SUBJECT TEACHING GUIDE

G429 - Chemistry

Degree in Mechanical Engineering

Academic year 2021-2022

1. IDENTIFYING DATA					
Degree	Degree in Mechanical Engineering			Type and Year	Core. Year 1
Faculty	School of Industrial Engineering and Telecommunications				
Discipline	Subject Area: Chemistry Basic Training Module				
Course unit title and code	G429 - Chemistry				
Number of ECTS credits allocated	6	Term		Semester based (2)	
Web					
Language of instruction	Spanish	English Friendly	Yes	Mode of delivery	Face-to-face

Department	DPTO. INGENIERIAS QUIMICA Y BIOMOLECULAR
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Other lecturers	ENRIQUE ALVAREZ GUERRA GABRIEL ZARCA LAGO LUCIA GOMEZ COMA GUILLERMO DIAZ SAINZ

3.1 LEARNING OUTCOMES
- Understanding of the relationship between the chemical products used in the Mechanical Technology.
- Application of the principles of chemistry to the selection of chemical products used in Mechanical Technology.

4. OBJECTIVES

Given that the phisicochemical properties of the compounds and chemical products govern the development and applications of the mechanical, Basic Chemistry has a main objective that the students analize the relationship between the chemical structure of the elements and chemical products and its applications in this field

6. COURSE ORGANIZATION

	CONTENTS
1	BLOC I. CHEMICAL SCIENCE IN MECHANICAL ENGINEERING. Lesson 1. Atoms and chemical elements. Lesson 2. Chemical compounds.
2	BLOC II. CHEMICAL PROCESSES IN THE INDUSTRIAL PROCESSES. Lesson 3. Chemical rections in the industrial processes. Lesson 4. Kinetic and thermodynamics in chemistry.
3	BLOC III.INORGANIC CHEMISTRY IN MECHANICAL ENGINEERING. Lesson 5. Electrochemistry. Lesson 6. Inorganic chemistry in the industry.
4	BLOC IV. ORGANIC CHEMISTRY IN MECANICAL ENGINEERING. Lesson 7. Carbon chemistry. Lesson 8. The oil industry. Lesson 9. Orgain products of industrial interest.

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Written exam.....50%; Minimum mark 5.0	Written exam	No	Yes	50,00
Written exam.....40%; Minimum mark 4.0	Written exam	No	Yes	40,00
Work in groups consisting on portfolio of ppt presentations and oral defense; 10% (a minimum attendance of 70% to the practical sessions is mandatory)	Work	No	No	10,00
TOTAL				100,00

Observations

In case of normal teaching or simultaneous remote and presential teaching, the evaluation will considered the following conditions:
1)The continous assessment requires the completion of THREE TESTS OF EVALUATION: PO1,PO2,CP.
2) These activities can be passed individually on the GLOBAL TEST (ordinary exam)
3) It is required a minimum grade of 5.0 on test PO1 and 4.0 on test PO2 to pass the course through continous assessment.
4) In the examination in the extraordinary call there will be a SINGLE global test of the subject.
5) The mark of the CPs work will be considered for ordinary and extraordinary exam calls

In case of sanitary emergency, the exams and works will be adapted by the use of remote teaching tools. The written exams will be substituted by short multiple choice questionnaires: 2 for PO2 and 3 for PO2. In the CPs group work, the oral defense will be omitted. It will apply the rest of requirements and rules as in normal situation.

Observations for part-time students

Part time students can do a single global test and they have to present a report of the Practical Case Studies

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

Chang R., "Quimica", 10ª ed., McGraw-Hill. México (2010).
Petrucci R.H., 2Quimica General", 8ª ed., Prentiice Hall, Madrid (2003).
Brown, S., Holme T.A., "Química: La ciencia central", 9ª ed.. Pearson Education, México (2004)