

# Syllabus for Chem 212, Quantitative Analysis Spring Semester 2014

**Quantitative Analysis**, 3 credit hours;

Lecture: TuTh 8:30 - 9:45AM Dumbach 236 Discussion: Mo 12:35 - 1:25PM Dumbach 118

Prerequisite: Chem 106 or 102 and 112 and Chem 222 or Chem 224 and Chem 226 or permission of the instructor .

**Instructor:** Dr. Conrad Naleway,

Flanner Hall 200C, Phone 773-508-3115

E-mail: cnalewa@luc.edu.

Office hours: To be announced in class plus by appointment

**Textbook:** "Exploring Chemical Analysis" (4<sup>th</sup> or 5<sup>th</sup> edition ), by Daniel C. Harris ISBN 1-4292-1004-4

**Other Materials:** You will need an inexpensive calculator having logarithmic (base 10 and base e), exponential, and trigonometric functions. Be sure you are familiar with your calculator and that it is in user-ready condition for quizzes and exams. Calculators cannot be shared during exams

## **Objectives**

- 1) To teach fundamental aspects of acid/base chemistry, redox, chemistry, electrochemistry, and ionic equilibria.
- 2) To acquaint the student with some of the fundamental techniques and state-of-the-art applications of chemical quantitative analysis used in biomedical, forensic, and environmental chemistry.

## **Grading:**

- **Top 3 of 4 90 minute exams** during lecture class period = **3x20=60%**
- **Cumulative Final Exam** = **15%**
- There will be **4 Quizzes** (3x5%) = **15%**
- **True Class Participation** during Lecture (2%) and Discussion [3%(group)+5%(individual)] (**Total=10%**)

## **Final Grading Scale:**

**A** 100-93;

**A-** 92-89;

**B+** 88-85;

**B** 84-81;

**B-** 80-77;

**C+** 76-73;

**C** 72-69;

**C-** 68-65;

**D** 64-55;

**F** <55.

**12 discussions:** 4 classes will be quizzes and 8 class will be problem-solving where class will be divided into 6 Groups of 5-6 students each. **Each Student MUST present at least once.** (5 pts., grading will be **Competitive**) I will assign 6 Problems per Discussion Period; One Per Group.

Quiz and Exam Problems will be largely variants of problems done in class or problems done in discussion period! Plus there also may be a few conceptual questions on each Exam/Quiz

All exams must be signed in the front, upper right hand corner. This signature will be taken as a statement of honest and completely independent work. Instances of academic dishonesty will warrant immediate failure of the course plus referral to the Dean's office. For more information on university policy, please read:

[http://www.luc.edu/academics/catalog/undergrad/reg\\_academicintegrity.shtml](http://www.luc.edu/academics/catalog/undergrad/reg_academicintegrity.shtml)

Exams will be graded and returned as soon as possible, usually the next class period. ALL grading questions, points of clarification and grading errors must be brought to the instructor's attention during office hours **no later than one week after exam is returned**. There will be no exceptions to this rule! Each returned exam must be copied with original being returned to instructor with a hand written note stapled to exam addressing concern(s). **Only exams completed in INK are eligible for possible regarding.**