

Chemistry 791

Organic Research Seminar, Spring 2015

Instructor: Prof. B. Mikael Bergdahl
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Lecture meetings: F, 2:00-2:50 p.m.; GMCS 305

Office Hours: MW 10:00-Noon

Texts: No course book is used in this class.

Course objectives: Presentation of current research by students working towards M.S. degrees. This course will prepare the students for what is expected at their masters thesis defense. The students are expected to give a 40 min presentation, and 10 min for questions, of their current research. The main objective with the course is to learn how to give a professional seminar in front of faculty and students as the audience.

Prerequisites: BS or equivalent degree in chemistry.

General information: There are no scheduled chemistry classes or labs between 2-3 PM on Fridays. The students enrolled in Chemistry 790/791 are expected to attend all of the students' presentations during the semester. The dates for presentations will be assigned with a presentation every week until everyone has given a talk. There will be no presentations the first weeks of the semester! The presentation will most likely take some time to prepare and you need an ample amount of time to organize and prepare your talk in order to earn a high grade in the class. Hence, it is appropriate that you should be offered to give a practice seminar during a different time, e.g. at a research group meeting, and obtain some feed-back on your presentation before your "real" seminar.

The Chemistry 791 presentations will be based on your laboratory research that you have conducted. The department requires all second year graduate students working toward the MS or Ph.D. degrees to present a chemistry 791 seminar on their proposed research project. At the time when you give your presentation, you should also have preliminary data for your presentation. It important that based on your initial data collected, you need to address and propose where your research is going next. What are you trying to accomplish with initial data and your future research? It is highly recommended that you select your thesis committee before your presentation, so that these individuals may be present at your talk. Discuss your research project in detail with your research advisor well in advance of your presentation date. The essential elements of your presentation are given below:

- Consider this a professional presentation. Thus, dress and act accordingly.
- Your presentation should be around 40 minutes in length, excluding questions and answers.
- Prepare a written abstract (1 page) for distribution at your presentation.

1. Introduction and Background

- A. Clearly define your research project(s)
- B. Present the goals of this research project. Describe why these goals are important and what must be done to demonstrate this. This latter aspect will be detailed later in the results and discussion section. Will someone have use for your discoveries? Suggest applications of your results.
- C. Present a reasonably detailed review of pertinent literature to your project. This section will most likely represent the largest portion of the introduction.

2. Results and Discussion

- A. Briefly outline proposed research. This may include methods of preparation, characterization of products, determination of reaction mechanisms etc. You will need to discuss this with your research advisor in detail. Your discussion on interpreting the results and consideration of possible alternative explanations will probably require the most effort on your part. Prepare for questions on this.
- B. Presentation of your preliminary experiments and discussion of the results.
- C. Proposed future research (what remains to be done). You may need to give literature details to the preparation and characterization of products, approaches to determine reaction mechanisms and interpretation of results. It is important that the discussion section tie together previous related work from your group or literature.

- 3. Conclusion. Propose future directions that this research project may take (beyond your degree) based on current results and proposed direction.

Suggestions for a successful Seminar

In general, plan on spending 1-2 minutes per transparencies. The talk should be around 40 minutes in duration, along with 10-15 minutes for questions and answers. Practice your presentation in front of your fellow students and members of your research group using the transparencies that you have prepared. Ask yourself, are those powerpoints readable and not too cluttered, effectively expressing an idea. Do not directly copy diagrams from the literature. Be sure to check these for the room that you are going to use. Be prepared to answer questions! If you cite information using another paper, be prepared to explain the various steps in each of your citations. Study the experimental sections and make appropriate notes.

Grading: Your grade will be determined by consensus of the attending faculty. As part of this course, all students should be attending the Departmental seminars as well as the 791 seminars. Your grade will be in part based on attendance of these seminars.

Good luck with your seminar in Chem. 791.