

CHEMISTRY FOR THE HEALTH SCIENCES

CHM 1033

MIAMI DADE COLLEGE

HOMESTEAD CAMPUS

Course Description

This course emphasizes chemistry topics related to the allied health sciences through study of the essentials of inorganic and organic chemistry and some biochemistry and the applications to physiological functions.

Required Text: Timberlake, Karen C. **Chemistry: An Introduction to General, Organic & Biological Chemistry, 9th ed. Benjamin Cummings**

Pre/co-requisite: MAT 1033; *co requisite:* CHM 1033L.

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Learning Outcomes of Miami Dade College

1. Communicate effectively using listening, speaking, reading and writing skills.
2. Use quantitative analytical skills to evaluate and process numerical data.
3. Solve problems using critical and creative thinking and scientific reasoning.
4. Formulate strategies to locate, evaluate and apply information.
5. Demonstrated knowledge of diverse cultures, including global and historical perspectives.
6. Create strategies that can be used to fulfill personal, civic and social responsibilities.
7. Demonstrate knowledge of ethical thinking and its application to issues in society.
8. Use computer and emerging technologies effectively.
9. Demonstrate an appreciation for aesthetics and creative activities.
10. Describe how natural systems function and recognize the impact of humans on the environment

General Information

Attendance

Due to the nature of the course content it is expected that students attend **all class sessions**. They must arrive on time and do not leave until dismissed by the instructor.

If the student encounters a problem that will cause absence, later arrival or leaving early, please inform the instructor prior to the unusual circumstance.

To avoid the discomfort of other students, please silence cell phones and other electronic devices.

Please do not bring food or drinks to be consumed during class sessions.

Homework

Reading the textbook and completing other assignments are part of the teaching-learning process and are intended to enhance the learning of content or to strengthen learning outcomes. Students must complete all assignments and must be able to present them on request.

Study check problems and odd numbered problems at the end of the chapter

Grading Procedures

Throughout the semester there will be four unit exams and a comprehensive final. Between major exams there will be a number of quizzes to assess the progress of learning and comprehension of the subject. As a general rule there will be no makeup exams unless prior arrangements have been made with the instructor and/or students can show proof/ documentation of the unusual circumstance.

Task	Value in points	# of assignments	Total possible points
Exams	100	4	400
Quizzes	variable	Variable	100
Comprehensive final	100	1	100
Total points			600

Grade Assignment

A	=	90	-	100%
B	=	80	-	89%
C	=	67	-	79%
D	=	55	-	66%
F	=	0	-	54%

Course Content

Topic	Required Reading
Measurements	CH. 1
Energy and Matter	CH. 2
Atoms and Elements	CH. 3
Compounds and their Bonds	CH. 4
Chemical Reactions and Quantities	CH. 5
UNIT ONE EXAM	
Gases	CH. 6
Solutions	CH. 7
Acids and Bases	CH. 8
Nuclear Radiation	CH. 9
UNIT TWO EXAM	
Introduction to Organic Chemistry	CH. 10
Unsaturated Hydrocarbons	CH. 11
Organic compounds with Oxygen and Sulfur	CH. 12
Carboxylic Acids, Esters, Amines and Amides	CH. 13
UNIT THREE EXAM	
Carbohydrates	CH. 14
Lipids	CH. 15

Amino Acids, Proteins and Enzymes CH. 16

Nucleic Acids and Protein Synthesis CH. 17

UNIT FOUR EXAM

COMPREHENSIVE FINAL EXAM

Note; Course policies and procedures, examination schedules, and course content are subject to change at the discretion of the instructor.

Resources

The Chemistry Place	www.chemplace.com/college
Chemistry CD-ROM	Included with text
Science Tutoring	Learning Support Lab Room D-203
Chemistry Video Series for material covered in class	Learning Support Lab Room D-203
Study guide and selected solutions	Learning Support Lab Room D-203
Supplemental Instruction (SI)	SI Leader in classroom

COURSE CONTENT

- CH. 1 Measurements
- Ch. 2 Energy and Matter
- CH. 3 Atoms and Elements
- CH. 4 Compounds and their Bonds
- CH. 5 Chemical Reactions and Quantities

Examination

- CH. 6 Gases
- CH. 7 Solutions
- CH. 8 Acids and Bases
- CH. 9 Nuclear Radiation

Examination

- CH. 10 Introduction to Organic Chemistry
- CH. 11 Unsaturated Hydrocarbons
- CH. 12 Organic Compounds with Oxygen and Sulfur
- CH. 13 Carboxylic Acids, Esters, Amines and Amides

Examination

- CH. 14 Carbohydrates
- CH. 15 Lipids
- CH. 16 Amino Acids, Proteins and Enzymes
- CH. 17 Nucleic Acids and Protein Synthesis

Examination

Final Examination