Philadelphia University
Faculty of Science
Department of Basic Science and Mathmatics
Second Semester, (2014/2015)

Course syllabus

Course title: General Chemistry Laboratory	**Course code:0212102**
Course level: 1st Year	**Course prerequisite (s) and/or co requisite (s):0212101**
Lecturetime: Sun, Mon (10:30- 13:00) (13:10-16:00)	**Credit hours:1**
	Contact hours:
Location: 608.	

Academic Staff Specifics

Name	Rank	Office number and location	Office hours	E-mail address
Lana Al-Qadumi	lecturer	Green House Unit	10-12 Wed, Thu	Lana_qadumii@philadelphia.edu.j

Course description (According to the University Catalogue)
This course includes experimental study of basic principles and techniques of chemistry such as states of matter, determination of formulas and molecular weights, simple volumetric and gravimetric analysis, heats of reaction, stociometry, equilibrium and qualitative analysis.

Course objectives:

Chemistry is an experimental science developed from countless observations of chemical phenomena. The purpose of the teaching laboratory is three-fold :

a) To expose the students to chemical phenomena through experimentations.
b) To develop the student's laboratory skills through laboratory techniques.
c) To instill safe handling of chemicals through good safety practices.

Course/ resources

- **Text book/ books (title , author (s), publisher, year of publication)**

  Title: General Chemistry, The essential concepts, 6th edition.
  Author: Raymond Chang.
  Publisher: Mc. Graw Hill 2011
  ISBN: 978-007-131368-1

- **Support material (s) (vcs, acs, etc).**
- **Lab Sheets, and working sheets**

- **Laboratory Handbook/ books (when applicable)**

  Title: Experiments in General Chemistry Featuring MeasureNetGuided Inquiry, Self Directed, and Capstone. Second Edition.
  Authors: Bobby Stanton (University of Georgia), Lin Zhu (Indiana University), Purdue (University at Indianapolis), Charles H. Atwood (University of Georgia).

Teaching methods(Lectures, discussion groups, tutorials, problem solving, debates, etc)

Working groups, each group consist of two studesnts, they must work together the practical work, answer the report and working sheets, and finally do the practical exam.

Learning outcomes:

Knowledge and understanding
At the end of this module, student will be able to:
The general procedures for conducting various elementary qualitative and quantitative experiments.
How to collect and organize experimental data.
The identity of typical chemistry equipment.
The procedures for operating common laboratory equipment.
The importance of safety precautions that should be practiced in the laboratory.

Assessment instruments

.Quizzes
Major and final exams
Home works
Reports

Allocation of Marks	
Assessment Instruments	**Mark**
Mid Term examination	**30**
Final examination	**40**
Reports, research projects, quizzes, homework, Projects	**30**
Total	**100**

Evaluation:

Evaluation will occur through the administration of assessment modes including: weekly quizzes, assessing overall preparation, midterm and final exams. Evaluation modes include the graded laboratory notebook, reports and technique performance. Technique performance includes assessment of safety practice.

Course/ academic calendar

week	Basic and support material to be covered	Homework/reports and their due dates
(1)	Safety rules, laboratory tools and equipments. The Density of Liquids and Solids.	Solving working sheets and reports
(2)	Formula of a hydrate. Limiting Reactant.	Solving working sheets and reports
(3)	Empirical formula of a compound	Solving working sheets and reports
(4)	Stociometry I	Solving working sheets and reports
(5)	Acid- Base Titration (Stociometry II)	Solving working sheets and reports
(6) Mid term examination		
(7)	Back Titration	Solving working sheets and reports
(8)	Determination of Acid Mixture. Determination of Acetic acid in Vinegar.	Solving working sheets and reports
(9)	Ionization- Acids, Bases, and Salts.	Solving working sheets and reports
(10)	Properties of Solutions	Solving working sheets and reports
(11)	Types of Reactions.	Solving working sheets and reports
(12)	Specific Heat	Solving working sheets and reports
(13) Final Exam		

Expected workload:

On average students need to spend 3hours of study and preparation for each lab>

Attendance policy:

Absence from lectures and/or tutorials shall not exceed 15%. Students who exceed the 15% limit without a medical or emergency excuse acceptable to and approved by the Dean of the relevant college/faculty shall not be allowed to take the final examination and shall receive a mark of zero for the course. If the excuse is approved by the Dean, the student shall be considered to have withdrawn from the course.