CHEM 343 Syllabus

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Course Code	Course Name	Credits	Prerequisite(S)		Classification			
CHFM 343	Experimental Physical	3	CHEM 202 &		Department			
	Chemistry	5	CHEM 241		Requirement			
Course	Experimental Physical C	hemistry (CHE	M 343), 2 credit	hours, taı	ught 6th level/	3rd		
Description	year chemistry students. This course is a series of experiments designed to illustrate some common techniques of physical chemistry							
Class		week fer Che						
Class	Classes are held 1 time/week for 6 hours.							
Scheduling								
	Experimental Physical C	hemistry, F. D	aniels et. al., 7th	ed., 1970	, McGraw-Hill.	. 2-		
Textbook	Practical Physical Chem	istry, Findlay, S	ed.					
Course								
Coordinator	Dr. Amell Alsudairi							
Relationship	1 2	2 3	4	5	6			
to SOs	X	X			X			
	<u>^</u>	X			<u>^</u>			
CLOs	CLO1. Obtain experiment	ntal knowledg	e in various brand	ches of ph	nysical chemist	try		
	(kinetics, electrochemistry, phase rule and surface chemistry). (SO1)							
	CLO2. Evaluation during	carrying the e	experiment throu	gh accura	acy, good resul	lts		
	and final report.(SO1)							

CLO3. Solving problems related to the experimental laws. (SO3) CLO4. Statistical treatment of the obtained data. (SO3)

CLO5. Independent work. (SO3)

CLO6. Communication and group work. (SO6)

Contents	List of Topics	No. of Weeks	
		VVEEKS	

Lab safety and equipment.	1
Alkaline hydrolysis of ester by titration method	1
Adsorption of oxalic acid on charcoal	1
Three component system	1
Auto-catalytic reaction for the oxidation of oxalic acid by permanganate	1
Persulfate-Iodide Reaction	1
Alkaline hydrolysis of ester by conductance measurements	1
Calculation number of electrons of electrolyte using Nernst Equation	1
Effect of temp. on viscosity of liquid	1
Determination of the rate law, using spectrophotometer method	1
Determination the corrosion rate of Al-sheet in alkaline medium	1
Thermodynamic parameters as a function of potential	1
Determination of molecular weight of polymer using Bohlin Viscometer	1
Computational chemistry: study the electronic structure and vibration spectrum of formaldehyde	1
Revision	1