Course: 84.514 Advanced Analytical Chemistry

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(not required) by Skoog, Holler and Nieman

Topics: Electrochemistry (Potentiometry, Voltammetry)
Molecular Spectroscopy (UV-vis, Fluorescence, Luminescence)

Exams: Three 1 hour exams, no cumulative final exam.
Last hour exam may be given during final exam time slot.
No excuse for missing exam.

Quizzes: Occasional unannounced quizzes at the end of class.

Grading: Exams makeup 75% of total grade (25% each)
Quizzes 5% (discretionary)
Student Projects makeup the remaining 20%

Projects: Each student must complete a project consisting of either a 10 minute class presentation or a research paper.
Projects should build on fundamentals presented in class, but, should give additional information on advanced techniques or important applications.
Project topics must be approved in advance.
A minimum of 10 literature sources must be used (e.g. journals such as Analytical Chemistry, Applied Spectroscopy, Analytica Chimica Acta, and others; books and book chapters).
A reference list must be submitted for either type of project.
All projects must be completed by the last class (The earlier the better!)
Sample Topics: Cryogenic Fourier Transform Spectroscopy
(don't use these) Non-Dispersive Infrared Analyzers
Coherent Anti Stokes Raman Spectroscopy
Optical Multichannel Analyzers
Potentiometric Stripping Analysis

Additional Material: Handouts will be posted on the website occasionally for extra reading and to enhance the discussion of certain topics.