# 7/24/2020

# brcc keystone logo

Baton Rouge Community College

*Academic Affairs Master Syllabus*

Date Approved: 11 September 2020

Term and Year of Implementation: Fall 2020

**Course Title:** Chemistry I for Science Majors

**BRCC Course Rubric:** CHEM 1123

**Previous Course Rubric**: CHEM 101

**Lecture Hours per week-Lab Hours per week-Credit Hours**: 3-0-3

**Per semester: Lecture Hours-Lab Hours-Instructional Contact Hours**: 45-0-45

**Louisiana Common Course Number:** CCEM 1123

**CIP Code:** 40.0501

**Course Description:** Covers principles of chemistry with emphasis on nomenclature, atomic and molecular structure, bonding, stoichiometry and quantitative problem solving. Introduces periodicity, energy relationships, and solutions. Intended for students pursuing careers in science, engineering and many health professions.

**Prerequisites:** MATH 1113 (or MATH 101) or MATH 1213 (or MATH 110) or MATH 1235 (or MATH 120) with grade of ‘C’ or better

**Co-requisites:** None

**Suggested Enrollment Cap:** 30

**Learning Outcomes.** *Upon successful completion of this course, the students will be able to:*

1. Demonstrate a fundamental knowledge of chemistry concepts in the areas of measurement, chemical and physical properties of matter, atomic and molecular structure, chemical equations and stoichiometry, reactions, energy relationships, periodicity, bonding, gas laws and solutions.

2. Analyze and solve fundamental quantitative chemistry problems.

3. Apply chemical principles to understanding natural phenomena, emerging chemistry-related technology, and materials encountered in everyday life.

**General Education Learning Outcome(s):** This course supports the development of competency in the following area(s). Students will:

Apply scientific concepts to explain the natural world. (General Education Competency in Scientific Reasoning)

**Assessment Measures.** Assessment of all learning outcomes will be measured using the following methods:

1. Administration of unit exams during the semester and a comprehensive final exam at the end of the semester.

2. Instructor-designed assignments including, but not limited to, written and oral assignments, projects, homework and quizzes. All assignments will be graded using an instructor-designed rubric.

**Information to be included on the Instructor’s Course Syllabi:**

* ***Disability Statement*:** Baton Rouge Community College seeks to meet the needs of its students in many ways. See the Office of Disability Services to receive suggestions for disability statements that should be included in each syllabus.
* ***Grading:*** The College grading policy should be included in the course syllabus. Any special practices should also go here. This should include the instructor’s and/or the department’s policy for make-up work. For example in a speech course, “Speeches not given on due date will receive no grade higher than a sixty” or “Make-up work will not be accepted after the last day of class”.
* ***Attendance Policy*:** Include the overall attendance policy of the college. Instructors may want to add additional information in individual syllabi to meet the needs of their courses.
* ***General Policies*:** Instructors’ policy on the use of things such as beepers and cell phones and/or hand held programmable calculators should be covered in this section.
* ***Cheating and Plagiarism*:** This must be included in all syllabi and should include the penalties for incidents in a given class. Students should have a clear idea of what constitutes cheating in a given course.
* ***Safety Concerns:*** In some courses, this may be a major issue. For example, “No student will be allowed in the lab without safety glasses”. General statements such as, “Items that may be harmful to one’s self or others should not be brought to class”.
* ***Library/ Learning Resources:*** Since the development of the total person is part of our mission, assignments in the library and/or the Learning Resources Center should be included to assist students in enhancing skills and in using resources. Students should be encouraged to use the library for reading enjoyment as part of lifelong learning.

**Expanded Course Outline:**

1. Quantitative problem solving
2. Nomenclature
3. Atomic and molecular structure
4. Chemical equations and stoichiometry
5. Introduction to solutions
6. Gas laws
7. Energy relationships
8. Introduction to Periodicity
9. Bonding