

**State University of New York
College at Old Westbury
Summer 2018**

Course: CP 2130 Principles of Chemistry 2

Time: MTWR 9:00- 11:30

Text General Chemistry, 11th Edition or other edition by Ebbing and Gammon. Publisher: Cengage.

Instructor: Prof. Timothy Strout

Office: S-112

Office hours: by appointment

Phone: 516-876-2743

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This is a second semester honors college chemistry course designed to provide students with an in-depth study of fundamentals of chemical kinetics, equilibrium, acid-base chemistry, acid-base equilibria and solubility equilibria, thermodynamics, redox, electrochemistry, and nuclear chemistry. The honors course moves at a more challenging pace, and students are expected to learn more concepts in greater depth. Equations are not provided on exams; students must learn all equations. **Prerequisites:** C or better in Principles of Chemistry 1 (CP 2120) and MA1020 or higher.

co-req: Principles of chemistry lab

Learning Objectives

This course meets the SUNY Learning Objectives for General Education Domain 7, Natural Sciences:

- Understanding of the methods scientists use to explore natural phenomena, including observation, hypothesis development, measurement and data collection, experimentation, evaluation of evidence, and employment of mathematical analysis; and
- Application of scientific data, concepts, and models in one of the natural sciences.

Both the 3 credit

Online Platform

Successful completion of this course requires that the student have consistent access to a computer and the Internet. Course syllabi, notes

Grading

3 exams	60%
assignments	30%
<u>Participation and attendance</u>	<u>10%</u>
Total	100%

Important Dates: July 13th – last day to add/drop Aug 1st – last day to withdraw from course. After this date, an instructor’s signature is required to withdraw from the course and I will not sign withdrawal forms. If students are not committed to the class and the work they should withdraw before Aug 1st

Students with Disabilities

If you have or suspect you may have a physical, psychological, medical or learning disability that may impact your course work, please contact Stacey DeFelice, Director, The Office of Services for Students with Disabilities (OSSD), NAB, 2065, Phone: 516-628-5666, Fax (516) 876-3005, TTD: (516) 876-3083. email: defelices@oldwestbury.edu.

The office will help you determine if you qualify for accommodations and assist you with the process of accessing them. All support services are free and all contacts with the OSSD are strictly confidential. SUNY/Old Westbury is committed to assuring that all students have equal access to all learning activities and to social activities on campus.

Academic Integrity

It is assumed that your intellectual labor is your own. If there is any evidence of academic dishonesty, including plagiarism, the minimum penalty will be an automatic failing grade for that piece of work. Plagiarism is taking (and that includes purchasing!) the words and ideas of another and passing them off as one’s own work. If another person’s work is quoted directly in a formal paper, this must be indicated with quotation marks and a citation. Paraphrased or borrowed ideas are to be identified by proper citations as well.

Summer 2018 Schedule

Week 1 July 9-12	States of Matter, Phase Changes, Crystal Structure Solution Formation, Concentration, Colligative Properties Colloids,
Week 2 July 16-19	Rates: Change of Concentration With Time, Half Life, Collision and Transition State Theory, Arrhenius Equation, Reaction Mechanisms, Catalysts
Week 3 July 23-26	Chemical Equilibrium, K_{eq} , Equilibrium Constant, LeChatelier's Principle, Catalysts, Acid-Base Concepts Examples of Equilibria: Acid-Base Equilibria and Solubility Equilibria
Week 4 July 20- Aug 2	Laws of Thermodynamics, Entropy, Free Energy, Equilibrium Constants Oxidation-Reduction Half Reactions, Electrochemistry, Spontaneity, Voltaic Cells Cell EMF, Nernst Equation, Electrolysis Nuclear Chemistry, Radioactive Decay Nuclear Transformation, Detection & Uses of Radioactivity, Nuclear Fission & Fusion, Effects of Radiation,
Week 5 Aug 6-8	Continue above

Note that this schedule is tentative and subject to change. All changes will be posted to Blackboard.