



SYLLABUS

A. Course Description

Course Code	Course Num.	Course Name	Credit Hours	Lec.	Lab.	Tut.	Private study	Pre-requisites	Course Level	Language
CHM	223	Organic Chemistry	1	0	3	0	2		3	English

In this module the students will perform experimental classes in physical chemistry that include: Boyle and Mariette's law (P, V), Amontons' law (P,T), Gay-Lussac's law (V, T), Boiling point elevation, Freezing point depression, Molecular Weight Determination by Freezing Point Depression and Determining the Molecular Mass of liquid.

At the end of this course the student will be able to

1. To recognize the scientific method of inquiry to obtain conclusions based on verifiable evidence.
2. To describe the theoretical bases of Boyle's and Amonton's gas laws.
3. To list the parameters for each gas laws formula.
4. To describe the temperature effect on the pressure and volume of gases.

B. References: Required Textbook & Internal Website

I shall use **Laboratory Manual supplied by the Department of Chemistry.**

Students are required to purchase the textbook/materials (it is an obligation). The book contains the lecture notes as well as activities for the students to take part in; the book serves as a workbook. Other references:

Google Classroom Webpage: <http://www.imamm.org/>

C. Topics Outline

Disclaimer: this is a very fast-paced course. There will be little time—if any—for review. What follows is an approximate outline of the pace of the course. We may go faster or slower, contingent on the class response. The tentative list of topics to cover:

Topics to be covered (Laboratories)	
Lab. 1	Safety and Laboratory equipments and measurements and How to make a report
Lab. 2	Boyle and Mariette's law (P, V).
Lab. 3	Amontons' law (P,T).
Lab 4	Gay-Lussac's law (V, T).
Lab. 5	Boiling point elevation.
Lab. 6	Freezing point depression.
Lab. 7	Molecular Weight Determination by Freezing Point Depression (1)



Lab. 8	Molecular Weight Determination by Freezing Point Depression (2).
Lab. 9	Determining the Molecular Mass of liquid (1).
Lab. 10	Determining the Molecular Mass of liquid (1).
Lab. 11	Calibration of a calorimeter
Lab. 12	Determination of the specific heat capacity of a metal (1).
Lab. 13	Determination of the specific heat capacity of a metal (2).
Lab. 14	Revision and Reports Discussion

Exams & Grading System

The semi-official dates of the exams for this course, with all the caveats, that the word “semi-official” entails, can be found here:

- **Midterm 1:** 6th or 7th week & **Midterm 2:** 11th or 12th week
- **Quizzes & Homeworks: During the semester**

Your course grade will be based on Final Exam, Midterms, Homework, Quizzes, Participation, Attendance and Project.

Midterm 1: 20 %	Midterm 2: 20 %	Final Exam: 40 %
Laboratory Performance and Reports: 20 %		

Grading distribution:

A+: [95, 100], A: [90, 95), B+: [85, 90) , B: [80, 85), C+: [75, 80), C: [70, 75), D+: [65, 70), D: [60, 65), F: [0, 60).

D. Student Attendance/Absence

Only three situations will be considered as possible excused absences:

- Occurrence of a birth or death in the immediate family will be excused. (“Immediate family” is defined by the University as spouse, grandparents, parents, brother, or sister).
- Severe illness in which a student is under the care of a doctor and physically unable to attend class will be excused. Students are not excused for a doctor's appointment. Do not make appointments that conflict with rehearsals. Notes from the University Health Center will be accepted.

[Executive Rules for Study Regulations and Exams](#)

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