

CHEMISTRY 221
Fall 2007
Syllabus

Texts: Quantitative Chemical Analysis, Daniel C. Harris, 7th Ed. , W.H. Freeman, 2007.
Applications of Microsoft EXCEL in Analytical Chemistry, Stanley R.Crouch, F. James Holler, 2004.

Lecturer: Professor Susan V. Olesik, 3033 McPherson Lab, olesik.1@osu.edu

Office Hours: 3:00 - 4:00 pm Wed, Friday or by appointment 292-0733

Teaching Assistants: Yuri Kogiso, Kaarina Lokko, J. You

Laboratory Supervisors: Dr. Ted Clark and Dr. S. Prasad Office: 2035 McPherson

Lectures: M/W/F 9:30am 2004 Evans Lab

<u>Dates</u>	<u>Topic</u>	<u>Reading Assignments</u> <u>(Chapters in Harris)</u>
Sept 19,21,24	Measurement/Experimental Errors	1 and 3
Sept 26,28,Oct 1	Statistics: including probability distribution, Confidence Intervals, t-test, F-test and Least Squares	4
Oct 3, 5 , 8	Chemical Equilibrium and Activity	6, 7, 8
Oct.10,12,15 Oct 17, 19, 22	Acid/Base Equilibria and Buffers	9,10,11
Oct 24, 26, 29 Oct 31	Electrochemistry	14,15
Nov 2,5,7 Nov 9,14	Spectroscopy	18, 19,20
Nov 16,19,21 Nov. 30	Separations, Gas and Liquid Chromatography	23,24,25

Midterm Examinations: Oct 15 th, 6:00 pm: Nov 19 6:00 pm
Final Examination: Tuesday, Dec 4, 7:30 am - 9:18 am

Grading:

Lectures 60% (Quizzes 5%, Midterms 20%, 20% and Final 15 %)
Lab 40%
100%

Quizzes: Take home quizzes will be provided in an unannounced fashion throughout the quarter. If you are not in class, you will not get the quiz. This includes any extenuating circumstances. You will allowed to drop one quiz grade. If you have an extenuating circumstance that will be covered by the dropped quiz.

Problem Sets: A problem set will be assigned each Monday. The answers are available in the published answer book. Problem Sets will not be graded.

Exam Grading Policy: If you wish to have an exam question regraded, turn in a written description of your concern no later than one class period after you received the original graded exam. Each exam in question will be regraded entirely.

All submitted work on exams, quizzes and laboratories reports must be **your own**.

Disability Services: All students with documented disabilities, who need accommodations, should see the instructor privately to schedule an appointment as early in the quarter as possible. If your disability requires materials in alternative format, please contact the Office for Disability Services.

QUANTITATIVE CHEMICAL ANALYSIS

Chemistry 221
Autumn Quarter 2007
Laboratory Syllabus

Teaching Assistants: Yuri Kogiso. Tues.-Thur. 8:30-12:18. ykogiso@chemistry.ohio-state.edu
Kaarina Lokko. Tues.-Thur. 1:30-5:18. klokko@chemistry.ohio-state.edu
Jia You. Mon.-Wed. 1:30-5:18. jyou@chemistry.ohio-state.edu

Lab Supervisors: Dr. S. Prasad. sprasad@chemistry.ohio-state.edu Office: 2035 McPherson.
Dr. Ted M. Clark. Clark.789@osu.edu

Start Date	Laboratory Assignments	Report Due Date No later than 4:00pm to Mail-slot outside 2035 MP
Sept. 19, 20	1. Statistical Analysis Assignment (100 pts)	Oct. 5
Sept. 19, 20	2. Preparation of Standard Acid and Base (100 pts)	Oct. 5
Sept. 26, 27	3. Identification of an Unknown Weak Acid (100 pts)	Oct. 12
Oct. 3, 4	4. Investigation of Properties of a Buffer (100 pts)	Oct. 19
Oct. 15, 16	5. Potentiometric Determination of Iron (100 pts)	Oct. 26
Oct. 22, 23	6. Spectrophotometric Determination of Iron (100 pts)	Nov. 2
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Oct. 29, 30	8. Ion-selective Electrode Determination of Chloride (100 pts)	Nov. 9
Nov. 5, 6	9. Environmental Analysis Project Report (150 pts)	Dec. 5
Nov. 28, 29	10. Environmental Analysis Project Presentation (100 pts)	

Holidays: Thanksgiving, November 22. No Class.

All reports for experiments in which you collect data must be typed and follow prescribed guidelines.

Late reports are penalized 5% per day, 25% per week.

No lab reports will be accepted after 4:00p on DEC 10th.

All experiments must be performed and the lab report submitted before 4:00p, DEC 10th, in order to pass the course.