Course:  84.514 Advanced Analytical Chemistry
Instructor:  Dr. David K. Ryan
           Olney 318a
           (978) 934-3698 Voice
           (978) 934-3569 Private Fax
           David_Ryan@uml.edu
           http://faculty.uml.edu/David_Ryan

       (not required)  by Skoog, Holler and Crouch

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

Exams:  Three exams to be given outside of class time, no cumulative final exam.
        Last hour exam may be given during final exam time slot.
        No excuse for missing exam. Cellphones cannot be used as calculators.

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.