and understandable way is a critical skill. Over the past few years you have had ample opportunity to prepare standardized scientific reports and have gained experience in writing scientific reports and in oral presentations. All of this practice is important because clear expression through writing and speaking is a prerequisite for a successful career in science. The purpose of the seminar course is to a structured opportunity to develop further your writing and oral presentation skills as a capstone experience. The remainder of the syllabus outlines the steps you will follow in this process.

Components

1. **Oral presentation.** Will occur at the end of the semester (see time table at the end) during our regularly scheduled seminar period. Two presentations will occur per seminar period. You will be expected to speak for 25 minutes. If your talk is substantially shorter, you will be penalized in your grade. You also cannot go over 30 minutes due to the constraints of the room schedule. There will be a period of 5 minutes for the audience to ask questions at the end of your seminar. The presentation will be professionally prepared and presented using Microsoft PowerPoint (or other software such as Apple Keynote).
2. **Written synopsis.** As a synopsis, the written paper will summarize the key elements of your talk. The written paper is described later and will be 5-10 pages in length. The paper is to be submitted and distributed to the faculty ahead of your talk.

1) Choosing a topic

First and foremost, the goal of a seminar should be to teach the audience something new and interesting. Answers to the 4 most common questions:

1. **Yes**, the topic you choose must be relevant to CHEMISTRY! Avoid topics that focus on applications of chemistry in other fields that don't contain significant discussion of chemistry.
2. **Yes**, everyone who attends your seminar presentation is very interested in learning new chemistry.
3. **No**, neither the faculty nor the graduate students that will listen to your talk "already know it all". Some topics that seem simple may not be.
4. **Yes**, it will be boring if your topic is overly narrow or shallow. You need to have enough breadth and depth in your material to tell a good story, *and* it needs to have enough interest for a broad range of listeners.

Chemistry should be a key component of your talk. For example, a survey of drugs recently approved by the FDA would be a poor topic. On the other hand, an in-depth discussion about the chemical basis of a disease state and how specific drugs act within cells at a biochemical level to

5. Any figure, table, result, concept, cartoon, etc. that appears on your slides that comes from another source *needs to be cited on the slide* (including material taken from web sites). Best place to do that is in the lower left corner of each slide that needs a citation.
6. Put the slide number on each slide in the lower right corner. It is helpful to the audience when asking questions later to direct their questions to a specific slide.
 - a. Normally, the default PowerPoint layout has a slide number box already in the slide master. If not, you can add (or edit) the slide number using the VIEW / Slide Master feature to add a text box at the bottom, then from within the text box add a slide number via INSERT / Slide Number.
7. Tables and figures should not be overly complicated or difficult to follow. Consider reducing the amount of information presented in a table to what is germane or use a series of slides.

Speaking points: the presentation itself

Delivering an effective seminar presentation is a practiced art. Here are some suggestions:

1. *Orient your audience to every slide.*
 - a. State clearly what is on the slide, especially with graphs, describing both the x & y

beta-amino aldehyde was then reacted with a methyl Grignard reagent to give the secondary alcohol”.

- c. “The reaction went really fast” – ok, but what is fast?
 - d. “They got great data when they changed to ____” – if so, show the audience with a figure and point out what is so great.
9. Don’t assume audience familiarity with the specialized terms. All concepts and terms need to be clearly defined as you go along.
 10. Be careful about using uncommon or esoteric abbreviations (e.g., PAH, ESCA) without first giving the full name at least once.
 - a. Avoid use of abbreviations in slide titles.
 11. Practice, practice, practice. Rehearse your talk **out loud** several times before you present in front of the audience.

Logistics before your talk:

The seminar room will be media-ready with a projection display device attached to a PC at the lectern. There will be a black/white board and probably an overhead-display device. The lectern should also have a D-Sub VGA connector for your PC.

NOTES:

1. You may present from the lectern PC, using a USB stick.
 - a. It is NOT advisable to e-mail your presentation to yourself and fetch the presentation via the PC’s web connection at the time of the talk.
 - b.
in



2016 Schedule

(week 1) 08/30/16 *Class meeting in A*

(week 4) 09/20/16:

(week 6) 10/04/16:

(week 8) 10/18/16:

(week 10): 11/01/16:
