SUBJECT TEACHING GUIDE

G324 - Chemistry

Degree in Chemical Engineering
First Degree in Chemical Engineering

Academic year 2022-2023

1. IDENTIFYING DATA					
Degree	Degree in Chemical Engineering First Degree in Chemical Engineering			Type and Year	Core. Year 1 Core. Year 1
Faculty	School of Industrial Engineering and Telecommunications				
Discipline	Subject Area: Chemistry Basic Training Module				
Course unit title and code	G324 - Chemistry				
Number of ECTS credits allocated	6	Term		Semester based (1)	
Web					
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. DE QUIMICA E INGENIERIA DE PROCESOS Y RECURSOS.
Name of lecturer	ANA CARMEN PERDIGON ALLER
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Other lecturers	FERNANDO GONZALEZ MARTINEZ

3.1 LEARNING OUTCOMES
- The student must be able to analyze and explain the chemical behavior of acids and bases and redox processes as well as to analyze and explain dynamic equilibrium established between an insoluble salt and saturated solution .
- The student must be able to distinguish the different functional groups and their generated reactivity.
- The student must be able to solve problems and theoretical and practical issues concerning the matter given.

4. OBJECTIVES
To know and understand the different states of matter in relation to chemical bonding
To study the chemical behavior of acids and bases from the point of view of chemical equilibrium
To know the dynamic equilibrium that is established between an insoluble salt and saturated solution
To understand how redox reactions generate electricity and explain the use of energy to produce chemical oxidation -reduction reactions.
To know the different functional groups of organic chemistry and its reactivity, preparation and uses

6. COURSE ORGANIZATION	
CONTENTS	
1	THEMATIC 1: Structure of Matter. Chemical bond. Structural units of matter. Elemental and compound substances. Nomenclature. Chemical bond. States of matter and intermolecular forces
2	THEMATIC 2: Chemical Reaction basis of industrial processes. Types of reactions. Equilibrium in solution. Acid-base reactions. Precipitation reactions. Oxidation reduction reactions. Applications Industry and Technology
3	THEMATIC 4: carbon chemistry and fuel Functional groups. Hydrocarbons, saturated, unsaturated and aromatic. Nomenclature. reactivity Petrochemical industry

7. ASSESSMENT METHODS AND CRITERIA				
Description	Type	Final Eval.	Reassessn	%
Continuous evaluation. Written exam.	Written exam	Yes	Yes	100,00
TOTAL				100,00
Observations				
In the extraordinary exam, evaluation corresponds to the totality of the subject, where appropriate qualification Workgroups is retained.				
Observations for part-time students				
The final evaluation for part-time students will porcetual weight of 60% in the final assessment of the subject. With the remaining 40% the result of the assessment of 2 single assigned work during the course of unrecoverable character.				

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

.-R. Chang, “Química”. Ed. Mc Graw Hill. 2010 (10ª Ed.)
.-R. Chang, "Chemistry". Ed. McGraw Hill. 2002
.-D.F. Shriver; P.W. Atkins; C.H. Lagford. “Química Inorgánica”. Ed. Pearson Education . 2006
.-C.E. Housecroft; A.G. Sharpe. “Química Inorgánica”. Ed Pearson. Prentice Hall. 2006
.-R.H. Petrucci; W.S. Harwood; F. G. Herring. “Química General: Principios y aplicaciones modernas Reactividad”. Pearson Educación, D.L. 2011. (10ª Ed.)
.-Atkins, Jones; "Principios de Química" Ed. Panamericana 5ª Edición