CHEM 8003 – STUDENT SEMINAR

Course Information

Instructor: Kenyetta Johnson Taylor (kenyetta.johnson@chemistry.gatech.edu)
Course Prefix and Number: CHEM 8003 A,B
Term: Fall 2026

Course Description

The objective of this class is to develop presentation skills while giving the students an opportunity to discuss the background and initial plans of their PhD thesis research in preparation for their Candidacy Exam.

Course Objectives

This course is designed to give students the ability to:

1. Practice development of oral communication and presentation skills
2. Demonstrate breadth of knowledge in chemistry/biochemistry
3. Learn to critically analyze a body of research
4. Teach peers about an important topic in their field; and to
5. Gain exposure to the range research conducted by their peers

Course Learning Outcomes

By enrolling in this course, students will:

1. Prepare and give an oral scientific presentation based on their thesis research.
2. Prepare and give an oral scientific presentation based on a literature review of a topic of interest.
3. Critically review the scientific presentations of their peers by evaluating their presentations (anonymously) and asking relevant questions.

Required Course Materials

No textbooks or materials are required.

Course Requirements & Grading Policy

Grading Policy:
Students will 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. 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. Your overall grade will be reduced based on Unsatisfactory participation points!

- Unsatisfactory participation points will reduce overall course grade (described in further detail under "Description of Graded Components"). This includes:
  - Attendance: can reduce overall grade by up to –10 pts
  - Asking question: can reduce overall grade by up to –10 pts
  - Seminar Titles/Lit references emailed on time: can reduce overall grade by up to –5 pts each (–10 pts max)
  - Peer Evaluations: can reduce overall grade by up to –10 pts)

Final Grade Delineation:
90-100 points=A
80-89 points=B
70-79 points=C
60-69 points=D
<60points=F

Description of Graded Components
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 and literature supporting the thesis project; (v) experimental approaches and preliminary results (if any); (vi) outcomes and potential pitfalls. (vii) summary/conclusions. 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. 10 points out of 50 points)

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 literature seminar should include: (i) a brief, sufficient background, introduction, and significance 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 potential 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. 10 points out of 50 points)

Participation points (will reduce overall grade if not completed):
This includes:

- Attendance: >4 absences will result in up to –10 pts
- Asking question: must ask at least 3 relevant questions throughout semester (up to –10 pts),
- Seminar Titles/Lit references emailed on time (up to –5 pts each, –10 pts max)
    - Each seminar title must be emailed to Dr. Johnson Taylor 3 weeks prior to the scheduled seminar date for approval. (*Exception:* For those presentations taking place in the first 2 weeks of the class **only**, 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 overall grade.
    - Be sure to indicate "thesis seminar" or "literature seminar" in the subject line of your email to Dr. Johnson Taylor
- Peer Evaluations: must be completed within 24 hrs of seminar for 75% of all seminars given (up to – 10 pts)

Seminar Schedules and logistics:
CHEM 8003A meets on Mondays, Wednesdays, and Fridays from 9:30-10:20. CHEM 8003B meets on Mondays, Wednesdays, and Fridays from 11:00-11:50. Participants are registered for either Section A or Section B and will participate in that section's seminars accordingly (see CANVAS for schedule of exact days and times that each student speaker will present) Students should come to class early to upload presentation and be prepared to present. Sample daily schedule will look as follows:

Example:
9:25-9:30 Speakers 1 and 2 set up (load ppt on computer console)
9:30-9:50 Speaker 1 Presentation (20 minutes)

9:50-9:55 Speaker 1 Q&A by audience
9:55-10:15 Speaker 2 Presentation (20 minutes) 1
10:15-10:20 Speaker 2 Q&A by audience

Attendance Policy

See "participation points" above

Academic and Research Honesty/Integrity Statement

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. Review the Student Code of Conduct and the Academic Honor Code, especially Appendix A: Graduate Addendum to the Academic Honor Code.

Students are expected to perform research in an ethical and responsible manner. All Doctoral and Master's Thesis students are required to take the Responsible Conduct of Research training, and it is expected that students abide by the principles taught in that training while performing research for this thesis course.

Allegations of scientific or scholarly misconduct are handled in accordance with the procedures outlined by the Policy for Responding to Allegations of Scientific or Other Scholarly Misconduct.

Core IMPACTS

Not applicable.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services as soon as possible to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.