

Syllabus for CHEM 215 Spring Semester 2009

Quantitative Chemical Analysis, 4 Credit hours; Prerequisite: CHEM 106 or CHEM 102 and 112

Instructor: Dr. Martina Schmeling, Flanner Hall 408, phone 508-3124,
e-mail: mschmel@luc.edu; URL: <http://homepages.luc.edu/~mschmel>

Book: Quantitative Chemical Analysis, Daniel C. Harris, 7th Edition, Freeman, 2007.

Objectives: Teaching the basic knowledge of quantitative chemical analysis and some selected fundamental analytical techniques time permitting. The core of the class will be focused around various forms of the chemical equilibrium like acid/base chemistry, complexometry etc. The main sections are complex chemistry, acid/base chemistry and electrochemistry.

Class procedure: Class hours are MWF between 12:35pm and 1:25pm. Classes meet in Mundelein Center Room 616. Two in-class exams additionally to the final exam are scheduled during the semester.

Laboratory: The laboratory will be conducted in Flanner Hall 313, Monday/Wednesday between 2:45pm and 5:30pm and Tuesday/Thursday between 8:30am and 11:15am. It is recommended that you use a note book to report your laboratory work during the lab periods. This will help you to write the lab report to be submitted for each lab. A laboratory handout describing most experiments, safety regulations as well as some handy hints for lab working will be posted on Blackboard as will be other important material related to the lab. Groups of three people will be assigned during the first lab session. Each group is working on an experiment together and elects a group leader – preferably on a rotational basis so everybody gets his/her turn. For each experiment a written lab report from everybody in the group has to be handed in **at the given due date which will be posted on Blackboard**. Lab reports submitted later than the due date will not be graded. The lab report should include: a short introductory section about the lab and its purpose; an experimental part in which you describe your experimental set-up and the techniques used; and a result and discussion part, where your own result(s) are shown and discussed with respect to the results of the entire group. The length of the report should be between 2 and 5 pages long. For each lab a small theoretical intro session will be held beforehand. Most of the material however, will be treated in class.

The final lab grade is an average of the different grades earned for each single lab. Grading of the individual lab reports is based on the written report itself and the result(s) you obtained for your unknown.

Check-out for the lab will be in the last week of class.

Grading:

40% Laboratory
20% Final Exam
40% Two Exams

Two exams are observed, one on February 18 and the second one on April 1, the final exam will be taking place on May 1 from 9:00am – 11:00am. Participation in the exams is mandatory. If a student fails to come to an in-class exam the other in-class exam counts double. **No make-ups!!**

Office hours are scheduled for Mondays and Wednesdays between 10:00am and 11:00am.

Resources:

Selected handouts, summarizing the most important facts, will be posted on Blackboard. Besides Blackboard, the Book has a very good resource site, which permits you to take on-line quizzes, do additional exercises and many other things. I highly recommend to do check this out. This link should get you to the website: <http://bcs.whfreeman.com/qca7e/default.asp>