

CHEM 8903-Chemistry and Biochemistry Graduate Seminar

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Course summary: The graduate seminar is intended to give students an opportunity to discuss background and initial plans of PhD thesis research; to demonstrate breadth of knowledge in chemistry/biochemistry; to learn to critically analyze a body of research; to teach peers about an important topic in their field; and to practice development of oral communication and presentation skills.

Second-year chemistry & biochemistry PhD students present two 20-minute seminars: (1) a thesis-research based seminar and (2) a literature seminar on a topic of interest to an audience of chemists and biochemists.

Registration and logistics: CHEM 8903A meets on Mondays, Wednesdays, and Fridays from 9:05-9:55. CHEM 8903B meets on Mondays, Wednesdays, and Fridays from 10:05-10:55. Participants are registered for either Section A or Section B (see attached schedule) and participate in that section's seminars accordingly.

Example:

9:00-9:05 Speakers 1 and 2 set up (load ppt on computer console)

9:05-9:25 Speaker 1 Presentation (20 minutes)

9:25-9:30 Speaker 1 Q&A by audience

9:30-9:50 Speaker 2 Presentation (20 minutes)

9:50-9:55 Speaker 2 Q&A by audience

Seminar Schedule: Attached is the preliminary schedule of seminars. The speaker is expected to invite his/her thesis committee and send an email reminder to his/her committee at least 2 days prior to the seminars.

Attendance/Participation: Attendance will be taken at each lecture. Please be sure to arrive to class by 9:05am (Section A) or 10:05am (Section B) otherwise, you will be marked as absent. For students with greater than five unexcused absences, there will be a deduction of a letter-grade for the course.

Each student is required to ask a minimum of THREE questions for the term. Failure to ask the minimal number of questions will result in a reduction of a letter-grade for the course.

Grading: Students can choose which seminar to present first (thesis or literature). Each seminar is equally weighted (50 points each) with grading based on a 100-point scale. Grading cutoffs: 90-100 points=A; 80-89 points=B; 70-79 points=C; 60-69 points=D; <60points=F. Unsatisfactory participation points will reduce Seminar points. Attendance: >5 absence (– 10 pts), Asking question: must ask at least 3 throughout semester (– 10 pts), Seminar Titles/papers emailed on time (– 5 pts each), Peer Evaluations: must be completed within 24 hrs of seminar for 75% of all seminars given (– 10 pts)

Thesis Seminar (50 points):

The thesis seminar should include discussion of the following topics:

(i) hypothesis to be tested; (ii) significance; (iii) innovation; (iv) key background literature supporting the thesis project; (v) experimental approaches and preliminary results (if any); (vi) outcomes and

potential pitfalls. Note: Students will not be assessed on research productivity, however, he/she are encouraged to present any preliminary results.

Stage presence (e.g. delivery, projection of enthusiasm, eye contact, interaction with the projected material, appropriate volume and pace, time management) and slide clarity (e.g proper fonts, balance of texts/figures, slide color) will count for 20% of the grade (i.e. 10points out of 50 points).

The seminar title must be emailed to Dr. Johnson one month prior to the scheduled seminar date for approval. (*For those presenting in the first 3 weeks of September You will have 2 weeks prior to the scheduled seminar date to send your seminar title for approval*) Failure to meet this deadline will result in reduction of a letter-grade. Be sure to indicate “thesis seminar” in the subject line of your email to Dr. Johnson.

Literature Seminar (50 points):

The literature seminar includes a detailed analysis of a high impact, cutting-edge paper (or two-if related) published in the past 5 years. The primary reference(s) should be from top peer-reviewed scientific journals (e.g. Science, Nature, PNAS, JACS, ACS divisional journals). It should NOT be a review article. However, you may need to read additional papers (including reviews and work by other authors) in order to prepare your topic and place your presentation in the context of important discovery to a general audience of chemists and biochemists. Remember to cite these papers during your seminar presentation.

Note: The paper(s) cannot be worked published from authors at Georgia Tech. The seminar cannot be based on a literature exam topic given within the past year or work done previously as an undergraduate or graduate student (at another institution). He/she may choose a topic that is within the student’s major area of study (but should not be current background literature for the student’s thesis project).

The seminar title AND primary literature reference(s) must be emailed to Dr. Johnson one month prior to the scheduled seminar date for approval (*For those presenting in the first 3 weeks of September You will have 2 weeks prior to the scheduled seminar date to send your references for approval*). Failure to meet this deadline will result in reduction of a letter-grade. Early topic submission is encouraged (especially if you wish to avoid someone else getting your topic/paper). Be sure to indicate “literature seminar” in your email to Dr. Johnson).

The literature seminar should include:

(i) a brief, sufficient background and introduction to allow a general chemistry/biochemistry audience to understand and appreciate the importance of the topic; (ii) critical analysis of the experimental design and collection of data; (iii) critical analysis of the interpretation of data; (iv) conclusion and future experiments.

Stage presence (e.g delivery, projection of enthusiasm, eye contact, interaction with the projected material, appropriate volume and pace, time management) and slide clarity (e.g. proper fonts, balance of texts/figures, slide color) will count for 20% of the grade (i.e. 10points out of 50 points).

Honor Code:

Please see www.honor.gatech.edu for Georgia Tech’s Academic Honor Code, which you are required to uphold.