University of Massachusetts Lowell
UMASS Lowell

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DEPARTMENT OF CHEMISTRY

Course:	CHEM.3140 Analytical Chemistry II (Instrumental Analysis) (Formerly 84.314)
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 David_Ryan@uml.edu
Book:	Quantitative Chemical Analysis, 8th Edition, 2010 by Daniel C. Harris
Topics:	Spectroscopy (Molecular and Atomic) Chromatography (Gas and Liquid) Electrochemistry (Potentiometry, Voltammetry)
Exams:	Two 1+ hour exams and a cumulative final exam will be given outside of class meeting times. Final Exam will be given 1 week after the last class at 8:00 AM unless an alternate time can be agreed upon by the class unanimously. Time conflicts will result in the final being held at the time scheduled by the University.
Quizzes:	Occasional unannounced quizzes in class.
Homework:	Three (3) or more problem sets during the semester.
Grading:	Exams makeup 40% of total grade (20% each) Final Exam (Comprehensive) 50% Homework and Quizzes 10% No makeup exams
Additional Material:	Occasional handouts may be used to supplement book. Check website Often for lecture notes, handouts (in pdf format) & helpful diagrams, etc.
Laboratory:	CHEM.3160 Analytical Chemistry II Laboratory is a required co-requisite for the course. Laboratory experiments will be coordinated with lectures as much as possible.
Attendance:	Students who faithfully attend class will do better than those that don't. It is highly recommended that you attend every class and arrive on time.