

Republic of Iraq
The Ministry Of Higher
Education
& Scientific Research

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



University: University of Baghdad
College: College of Science for
Women
Department: Department of
chemistry
Stage: Second year
Lecturer name: Sura Khaleel
Ibrahim
Qualification: MSc. in physical
chemistry
Place of work: College of Science
for Women

Syllabus Form

Course Instructor	Sura Khaleel Ibrahim				
E-mail	Sura.khalil71@yahoo.com				
Title	Chemical Thermodynamics: 2nd year, "Physical Chemistry"				
Course Coordinator	Chemical Thermodynamics: 2nd year,				
Course Objective	The material that will be covered in this subject is intended to provide you with the tools and understanding to handle basic problems involving chemical systems at equilibrium.				
Course Description	Thermodynamics: it concerned with equilibrium states of matter and has nothing to do with time.				
Textbook	1-Atkins, P., and J. de Paula. Physical Chemistry. New York, NY: W.H. Freeman and Company, 2009 2-Silbey, R., R. Alberty, and M. Bawendi. Physical Chemistry. New York, NY: John Wiley & Sons, 2004				
Course Assessments	Term Tests	Laboratory	Quizzes	Project	Final Exam
	As (20%)	As (15%)	As (5%)	-----	As (60%)
General Notes					

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Course Weekly Outline

Week	Date	Topes Covered	Lab. Experiment Assignments	Notes
1	28/9/2015	The properties of gases(Ideal gases)	The accuracy of measurements	
2	5/10/2015	The properties of gases(Real gases) and exercises	determination the absolute and relative density	
3	12/10/2015	1 st exam	determination the viscosity of a pure liquid	
4	19/10/2015	First law,work,heat,and energy	determination the molecular weight by freezing point depression (2weeks)	
5	26/10/2015	Internal energy & expansion work		
6	2/11/2015	Enthalpy	determination the calorimeter constant (2weeks)	
7	9/11/2015	Joule-Thomson effect		
8	16/11/2015	Adiabatic changes	determination the heat of neutralization (2weeks)	
9	23/11/2015	2 nd exam		
10	30/11/2015	Thermochemistry	determination the heat of solubility (2weeks)	
11	7/12/2015	Second law and entropy		
12	14/12/2015	Entropy accompanying changes specific processes	determination the molar volume of ethanol and its partial molar volume at 25 °C in dilute aqueous solution (2weeks)	
13	21/12/2015	Third law		
14	28/12/2015	3 rd exam	determination the molar volume of	

			ethanol and its partial molar volume at 25 °C in dilute aqueous solution	
15	4/1/2016	The Helmholtz and Gibbs energies	Exam	

INSTRUCTOR Signature:

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