General Chemistry for Science Majors I, with Lab
TCSU CHEM 110

A. **Description**
   This is the first 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 2 (Equivalency ends Fall 2009)