

SUBJECT TEACHING GUIDE

G798 - Environmental Management Methods

Degree in Chemical Engineering

Academic year 2023-2024

1. IDENTIFYING DATA					
Degree	Degree in Chemical Engineering			Type and Year	Optional. Year 4
Faculty	School of Industrial Engineering and Telecommunications				
Discipline	Subject Area: Option B: Industrial Environmental Management Optional Module				
Course unit title and code	G798 - Environmental Management Methods				
Number of ECTS credits allocated	6	Term	Semester based (2)		
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 MARIA ANDRES PAYAN				
E-mail	ana.andres@unican.es				
Office	E.T.S. de Ingenieros Industriales y de Telecomunicación. Planta: - 3. DESPACHO (S3012)				
Other lecturers	TAMARA LLANO ASTUY LUCIA PEREZ GANDARILLAS				

3.1 LEARNING OUTCOMES

- The student must be able to: Implement an Environmental Management System in a company; Identify the environmental aspects of an enterprise; Develop the EMS documentation; Planning an audit of the EMS.

4. OBJECTIVES

Master the most modern techniques and tools in the area of Environmental Management, as well as train the student to implement and develop an Environmental Management System in a company that promotes the transition to a Circular Economy model.

6. COURSE ORGANIZATION	
CONTENTS	
1	BLOCK 1: CIRCULAR ECONOMY STRATEGY IN COMPANY TOPIC 1. SUSTAINABLE DEVELOPMENT GOALS AND CIRCULAR ECONOMY; SUBJECT 2. CHANGE OF MODEL FROM LINEAR TO CIRCULAR.
2	BLOCK 2: ENVIRONMENTAL MANAGEMENT TOOLS TOPIC 3. LIFE CYCLE ANALYSIS; TOPIC 4. ECO-DESIGN; TOPIC 5. PRODUCT ENVIRONMENTAL STATEMENT; ITEM 6. MULTI-CRITERIA ANALYSIS;
3	SECTION 3: ENVIRONMENTAL MANAGEMENT SYSTEMS IN COMPANY ITEM 7. THE ISO 14001 and EMAS-REGULATION INTRODUCTION AND OBJECTIVES; ITEM 8. IMPLEMENTATION OF A ENVIRONMENTAL MANAGEMENT SYSTEM (EMS); ITEM 9. INITIAL ENVIRONMENTAL ASSESSMENT; ITEM 10. REQUIREMENTS OF A EMS- ISO14001; ITEM 11. REQUIREMENTS OF AN EMS-EMAS REGULATION
4	SECTION 4: ENVIRONMENTAL MANAGEMENT IN COMPANY. ITEM 12. AUDIT OF EMS; ITEM 13. ENVIRONMENTAL PERFORMANCE EVALUATION; ITEM 14. COMMUNICATION ENVIRONMENTAL. GUIDELINES AND EXAMPLES

7. ASSESSMENT METHODS AND CRITERIA				
Description	Type	Final Eval.	Reassessn	%
Practical cases Date of completion: Throughout the course Recovery conditions: all the evaluations of each thematic block will be recoverable	Work	No	Yes	65,00
Written exam Date of completion: at the end of the teaching of Block II Recovery conditions: In ordinary/extraordinary call	Written exam	No	Yes	35,00
TOTAL				100,00
Observations				
Continuous assessment carry the obligatiry student attendance at classes.				
Observations for part-time students				
The final evaluation for part-time students will assume a percentage weight of 60% in the final assessment of the subject. And the valuation of four individual works associated to each one of the blocks, assigned along the course, will suppose the remaining 40% of the final evaluation.				

8. BIBLIOGRAPHY AND TEACHING MATERIALS
BASIC
-Claver, E., Molina, J.F., Tarí, J.J. Gestión de la Calidad y Gestión Medioambiental, Ed. Pirámide (3ª Ed), Madrid, 2011. - Prieto, Mª José. Sistemas de Gestión Ambiental (3ª Ed), AENOR ediciones, Madrid, 2011. - Gestión Ambiental: Manual de Normas UNE (3ª Ed), AENOR ediciones, Madrid, 2011. - Granero, J. Como implantar un Sistema de Gestión Ambiental según la norma ISO 142001 (3ªEd), Fund. Confemetal, 2011.

