

SUBJECT TEACHING GUIDE

1067 - Sustainability of Processes and Products

Master's Degree in chemical engineering

Academic year 2024-2025

1. IDENTIFYING DATA					
Degree	Master's Degree in chemical engineering			Type and Year	Compulsory. Year 1
Faculty	School of Industrial Engineering and Telecommunications				
Discipline					
Course unit title and code	1067 - Sustainability of Processes and Products				
Number of ECTS credits allocated	6	Term	Semester based (2)		
Web	http://grupos.unican.es/depro/				
Language of instruction	Spanish	English Friendly	Yes	Mode of delivery	Face-to-face

Department	DPTO. INGENIERIAS QUIMICA Y BIOMOLECULAR
Name of lecturer	JONATHAN ALBO SANCHEZ
E-mail	jonathan.albo@unican.es
Office	E.T.S. de Ingenieros Industriales y de Telecomunicación. Planta: - 4. SEMINARIO (S4059)
Other lecturers	JOSE ANGEL IRABIEN GULIAS CLARA CASADO COTERILLO MARTA RUMAYOR VILLAMIL ESTHER SANTOS SANTAMARIA GUILLERMO DIAZ SAINZ

3.1 LEARNING OUTCOMES

- Sustainable Development. Concept and application in Sustainable Production and Consumption.
- Assessment of the Environmental Sustainability of Processes and products
- Reports to be discussed

4. OBJECTIVES

- Identify and assess the environmental burdens and the use of resources in processes and products
- Evaluation of the application of innovative technologies to increase the process and products sustainability
- Understand and apply the elements of sustainability to the case studies.

6. SUBJECT PROGRAM

CONTENTS

1	SUSTAINABILITY FUNDAMENTALS
2	METRICS
3	CASE STUDIES

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Motivation, participation and reports.	Work	No	Yes	100,00
TOTAL				100,00
Observations				
Motivation and participation 50%, reports 30%, and portfolio 20%				
Observations for part-time students				
First year following the course and second year reports				

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

Azapagic, A.; Perdan, S. 2011. Sustainable Development in Practice. Case Studies for Engineers and Scientists. 2a Edición. John Wiley & Sons Ltd. ISBN: 978-0470718711.

Allen, D. T.; Shonnard, D. R. 2011. Sustainable Engineering. Concepts, Design and Case Studies. Pearson. ISBN: 978-0132756549.