Introduction: CHEM 595A is a discussion/seminar course that helps students to improve their presentation skills while informing the “Journal club” about the advances in analytical research, including departmental research as well as in the literature.

Learning Objective: The purpose of the course to provide mechanism to students so that they learn critical thinking, effective communication skills, and building creativity. These are essential skills for good job interviews, reports, professional talks, lectures, research proposals, theses, dissertations, etc.

Details: In semester students present their own research. In addition, journal club is the mechanism that is used to facilitate full literature seminars that are presented for credit via CHEM 593a and for other scheduled presentations of graduate students registered for this course. All students who are registered for CHEM 595A will present a noncredit presentation unless they are already scheduled to present for another purpose, such as (CHEM 593a, 593b are not required to present a noncredit presentation. Students who are registered for 593b or 593c are not relieved of this requirement with the rationale being that students in the later stages of their program serve as a good example for newer students.

Guidelines:

1. Non-credit presentations
   To present in an organized, logical, and legible fashion the contents of a single journal article approved by the faculty member in charge of the journal club.

   Article approval and distribution
   Your article must be approved by 4 PM on the Wednesday before your scheduled presentation (one week prior). Also, you should distribute your article to all analytical faculty and student by 4 PM on the Monday prior to your scheduled presentation (48 hours prior).

   Suggestions
   a) If you present an outline of your paper at the beginning of your talk, then present an informative outline. Outlines of the form, I. Introduction, II. Experimental Section, III. Results, and IV. Conclusions.
   b) These headings are fine, however, if some detail is given about each topic. Basic theory, methods, procedures, and applications should be covered.
   c) Background material should be provided, if necessary, but extensive background research is not recommended.
   d) Use legible, uncrowded slides. Do not fill slides with extensive text. Do not read text from slides. Slides should be kept simple.
e) Make your presentation 20 minutes, exclusive of discussion. -- The goals of these presentations are to develop skills in the organization of information and its presentation, to discuss and describe new scientific topics, and to learn to deal succinctly with questions.

f) Acceptable journals for the above presentations include, but are not limited to, Analytical Chemistry, Analyst, Applied Spectroscopy, Journal of Chromatography, Analytica Chimica Acta, and Environmental Science and Technology.

2. **Credit Seminars (via CHEM 593A)**
   It requires a review of an analytical technique (e.g., electrochemical detection in capillary electrophoresis, laser-induced fluorescence, solid phase microextraction), new developments in instrumentation (e.g., capillary electrophoresis on a chip), or an analytical application (e.g., the analysis of proteins and peptides by HPLC, DNA sequencing by capillary electrophoresis). The techniques and instrumental methods should not have matured fully but should be sufficiently developed, so one can satisfy the criteria below.

   **Topic Approval**
   The topic must be approved by both your advisor and faculty member in charge of the journal club.

   **Requirements**
   a. It cannot be closely related to your research project. Basic theory, methods, procedures, and applications must be covered.
   b. Background material is essential. Under no circumstances should one or two articles be singled out for attention. A review of 20 or so papers at a minimum should be undertaken. From these works, an original presentation should be organized. Particular care should be taken in the material's organization.

   **Suggestions**
   a. Use legible, uncrowded overheads. Do not fill overheads with extensive text. Do not read text from overheads. Overheads should be kept simple.
   b. The presentation should take roughly 50 minutes, exclusive of questions. Good presentations are expected, similar to that expected at a professional meeting.
   c. Prepare a 250-300 word typed abstract of your seminar and a typed listing of 15-20 of the most important references that you used in preparing your seminar. These should be distributed to the analytical faculty and students no later than the day of the seminar.
   d. All credit seminars will be graded. If the performance is unsatisfactory, the student must sign up for another credit seminar to obtain a passing grade.
   e. If you are uncertain of the quality of your presentation, consult your research director. You may wish to practice in order to improve your presentation. The goals of this presentation are to develop skills in reviewing the literature and in organizing and presenting an original lecture.
Seminar Schedule for spring 2016

02/17  Ahmad Qamar (Prel. Talk)
02/24  Srikanth Akinapalli
03/09  Xiaoli Wang
03/23  Sensen Chen
04/27  Lee Elliott