CHM 1220
General Chemistry II

I. College of Science and Mathematics
   Department of Chemistry

II. Course Information
   Course Title: General Chemistry II
   Course Abbreviation and Number: CHM 1220
   Course Credit Hours: 3
   Course Cross Listing(s) Abbreviation and Number:
   Check (“x”) all applicable:
   General Education Course_____ Writing Intensive Course_____ Service Learning Course_____ Laboratory Course_____ Ohio TAG (Transfer Assurance Guide) Course _____ Ohio Transfer Module Course_____ Others (specify)_____

III. Course Registration
   Prerequisites: CHM 1210, CHM 1210L
   Corequisites: CHM 1220L
   Restrictions: Other:

IV. Student Learning Outcomes
   Students must be proficient in all of the following core competencies:

   1. Intermolecular forces and phase changes
   2. Solutions and colligative properties
   3. Chemical kinetics
   4. Chemical equilibrium
   5. Acid-base equilibria
   6. Thermodynamics (including entropy and free energy)
   7. Electrochemistry
   8. Descriptive chemistry, including chemical properties and classification of the elements, periodic patterns of reactivity
   9. Students should have been exposed to a variety of applications of chemistry in society
   10. Students must have continued to develop strong analytical and interpretive skills to effectively apply algebraic methods to solve chemical problems.

CHM 1220 is a Natural Science course for the Core Element program. Learning outcomes are:
- Understand the nature of scientific inquiry
- Critically apply knowledge of scientific theory and methods of inquiry to evaluate information from a variety of sources
- Distinguish between science and technology and recognize their roles in society
- Demonstrate an awareness of theoretical, practical, creative and cultural dimensions of scientific inquiry
- Discuss fundamental theories underlying modern science
V. Suggested Course Materials (required and recommended)

VI. Suggested Method of Instruction
Lecture - some sections may be web-assisted

VII. Suggested Evaluation and Policy
Tests, Quizzes, number of exams/quizzes and policies may vary with instructor

VIII. Suggested Grading Policy
A (≥90%), B (≥80%), C (≥70%), D (≥60%) – may vary with instructor

IX. Suggested Assignments and Course Outline

"M&F" chapters refer to the McMurry & Fay textbook stated above.
Week 1 Liquids, Solids and Phase Changes (M&F chp 10)
Week 2 Solutions and Their Properties (M&F chp 11)
Week 3 Chemical Kinetics (M&F chp 12)
Week 4 Chemical Kinetics (M&F chp 12)
Week 5 Chemical Equilibrium (M&F chp 13)
Week 6 Chemical Equilibrium (M&F chp 13)
Week 7 Acid/Base Chemistry (M&F chp 15)
Week 8 Acid/Base Chemistry (M&F chp 15)
Week 9 Acid/Base Chemistry (M&F chp 15, 16)
Week 10 Solubility Equilibria (M&F chp 16)
Week 11 Chemical Thermodynamics (M&F chp 17)
Week 12 Chemical Thermodynamics (M&F chp 17)
Week 13 Electrochemistry (M&F chp 18)
Week 14 Electrochemistry (M&F chp 18)
Week 15 final exam week

X. Other Information

This is a sample course syllabus guideline. Course materials, method of instruction, evaluation and policy, grading policy, assignments, and other course matters can differ by specific course sections and individual professors. Additional information can be obtained by contacting the Department of Chemistry.