Chemistry 3332 - Fall 2008

Textbook

Lecture Material, and Essential Reading.
The material that is presented in both the lecture and laboratory parts of the course defines the details and direction of the course content. In general, you should consider that you should be studying the material covered in lecture. However, you will achieve at a higher level in the course, if you read, and learn, beyond the confines of the lecture material. In addition, excellence may be achieved if you read other textbooks and articles on quantitative analytical chemistry, and practice a large number of problems. It is important to note that for statistical and other calculations, there is useful material on the web material, on the publisher’s web site, that accompanies the textbook.

Lecture Sequence
Approximate number of lectures in parentheses – numbers of lectures may vary. Later parts of the sequence may not be covered depending on progress in the semester. Parts 5 and 6 may not be covered.

Part 1. Introduction to Quantitative Analytical Chemistry (2)
Read Chapters 0, 1 and 3.

Part 2. Statistical Handling of Data and Methods of Calibration (6)
Read Chapters 4 and 5

Part 3. Analysis by Titration (8)
Acid Base Equilibria, and Titration Curves. Read Chapters 6, 7, 10, 11, 12
Complexometric Titrations. Read Chapter 13
Redox Titrations, and Electrode Potential. Read Chapters 14, 15, 16

Part 4. Spectrometry and Spectrophotometry (7)
Molecular Spectrometry. Read Chapter 19-21
Atomic Spectrometry. Read Chapter 22
Sample Preparation, Read Chapter 28

Part 5. Chromatography (4) (may be covered by exam only)
Chromatography. Read Chapters 23-26

Part 6. Gravimetric Analysis (1) (may be covered by exam only)
Read Chapter 27

Examination Dates, and Times
You will not usually be tested on material covered in a previous examination, except for quantitative aspects of statistical analysis of data, concentration units, and concepts of calibration. All examinations will be in class. The midterm will last over two classes. The final examination
may have a quiz-type cumulative section and a section that covers material presented after the third examination. In addition, these details may change depending on the progress of the class during the semester. The teaching assistants will provide help sessions immediately before examinations, upon request by the class. Quizzes and homework may be given at any time.

**First Examination**
Wednesday. September. 17, 2008. In class, in JONS 229

**Midterm Examination**
Monday, October 6, 2008, Part 1 during class, JONS 229
Wednesday. October 8, 2008, Part 2 during class, JONS 229

**Third Examination**
Wednesday, November 5, 2008, JONS 229

Note: Thanksgiving break November 24-29, 2008

**Final Examination**
December 8-13, 2008, JONS 229 (Exact time not yet available).

**Homework**
Homework will be assigned, approximately once every two weeks, and you will be asked to hand it in for grading. However, this homework does not represent the full extent of the studying that is expected of you. In addition, you should attempt to do all the relevant problems at the end of each assigned chapter in Harris, as we progress through the semester. The solutions to the problems are in the “Solutions Manual” for Harris. If you study the Harris problems competently you should have less difficulty with examinations.

Reliance on the biweekly homework assignments for practice of problems will not be enough to allow you to do well in the examinations. You must set you own goals for studying, or risk poor examination performance. If class attendance is insufficient, random homework will be set with very short lead times for completion.

**Grading**
The course grade will be based 60% on the examinations, quizzes, and graded homework assignments, and 40% on the laboratory reports, and laboratory notebook. The 60% that constitutes the examinations and homework assignments will be structured such that the quizzes and graded homework assignments shall constitute about 12% of the course grade, while the four examinations will each constitute 12% of the course grade, each.

**Professor Robert G. Michel; Chemistry A319**

Preferred method of communication for appointments, discussion of course work, etc. is by E-mail: robert.g.michel@uconn.edu. E-mail will be answered 8:00 am to 7:30 pm most days. The RGM calendar can be found at: [http://ical.mac.com/rgmichel/RGMichel_Calendar](http://ical.mac.com/rgmichel/RGMichel_Calendar) White space in the calendar is time available when you can make an appointment. Find a half-hour white space slot and let me know your chosen time by email. If you want to find me in my office without making an appointment, office hours are Mondays, and Wednesdays after lecture for about half and hour or so, and on Wednesdays at 4 pm or so, for an hour. You can use IM chat or video to reach me at “auchengrange” if you wish. Phone is 486 3143 for voice messages.