Syllabus

Course:	Chem 122, General Chemistry II, 4 credits
Term:	Spring Semester, 2011
Class Schedule:	10:00-10:50 am, MWF; Lab: Tuesday 8:00-9:50 and 10:00-11:50
Text:	Chemistry by Chang, 9th Ed. McGraw-Hill Instructor generated lab manual
Instructor:	Angie Bartholomay
Office/Phone:	Nelson Science Center, Room 113 Phone: 228-5471
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Office Hours:	Open, you may stop by at any time.

Course Content: General Chemistry II will cover chapters 12, 14-16, 18, 19, 23, and 24. Topics will include intermolecular forces, kinetics, solution chemistry, acid/base chemistry, thermodynamics, electrochemistry, nuclear reactions, and carbon bonding; with special emphasis on qualitative analysis. A quantitative evaluation of surface water is included especially for wildlife majors.

Grading: Grades will be based on total points using the following percentage system: 100-90, A; 89-80, B; 79-70, C; 69-60, D; <60. Exams, lab reports, a final lab project, and an independent study project will be used to determine the final grade. IMPORTANT! Any grievances about graded material must be addressed within one week from the time the material is returned to the student.

Exams: There will be four exams (100 points each) during the course of the semester. Should a situation arise that dictates a change in this schedule, the change will be announced at least one week in advance of the change in the schedule. Exams may contain short answer/essay, multiple choice, and problems. The use of periodic tables is permitted and will be provided.

Quizzes: Quizzes are unannounced and cover mathematical aspects we have been studying. Each quiz is worth 20 points. Quizzes cannot be made up.

Lab Project: 2-3 member teams will perform a qualitative analysis project beginning with lab #9 and will have four weeks to complete the analysis. Project is worth 150 pts:

Make-up: You will be allowed to makeup missed exams; however you will receive only 70% of the test score. If you know you cannot be present the day of the exam, you must take the exam prior to the absence in order to receive full credit. **It is your responsibility to take the make up exam**.

Laboratory: The laboratory portion of the course provides an opportunity to integrate lecture concepts with observable activities. Chemical splash safety goggles are required and can be purchased at the bookstore. **Attendance in lab is mandatory. There are no excused absences.** The 8 lab reports plus the two field studies are worth 15 points each. Lab reports not submitted for grades at the next scheduled will receive 70% of the graded report.

Research You will have a choice of one of the following as independent study. This is worth 150 pts.
1) Should you choose the research paper, it will be 4-5 pages in length on some current topic in chemistry or related science. The paper must follow all of the requirements of any research paper completed for Composition II .
2) The Science Olympiad involves preparing chemicals and test questions as needed for the chemistry events and the running of those events on March 24.

Academic Integrity	Ignorance is no excuse. You are expected to understand the rules governing copyright infringement and proper acknowledge of sources of information when presenting material from research articles and from internet searches. All work submitted is expected to be <u>your</u> work, thoughts, and ideas. Violations of copyright laws and plagiarism are grounds for failure in this course.

Lecture Schedule:	Reading assignment	lab schedule	topic
Jan. 12	Syllabus review and p. 509 – 511		
Jan. 14	p. 511 – 520		
Jan. 17	**Martin Luther King Day – No Class**		
Jan. 19	p. 520 – 528	Jan. 18	Colloids
Jan. 21	p. 528 – 533		
Jan. 24	p. 545 – 553	Jan. 25	Colligative Properties of Solutions
Jan. 26	p. 543 – 564		
Jan. 28	p. 564 – 574		
Feb. 2	p. 575-588	Feb 1	Rates of Chemical Reactions
Feb. 4	**Exam #1 – Chapters 12 & 13**		
Feb. 7	p. 601 – 610		
Feb. 9	p. 610 – 619	Feb. 8	Le Chatelier's Principle
Feb. 11	p. 619 – 629		
Feb. 14	p. 645 – 656	Feb. 15	Determining Equilibrium Constant
Feb. 16	p. 656 – 665		
Feb. 18	p. 665 – 674		
Feb. 21	**President's Day – No Class**		
Feb. 23	p. 674 – 683	Feb. 22	Acid-Base Titration Curve
Feb. 25	p. 697 – 708		
Feb. 28	p. 708 – 716	Mar.1	Solubility Product Constant
Mar. 2	**Exam #2 – Chapters 14, 15, & 16 (Part 1)**		
Mar. 4	p. 716 – 725		
Mar. 7	p. 725 – 737	Mar. 8	Oxidation-Reduction Reactions
Mar. 9	p. 783 – 790		
Mar. 11	p. 790 – 795		
Mar. 14 – 18	**Spring Break – No Classes**	**Mar. 15**	**Spring Break**
Mar. 21	p. 796 – 803		
Mar. 23	p. 803 – 809	Mar. 22	Analysis of Group I cations
Mar. 25	p. 819 – 830		
Mar. 28	p. 831 – 838	Mar. 29	Analysis of Group II Cations
Mar. 30	p. 839 – 847		
Apr. 1	p. 848 – 854		
Apr. 4	REVIEW	Apr. 5	Analysis of Group III Cations
Apr. 6	**Exam #3 – Chapters 16 (Part 2), 18, & 19**		
Apr. 8	p. 967 – 979		
Apr. 11	p. 979 – 989	Apr. 12	Analysis of Group IV and V Cations
Apr. 13	p. 989 – 994		
Apr. 15	p. 1003 – 1009		
Apr. 18	p. 1009 – 1016	Apr. 19	Qualitative Analysis
Apr. 20	**Earth Day Event**		
Apr. 22	**Good Friday**		
Apr. 25	**Easter Break**		
Apr. 27	p. 1017 – 1023	Apr. 26	Field Studies in Water Quality
Apr. 29	Field Studies		
Apr. 28	Independent project evaluation		
Apr. 30	Qualitative Evaluation	May 3	Field Studies in Water Quality
May 5	REVIEW		
TBA	**Final Exam – Chapters 23, 24, and questions from projects**		