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DEPARTMENT OF CHEMISTRY

Course: **84.314 Analytical Chemistry II (Instrumental Analysis)**

Description: This course will introduce the student to modern instrumental methods of chemical analysis. Included are such topics as UV-vis, fluorescence, atomic absorption and emission spectroscopy. The principles and applications associated with electrochemical methods of analysis and chromatographic techniques such as GC and HPLC will also be presented. This course is required for chemistry majors.

Website: http://faculty.uml.edu/David_Ryan/84.314

Instructor: Dr. David K. Ryan
Olney 318a
978-934-3698
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Book: Principles of Instrumental Analysis, 6th Edition, 2007
by Douglas A. Skoog, F. James Holler & Stanley R. Crouch

Topics: Spectroscopy (Molecular and Atomic)
Chromatography (Gas and Liquid)
Electrochemistry (Potentiometry, Voltammetry)

Exams: Two 1+ hour exams and cumulative final exam.

Quizzes: Occasional unannounced quizzes in class.

Homework: Problem sets during the semester.

Grading: Exams makeup 40% of total grade (20% each)
Final Exam (Comprehensive) 50%
Homework and Quizzes 10%

Additional Material: Handouts may be used to supplement the book. Check the website often for lecture notes, handouts (in PDF format) & helpful diagrams, etc.

Laboratory: 84.316 Analytical Chemistry II Laboratory is a required corequisite for the course. Laboratory experiments will be coordinated with lectures as much as possible.