



Course Specifications

Institution:	Majmaah University.
Academic Department :	Chemistry
Programme :	Chemistry
Course :	Electro-Reversible Chemistry (1)
Course Coordinator :	Ibtehag ELhassan
Programme Coordinator :	Dr.Gehan Alaemary
Course Specification Approved Date :	28/12 / 1436 H



A. Course Identification and General Information

1 - Course title : Electro-Reversible Chemistry 1		Course Code: CHEM225	
2. Credit hours :		3(two theoretical and two practical hours) a week	
3 - Program(s) in which the course is offered:		Chemistry	
4 – Course Language :		Arabic	
5 - Name of faculty member responsible for the course:		Ibtehag ELhassan	
6 - Level/year at which this course is offered :		Four level	
7 - Pre-requisites for this course (if any) : • General Chemistry chem. 111			
8 - Co-requisites for this course (if any) : Practical course			
9 - Location if not on main campus :(faculty of education Zulfi)			
10 - Mode of Instruction (mark all that apply)			
A - Traditional classroom <input type="checkbox"/>	<input checked="" type="checkbox"/>	What percentage? <input type="checkbox"/>	30 % <input type="checkbox"/>
B - Blended (traditional and online) <input type="checkbox"/>	<input type="checkbox"/>	What percentage? <input type="checkbox"/>	0 % <input type="checkbox"/>
D - e-learning <input type="checkbox"/>	<input checked="" type="checkbox"/>	What percentage? <input type="checkbox"/>	70 % <input type="checkbox"/>
E – Correspondence <input type="checkbox"/>	<input type="checkbox"/>	What percentage? <input type="checkbox"/>	0 % <input type="checkbox"/>
F - Other <input type="checkbox"/>	<input type="checkbox"/>	What percentage? <input type="checkbox"/>	0 % <input type="checkbox"/>
Comments : <input type="checkbox"/>			

B Objectives

What is the main purpose for this course? Definition of electrical conductivity, Recognize the reversible electrochemical processes, To know the types of polar, Recognize the absolute and relative potential, Identify the types of cells, Measurement and applications e.m.f
Briefly describe any plans for developing and improving the course that are being implemented : The use of interactive whiteboard teaching instead of the chalkboard. use of the Web in modern additions to the course .






C. Course Description

1. Topics to be Covered

List of Topics	No. of Weeks	Contact Hours
electrical conductivity, Faraday's Law, Arrhenius theory,	3	6
reverse electrochemical processes, The electrical driving force, Standard cells, Effect of concentration and temperature on the electrical driving force, Nernst equation, Electrode potential	3	6
polarity types , the absolute and relative potential, Electrochemical series	5	10
types of cells	2	4
measuring applications emf	2	4
Laboratory
Measurement of solubility by conductivity, Conductivity titration	4	8
Measuring the electrical driving force and specifies standard potential , Measurement of the redox potential	4	8
Specifies the concentration of solvent by polarity, Specifies a solubility of silver chloride, Measure the pH of the solution	4	8

2. Course components (total contact hours and credits per semester):

	Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours	2	---	2	---	---	4





Credit	2	---	1	---	---	3
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3. Additional private study/learning hours expected for students per week.

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4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	Knowledge		
1.1	Know the basics of electrochemistry,	lecture discussion, mutual dialogue	Oral tests at the beginning of each lecture, Written tests, final examination
1.2	Definition of electrical conductivity		
1.3	Recognize the reversible electrochemical processes		
1.4	To know the types of polar		
1.5	Recognize the absolute and relative potential		
1.6	Identify the types of cells,		
1.7	Mastering laboratory experiments	Practical course	Follow-up practical books,
2.0	Cognitive Skills		
2.1	Measurement and applications e.m.f	problems, Laboratory study Open discussions	Continuous questions- duties - practical test
2.2	the application of laws to resolve problems		
2.3	connect between practical and theoretical		
3.0	Interpersonal Skills & Responsibility		
3.1	Dealing with team spirit in experiments	Working in groups within	Oral questions,
3.2	Creating constructive competitive spirit		



	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
3.3	Encourage communication between students	the lab Collective seminars	Correct experimental results
3.6
4.0	Communication, Information Technology, Numerical		
4.1	Development of communication skills	Proplems research, study discussion	Oral and written exercises Follow-up practical books,
4.2	Development of numerical skills		
4.3	Use chemical Internet sites and doing some calculation		
5.0	Psychomotor		
5.1			

5. Schedule of Assessment Tasks for Students During the Semester:

	Assessment task	Week Due	Proportion of Total Assessment
1	Questions and exercises	fourth and fifth	10%
2	Theoretical midterm exam	sixth	20%
3	practical midterm exam	eighth	20%
4	Final practical exam.	fourteenth	20%
5	Final Theoretical exam	Last week	40%





D. Student Academic Counseling and Support

Two hours of weekly academic guidance

E. Learning Resources

1. List Required Textbooks :

Chemistry electrical electrolytic conductivity Ahmed Abdulaziz Al Owais

2. List Essential References Materials :

- **Foundations of physical chemistry, Adel Ahmed Jrare**
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3. List Recommended Textbooks and Reference Material :

- **Chemistry electrical electrolytic conductivity Ahmed Abdulaziz Al Owais**

4. List Electronic Materials :

- **Wikipedia**

5. Other learning material :

- **Power point, show- CD**



F. Facilities Required

1. Accommodation

- **Prepared Classroom with Interactive whiteboard**
- **40 chair.**

2. Computing resources

- **Laptop special for Professor only**

3. Other resources

- **There is a need to equip lab special for this course**

G Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching:

- **Meeting with the students academic excellence and the stumble**
- **Identification of evaluation for the course form students**





2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor : <ul style="list-style-type: none">• Benefit from the expertise of the members of the section• Identify assessment for teachers• Report of the expert from College matchups
3 Processes for Improvement of Teaching : <ul style="list-style-type: none">• Courses for Faculty members• Workshop to improve methods of evaluation•
4. Processes for Verifying Standards of Student Achievement <ul style="list-style-type: none">• The patch is checked by faculty member
5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement : <ul style="list-style-type: none">• discussion the members section regularly to improve the course• feedback processes for course quality

Course Specification Approved
Department Official Meeting No (3) Date 28 / 12 / 1436H

Course's Coordinator <input type="checkbox"/>	<input type="checkbox"/> Department Head <input type="checkbox"/>
Name : <input type="checkbox"/> Ibtehag Elhassan <input type="checkbox"/>	<input type="checkbox"/> Name : <input type="checkbox"/>
Signature : <input type="checkbox"/>	<input type="checkbox"/> Signature : <input type="checkbox"/>
Date : <input type="checkbox"/> 28/ 12 / 1436 H <input type="checkbox"/>	<input type="checkbox"/> Date : <input type="checkbox"/> .../ ... / H
<input type="checkbox"/>	

