

## General Chemistry for Science Majors II, with Lab TCSU CHEM 120

### A. Description

This is the second semester of a one-year course in chemistry intended for majors in the natural sciences (chemistry, biochemistry, biology, physics, pre-medicine), mathematics, and engineering.

### B. Recommended Preparation

None specified

### C. Prerequisites

None specified

### D. Minimum Unit Requirement

5 units, including at least 1 unit of laboratory and 1 additional unit of laboratory/recitation (at least 38 hours of lecture and 38 hours of laboratory)

### E. Course Topics

This course will consist of half of the content listed under CHEM SEQ A.

The complete one-year course will present fundamental principles and concepts of chemistry including, but not limited to atomic structure, quantum theory, periodic properties, chemical reactions, stoichiometry, gas laws and theories, molecular structure and bonding, states of matter, solutions, acids and bases, chemical equilibrium, thermodynamics, oxidation-reduction, electro-chemistry and chemical kinetics, nuclear chemistry, organic chemistry, descriptive chemistry, and coordination chemistry. The laboratory sequence will support the above topics including both qualitative and quantitative experiments, analysis of data and error propagation.

It is strongly recommended that TCSU CHEM 110 and 120 (TCSU CHEM SEQ A) be completed at a single institution before transfer.

### F. Student Learning Outcomes

The American Chemical Society (ACS) General Chemistry Guide and the General Chemistry examinations provide information on topics and indicate an appropriate level of this sequence of courses, including learning goals and objectives.

### G. CAN Equivalent

CAN CHEM 4 (Equivalency ends Fall 2009)