

CAPITAL COMMUNITY COLLEGE

Course Outline for

PRINCIPLES OF ORGANIC CHEMISTRY I

SECTION I

SUBJECT AREA AND COURSE NUMBER: Chemistry G213

COURSE TITLE: Principles of Organic Chemistry I

CATALOG DESCRIPTION:

Students will study the structure, synthesis, and reactions of aliphatic hydrocarbons, alcohols, alkyl halides, and ethers. Students will explore stereochemistry and reaction mechanisms, focusing in SN1 and SN2 reactions.

LECTURE HOURS PER WEEK: 3

LABORATORY HOURS PER WEEK: 3

CREDITS: 4

PREREQUISITE:

Chemistry 122 or permission from the instructor

SECTION II

- A. SCOPE:** Principles of Organic Chemistry I is intended to provide a good understanding of organic chemistry. Students with aspirations in the medical, science or health related careers often take this course.
- B. REQUIRED WORK:** determined by the instructor.
- C. ATTENDANCE AND PARTICIPATION:** Students are expected to attend class and to participate in class activities. It is particularly important that students attend laboratory. Students must take examinations at the scheduled time and must hand in any reports, homework or other assignment at the time requested by the instructor.
- D. METHODS OF INSTRUCTION:** This course will involve students in active learning. Students will solve problems and conduct laboratory experiments. They will have opportunities to work alone as well as opportunities to work as members of a group. Other methods of instruction may include lecture, discussion, student presentations or exercises which make use of computers.

E. OBJECTIVES, OUTCOMES and ASSESSMENT

The following objectives and outcomes represent the department's core requirements for student achievement. Individual instructors will add other topics, thus each section of this course will be unique while at the same time assure that student will be well prepared in core area.

Learning Objectives	Outcomes	Assessment
To demonstrate an understanding of:	Student will:	As measured by:
Measurement and Applied Mathematics in Chemistry	Student will do the following: A. Measure mass, volume, temperature and other physical properties of matter. B. Use the concept of the mole to find empirical formulas, carry out stoichiometric and other similar calculations. C. Use algebra, dimensional analysis, graphing, logic and other techniques to solve chemical problems.	1. Written in class tests, quizzes and examinations 2. Laboratory experiments
Structure of Matter	Student will do the following: A. Study the naming, structure, and reactivity of organic chemical compounds. B. Understand the meaning of and be able to write organic chemical formulas. C. Understand the mechanism of certain chemical reactions.	1. In class exercises, quizzes, and tests. 2. Graded laboratory reports and/or laboratory examinations
Relationship between theoretical concepts and practical problems.	The student will: A. Use theoretical information to solve practical problems. B. Use collected data to make generalizations. C. Perform assigned experiments in the laboratory, collect the required data and draw appropriate conclusions.	3. Other methods may include graded homework assignments, reports, presentations or projects

F. TEXTS AND MATERIALS: Organic Chemistry, Leroy Wade, Jr., Prentice Hall

G. INFORMATION TECHNOLOGY: calculator