

# Chemistry 643

## Graduate Seminar I

### Spring 2020 Syllabus

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All seminars will be in Beaupre 105 at 3:00 PM on Mondays (unless otherwise noted)

#### UPDATES AS OF 03/19/2020:

In light of the transition to online course instruction beginning March 23<sup>rd</sup> and the ban on inessential travel beginning March 16<sup>th</sup>, all remaining departmental seminars have been cancelled. Accordingly, I will assign a seminar on YouTube on a related subject each week, and students will be responsible for submitting abstracts for those seminars. There will be no abstract due for the week of March 16<sup>th</sup>, but otherwise all due dates remain unchanged.

#### Overview:

Scientists are required to give oral presentations of their research in a variety of formats throughout their careers, but perhaps the most important to master is the 50-minute research talk. This course provides an introduction to the art of the scientific seminar through attendance at and careful analysis of each seminar hosted by our department throughout the semester. It also introduces students beginning their graduate degrees to a broad range of topics of current interest in the chemical sciences and closely related disciplines while simultaneously honing their scientific writing skills.

#### Assignments:

You will be required to attend all departmental seminars during the semester and submit a written abstract summarizing each presentation. Abstracts should be  $250 \pm 50$  words. I will read each abstract, and if I find your work satisfactory, I will enter a score of "1" into the Sakai gradebook for that assignment. If I do not find it satisfactory, I will send it back to you with comments for revision and enter a score of "0" into the Sakai gradebook. You may revise and resubmit your first four abstracts as many times as necessary to receive a satisfactory grade, but you will only have one chance to revise the remaining eight. **In order to receive credit for the course, you MUST have submitted satisfactory abstracts for all but one of the seminars by the end of the semester.**

Abstracts are due by 9:00 AM on Friday of the same week, but you are strongly encouraged to write them as soon as you can so the material remains fresh in your mind. Only two late abstracts will be accepted, up to three days late (i.e. 9:00 AM on the Monday following the seminar). All revisions must be submitted no more than 48 hours after I return the previous version to you. **If in my estimation an abstract was thrown together without substantial effort or revision was only made superficially, a zero will be given for the assignment and no further resubmissions will be accepted.**

There are many excellent seminars every semester hosted by departments outside our own. You are welcome to attend up to two extradepartmental seminars and submit abstracts for them in place of ours. However, you must request my approval at least three days in advance of the seminar so I may assess the

relevance of the subject matter to your program of study. **If you choose to exercise this option, you must still attend the chemistry seminar(s) for which you elect not to submit abstract(s).**

One of the main goals of this course is for you to gain exposure to a broad range of contemporary research in chemistry and closely related disciplines. Therefore, attendance at all seminars is mandatory. **You are also required to attend all CHM 644 seminars (held infrequently on Fridays at 2:00 PM in Beaupre 105),** but you are not required to write abstracts for these presentations. I will take attendance each week, and I will note if you arrive late or leave early. You must provide written justification for missing a substantial part of any seminar as well as any supporting documentation I may request. **Failure to justify any absence, full or partial, will result in loss of credit for the entire course.**

Another goal of this course is for you to gain an understanding of what makes a good scientific presentation. Before the first seminar, each student will be randomly assigned one seminar for which they must **also** write a  $350 \pm 50$  words critique. You should discuss what elements of the talk you believe were successful and/or unsuccessful; this can include (but is not limited to!) the introduction/motivation for the work, pedagogical graphics/cartoons and analogies, explanations of experimental methods, data figures/tables, and overall narrative approach. You should also highlight any parts of the talk that you did not understand. Do not assume that anyone giving a seminar must be good giving seminars! The critique should be submitted alongside the standard abstract. The same due dates and grading policies will be followed, except you will only be allowed one resubmission of the critique.

