

CHEM 102

Laboratory for Chemistry and Its Role in Society

1 Credit

Community College of Baltimore County
Common Course Outline

Description

CHEM 102 – Laboratory for Chemistry and Its Role in Society: serves as a laboratory course to accompany CHEM 100. This course introduces basic chemistry lab skills and demonstrates principles and concepts developed in CHEM 100.

Co-requisites: CHEM 100

Overall Course Objectives

Upon completion of this course, students will be able to:

1. use chemicals safely and properly dispose of wastes with particular emphasis on the avoidance of environmental pollution;
2. make accurate measurements using standard laboratory equipment such as the electronic balance, metric ruler, and graduated cylinder;
3. follow written and verbal directions in the performance of an experiment;
4. observe various techniques to separate and identify components in a mixture;
5. apply the scientific method to find an explanation for observations;
6. use a computer and other instruments to collect data and graph trends;
7. interpret data to perform the necessary calculations to arrive at conclusions;
8. discuss how chemistry relates to global, ethical, and societal issues;
9. find, evaluate, use, and cite appropriate academic resources and documents, including print and digital media, to gather and evaluate physical and chemical data;
10. keep records of observations to communicate the results of laboratory investigations;
and
11. write reports to summarize results.

Major Topics

- I. Learning to Use Laboratory Equipment
- II. Density
- III. Physical and Chemical Properties
- IV. Exploration using the Scientific Method
- V. Separation of Substances
- VI. Quantitative Analysis
- VII. Acid-Base Titration
- VIII. Heat Effects of Chemical Reactions
- IX. Food Chemistry

Course Requirements

The Common Course Outline (CCO) determines the essential nature of each course.
For more information, see your professor's syllabus.

Grading will be determined by the individual faculty member, but shall include the following, at minimum:

- six quizzes
- a cumulative 2-hour final exam
- a formal laboratory report
- a written assignment that will assess General Education Outcomes will be worth at least 10% of the course grade

Other Course Information

This course is an approved 1 credit General Education course in the Biological and Physical Sciences and fulfills the laboratory requirement. One or more assignments will infuse CCBC General Education Program outcomes and will account for a minimum of 10% of the total course grade. Successful completion of this course and the companion lecture (CHEM 100) fulfills the lecture and laboratory requirement and equals 4 credits.

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