

This syllabus is provided as a general informational guide. Some of the information may vary depending on the specific course section and instructor. Different sections of the same course may require different textbooks. Verify the section specific textbook information in the CUNY's Academic Course Schedule Web Page. Modifications of the grading system presented here will be communicated by the instructors of the sections when they meet the class.

BOROUGH OF MANHATTAN COMMUNITY COLLEGE

City University of New York

Department of Science

Title of Course: Concepts In Chemistry Laboratory

Course Code: CHE 109

Lecture hours: 1

Semester: Spring 2017

Class hours: 3

Laboratory hours : 2

Credits: 3

Instructor Information

Name:

Telephone:

Office:

Email:

Course Description

This is a one-semester course designed specially for liberal arts, business and other non-science oriented majors. Topics to be discussed include modern atomic theory and an introduction to the molecular basis of matter through the study of chemical principles and reactions and the relationship of this submicroscopic world to the daily life of students. This class includes a 1 hour lecture and a 2 hour lab session. The lecture hour will be an expansion of the lecture content covered in the co-requisite class CHE 108 that will provide information needed to carry out experiments in the 2 hour hands-on laboratory experience.

Basic Skills MATH 051, ENG 088, ACR 094

Prerequisites/Co-requisites: CHE 108

Course Student Learning Outcomes	Measurements (means of assessment for student learning outcomes listed in first column)
1. Students will be able to identify and apply the fundamental concepts and methods of the physical science of chemistry to the study of matter and its reactions.	1. Assignments and laboratory experiments will stress fundamental chemical concepts.
2. Students will be able to apply the scientific method to explore natural phenomena, including hypothesis development, observation, experimentation, measurement, data analysis, and data presentation while studying the nature of matter and its reactions.	2. Laboratory experiments will require the statement of a hypothesis, gathering of numerical measurement and objective observation followed by analysis and presentation of this data.

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3. Students will be able to use the scientific method to carry out collaborative laboratory investigations.	3. Laboratory experiments will require students to consult on the gathering of numerical measurement and objective observation followed by critical analysis and presentation of their data.
4. Students will be able to gather, analyze and interpret data and present it in an effective written laboratory report.	4. Laboratory experiments will require students to properly gather, analyze and interpret data and then to present it in an effective written laboratory report.
5. Students will be able to identify and apply research ethics and unbiased assessment in gathering and reporting scientific data.	5. Laboratory experiments will stress the honest and accurate reporting of all data to the proper number of significant figures.

Below are the college's general education learning outcomes, the outcomes that are checked in the left-hand column indicate goals that will be covered and assessed in this course. (Check at least one.)

<input type="checkbox"/>	General Education Learning Outcomes	Measurements (means of assessment for general education goals listed in first column)
<input checked="" type="checkbox"/>	Communication Skills- Students will be able to write, read, listen and speak critically and effectively.	Students will answer occasional insightful questions both during lecture and pre-lab as well as submit lab manual reports.
<input checked="" type="checkbox"/>	Quantitative Reasoning- Students will be able to use quantitative skills and the concepts and methods of mathematics to solve problems.	Students will solve problems requiring basic arithmetic and simple algebraic manipulation as well as to analyze experimental data.
<input checked="" type="checkbox"/>	Scientific Reasoning- Students will be able to apply the concepts and methods of the natural sciences.	Laboratory observations
<input type="checkbox"/>	Social and Behavioral Sciences- Students will be able to apply the concepts and methods of the social sciences.	
<input type="checkbox"/>	Arts & Humanities- Students will be able to develop knowledge and understanding of the arts and literature through critiques of works of art, music theater or literature.	
<input type="checkbox"/>	Information & Technology Literacy- Students will be able to collect, evaluate and interpret	
<input type="checkbox"/>	Values- Students will be able to make informed choices based on an understanding of personal values, human diversity, multicultural awareness and social responsibility	

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Required Text- Chemistry for Changing Times, 14th Edition; John W. Hill, McCreary and Doris Kolb Pearson Prentice Hall

Required Laboratory Manual- Laboratory Manual Conceptual Chemistry, 5th Edition; Donna Gibson and John Suchocki, Pearson Prentice Hall

In the BMCC bookstore, there is a discounted package for CHE108/109 that contains a loose-leaf copy of the textbook and a custom lab manual (ISBN-13: 9781323393086).

Other Resources- A scientific calculator.

Use of Technology (if applicable)- Blackboard may be used at the instructor's discretion.

Evaluation & Requirements of Students

- 1) Completion of all required laboratory experiments and submission of all required laboratory reports : 60%
- 2) Four quizzes: 30%
- 3) A 2-page paper or a 5 minute presentation (instructor's choice) on a newspaper article or a chemical molecule: 10%

College Attendance Policy

At BMCC, the maximum number of absences is limited to one more hour than the number of hours a class meets in one week. For example, you may be enrolled in a three-hour class. In that class, you would be allowed 4 hours of absence (not 4 days). In the case of excessive absences, the instructor has the option to lower the grade or assign an F or WU grade.

Academic Adjustments for Students with Disabilities

Students with disabilities who require reasonable accommodations or academic adjustments for this course must contact the Office of Services for Students with Disabilities. BMCC is committed to providing equal access to all programs and curricula to all students.

BMCC Policy on Plagiarism and Academic Integrity Statement

Plagiarism is the presentation of someone else's ideas, words or artistic, scientific, or technical work as one's own creation. Using the idea or work of another is permissible only when the original author is identified. Paraphrasing and summarizing, as well as direct quotations, require citations to the original source. Plagiarism may be intentional or unintentional. Lack of dishonest intent does not necessarily absolve a student of responsibility for plagiarism.

Students who are unsure how and when to provide documentation are advised to consult with their instructors. The library has guides designed to help students to appropriately identify a cited work. The full policy can be found on BMCC's web side, www.bmcc.cuny.edu. For further information on integrity and behavior, please consult the college bulletin (also available online).

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OUTLINES TOPICS- LABORATORY (TENTATIVE SCHEDULE)

<u>WEEK</u>	<u>EXPERIMENT</u>
1	Safety
2	Taking Measurements
3	Salt and Sand
4	Percent Water in Popcorn
5	Bright Lights
6	Physical and Chemical Properties and Changes
7	Electron-Dot structures
8	Molecular Shapes
9	Solutions
10	Mystery Powders
11	Upset Stomach
12	Electrochemistry
13	Energy and Calorimetry
14	Radioactivity
15	Organic Molecules (Omit Part F)
16	How Much Fat