

**JAMESTOWN COMMUNITY COLLEGE**  
**State University of New York**

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**INSTITUTIONAL COURSE SYLLABUS**

**Course Title:** General Chemistry I

**Course Abbreviation and Number:** CHE 1550

**Credit Hours:** 4

**Course Type:** Lecture/Lab

**Course Description:** Students will investigate fundamental concepts of chemistry from a theoretical perspective with an emphasis on problem solving. Through the laboratory students will attain and demonstrate qualitative and quantitative skills. The chemistry of elements and compounds will be studied through measurements, atomic structure, periodicity, chemical bonding, stoichiometry, reaction classification, redox, gases, liquids, and solids. The review class is strongly recommended as an opportunity to practice problem solving, to ask specific questions, and to review returned quizzes and exams. Course content is designed for the science/engineering major who has already taken a chemistry course and who wishes to transfer to a four-year institution.

Prerequisite: high school chemistry of CHE 1500; Prerequisite/Corequisite: ENG 1510; Prerequisite/Corequisite: MAT 1590 or higher (or Eligibility: MAT 1600).

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**General Education Requirements Met**

**SUNY**

Natural Sciences

**JCC**

Scientific Reasoning

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**Student Learning Outcomes:**

Students who demonstrate understanding can:

1. Demonstrate an 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 [SUNY Gen Ed – Natural Sciences]
  2. Demonstrate an understanding of the application of scientific data, concepts, and models in one of the natural sciences. [SUNY Gen Ed – Natural Sciences]
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**Topical Outline:**

- Introduction: Matter and Measurement
  - Atoms, Molecules, and Ions
  - Stoichiometry: Calculations with Chemical Formulas and Equations
  - Aqueous Reactions and Solution Stoichiometry
  - Thermochemistry
  - Electronic Structure of Atoms
  - Periodic Properties of the Elements
  - Basic Concepts of Chemical Bonding
  - Molecular Geometry and Bonding Theories
  - Gas Law
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**Information for Students**

- Expectations of Students
  - [Civility Statement](#)
  - [Student Responsibility Statement](#)
  - [Academic Integrity Statement](#)

• [Accessibility Services](#)

Students who require accommodations to complete the requirements and expectations of this course because of a disability must make their accommodation requests to the Accessibility Services Coordinator.

- [Get Help: JCC & Community Resources](#)
- [Emergency Closing Procedures](#)

- Course grade is determined by the instructor based on a combination of factors, including but not limited to, homework, quizzes, exams, projects, and participation. Final course grade can be translated into a grade point value according to the following:

A=4.0	B+=3.5	B=3	C+=2.5	C=2	D+=1.5	D=1	F=0
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- Veterans and active duty military personnel with special circumstances (e.g., upcoming deployments, drill requirements, VA appointments) are welcome and encouraged to communicate these to the instructor.
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**Effective Date:** Fall 2021