Although satisfactory abstracts for all but one of the seminars are required to receive credit, I understand that both unavoidable and unforeseen conflicts can arise. If you must miss more than one seminar, you may submit abstracts for up to two extradepartmental seminars as described above to satisfy the requirement. Another option you may choose to exercise if you cannot attend a particular seminar is to read a recent publication from the speaker's group that I will assign and submit a summary of that publication. I should emphasize, however, that this option is more challenging than it may seem, as I will expect your summary to be entirely distinct from any portion of the original publication. If you must miss the seminar for which you were assigned the critique, you must make an effort to "trade" assignments with another student in the class. If no one volunteers, you will be randomly assigned a different seminar.

Finally, seminars are an excellent opportunity to engage in scientific dialog. While I do not require you to ask questions during the seminars, I do offer the following incentive: if you ask a *truly incisive* question during any seminar, you will be given a "free" satisfactory grade to use in place of one abstract at any point in the semester. If I determine that you have asked a truly incisive question, I will enter a score of "1" into the Sakai gradebook for the "Question" extra credit column. At that point, it is YOUR responsibility to inform me when you would like to use your "free" satisfactory grade. And as always, **you will still be required to attend the seminar** for which you skip writing an abstract!

### **Expectations:**

Abstracts must be typed and submitted electronically as PDF files through the CHM 643 Sakai site. In addition to the text of the abstract, they must include the name and institutional affiliation of the speaker and the title and date of the seminar.

You should take careful notes during each seminar, but you must also be cautious not to get so caught up in taking notes that you lose track of the speaker's overall narrative(s). I do not expect (nor want!) you to include, for example, specific numerical values or synthetic conditions unless they are absolutely central to the research. Instead, focus on making sure you understand what the speaker is saying, and make note

of any time that you do not understand. This is *especially* important for seminars on topics far outside your particular research area. Except in cases of accommodation, **you may not record any part of the seminar in any manner – audio, video, or photo – other than taking notes by hand.** If you require accommodation, please talk to me as soon as possible so we may make appropriate arrangements.

Abstracts should describe, usually but not necessarily in this order, 1) the general motivation for the work, 2) the specific scientific problem(s) being addressed, 3) the experimental approach, and 4) the results and conclusions. If you believe the speaker did not actually discuss one of these points, you should say that explicitly in a separate sentence after the abstract. I expect the writing to be clear and concise with good narrative flow and appropriate technical language. Meeting these requirements will likely be difficult at first, but hopefully your writing skills will improve as the semester progresses. That said, my expectations for your writing will also increase as the semester progresses, so you should aim to spend the same amount of time crafting and perfecting each of your abstracts.

You are encouraged to meet in groups to discuss the seminars, which will hopefully give you an opportunity to clarify any material that you did not understand. Again, this is likely most helpful if done immediately following the talk. You are also welcome to ask each other for feedback on your abstracts before you submit them. However, each student is expected to submit an **entirely original** abstract each time, so I do not recommend giving feedback on someone else's abstract until you have completed a draft of your own to avoid subconsciously copying that person's work.

I am also available to discuss seminar material and your writing, either one-on-one or in small groups. You may ask to meet with me any time I am in my office with the door open, or you may send me an email to set up an appointment. Please note, however, that I generally will **not** be available immediately after seminars, as I will frequently be attending dinner with the speakers.

Lastly, **plagiarism of any kind – even just a part of one sentence – will not be tolerated.** This includes, but is not limited to, 1) copying another student's work, 2) directly copying language from the seminar slides or oral presentation without attribution, 3) directly copying language from the speaker's published work without attribution, **or 4) substitutional paraphrasing,** i.e. rewriting a direct quote by substituting with synonyms or simply rearranging parts of the sentence. If I determine that a part of any abstract is plagiarized, a zero will be given for the assignment and no resubmissions will be accepted. A second infraction may result in forfeiture of credit for the course and further disciplinary action.

Standard scientific terms need not – and indeed, should not – be reworded or attributed. If you are unsure whether or not a particular phrase is a standard term, a web search of the phrase in quotation marks should help you make this determination. You may also ask me about a particular phrase before using it.