FUTURE UNIVERSITY IN EGYPT جامعة المستقبل

Faculty of Engineering & Technology

Chemistry 1

Information :

Course Code :	CHM 151	**Level :**	Undergraduate	**Course Hours :**	2.00- Hours

Department : Faculty of Engineering & Technology

Instructor Information :

Title	Name	Office hours
Lecturer	Aya Hanfay Reda Hanfy Mohamed	40
Lecturer	Aya Hanfay Reda Hanfy Mohamed	40
Lecturer	Aya Hanfay Reda Hanfy Mohamed	40
Assistant Lecturer	Ahmed Abdelfattah Abdelaziz Abdelfattah	16
Assistant Lecturer	Ahmed Abdelfattah Abdelaziz Abdelfattah	16
Assistant Lecturer	Ahmed Abdelfattah Abdelaziz Abdelfattah	16
Teaching Assistant	Mohamed Osama Mohamed Abbas	

Area Of Study :

Description :

Gases, Mass balance and heat balance in combustion process of fuels, Solutions, Dynamic equilibrium in physical and chemical processes, Electrochemistry and corrosion, Water treatment, Building materials, Environmental engineering selected chemical industries: fertilizers, dyes, polymers, sugar, petrochemicals, semi-conductors, oil and fats, industrial systems.

Course outcomes :

a.Knowledge and Understanding: :	
1 -	- Define the main physical and chemical phenomena and terms related to the above-mentioned subjects.
2 -	- Describe the general idea about construction of materials and cement chemistry.
3 -	- Identify the effect of the environment and problems of water pollution
b.Intellectual Skills: :	
1 -	Examine different solutions for calculation of numerical problems related to gases, liquid, solid, thermo-chemistry and electro-chemistry.
2 -	Analyze chemical reactions and their characteristics to process industries.

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3 -	Solve industrial problems related to polymers, petrochemicals and electro-chemistry.
c.Professional and Practical Skills: :	
1 -	Utilize accurate use of different glass wear used for qualitative and quantities chemical analysis.
2 -	Predict the physical properties of petroleum oil analysis using standard equipment.
3 -	Apply chemistry background to solve problems related to gases, liquid, solid, thermochemistry and electro-chemistry.
d.General and Transferable Skills: :	
1 -	Collaborate effectively within multidisciplinary team.
2 -	Work coherently and successfully as a part of a team in the Lab and assignments.

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Gasses State	8	2	2
The Properties of Liquids and Solids	8	2	2
Thermo-chemistry	8	2	2
Thermodynamics	4	1	1
Electrochemistry and Corrosion of Metals	8	2	2
Solutions Chemistry	8	2	2
Water and its Treatment	4	1	1
Chemistry of Cement	4	1	1
Mass balance in combustion process of fuels	8	2	2

Teaching And Learning Methodologies :

Interactive Lecture
Discussion
Problem-based Learning
Cooperative learning

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Assignment	5.00		
Final Exam	40.00		
Participation	5.00		
Quizzes	10.00		
Two Mid- Exams	40.00		

Course Notes :

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Recommended books :

Periodicals :

Web Sites :

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