

SUFFOLK COUNTY COMMUNITY COLLEGE

ABBREVIATED

COLLEGE COURSE SYLLABUS FORM

A course syllabus is not the same as a course outline. A course syllabus outlines the general requirements for a course. A course outline is the specific document created by the individual faculty member to distribute to a specific course section. This is an "abbreviated" course syllabus because it is only collecting information on the course number, title, description, and learning outcomes. Please submit this completed form electronically to Dean Britton.

PLEASE NOTE: Any changes made to the Course Number, Title, or Catalog Description must go through the regular faculty governance process. This Expedited Process of Approval, which expires in March 2012, only pertains to approval of the Learning Outcomes. Therefore, this is NOT the form to be used to change course numbers, titles, or descriptions. This is NOT the form to use for proposing a new course. (See the Governance website for those types of proposals.)

I. Course Number and Title:
CHE133, College Chemistry 1

II. Catalog Description:

CHE133 is the first semester of a full year comprehensive College Chemistry program. It is designed to meet the needs of students with career goals in chemistry, biology, engineering, medicine or dentistry. Includes the study of general scientific principles, laws of chemical combination, gas laws, atomic structure, chemical bonding, and basic principles of thermochemistry. Laboratory work is quantitative in nature and emphasizes experimental techniques and study through observation. (4 credit hours)

The course involves 3 hours of lecture, 1 hour of recitation, and 3 hours of laboratory per week. It fulfills the SUNY General Education Requirement for Natural Sciences. Prerequisite: MAT124 and CHE100 (General Chemistry) or CHE122 (Foundations of College Chemistry) or permission of Academic Chair.

III. *Learning Outcomes:

This course is intended for students whose emphasis is science, engineering, medicine, dentistry, or chiropractic.

The successful student will demonstrate proficiency in:

- Writing the name and chemical formula for inorganic ionic and covalent compounds.
- Representation of chemical reactions via chemical equations.
- Describing the electronic structure of atoms and ions using the wave-mechanical theory.
- Performing computations involving stoichiometry under aqueous, non-aqueous and gaseous state.
- Comprehending gas laws, gas law stoichiometry, kinetic molecular theory and real gases.
- Chemical thermochemistry, calorimetry and enthalpy calculations.
- Understanding Chemical bonding and molecular geometry concepts of molecules and ions using Lewis dot structures, V.S.E.P.R., M.O. and V.B. theories.
- Performing basic laboratory operations involving: volumetric (titrations) and gravimetric analysis, calorimetry, visible spectroscopy, visible spectrophotometry, boiling point and density measurements and using molecular modeling materials.
- The understanding of atomic and molecular structures.

*These statements must appear verbatim in course outlines. However, additional outcomes may be added to individual course outlines at the instructor's discretion.

Revised 1/10

Name of Discipline Lead: **Jing-Yi Chin**_____

Discipline Vote:

For_____ Against_____ Abstention_____

Date of Vote:_____

_(Initial and Date)_____ Certification of Vote by AVP of Academic Affairs

_(Initial and Date)_____ Certification of Vote by College Curriculum Chair

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Revised 1/10