SUBJECT TEACHING GUIDE

M875 - Planning and Instruments in Sustainability Policies

Master's Degree in Industrial Engineering Research

Academic year 2021-2022

1. IDENTIFYING DATA					
Degree	Master's Degree in Industrial Engineering Research			Type and Year	Optional. Year 1
Faculty	School of Industrial Engineering and Telecommunications				
Discipline	Module - Sustainable Design in Industrial Systems Electroenergetic Module Planning and Sustainable Project Engineering				
Course unit title and code	M875 - Planning and Instruments in Sustainability Policies				
Number of ECTS credits allocated	5	Term		Semester based (1)	
Web					
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. TRANSPORTES Y TECNOLOGIA DE PROYECTOS Y PROCESOS
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Other lecturers	PEDRO DIAZ SIMAL MARIA DEL CARMEN RUIZ PUENTE

3.1 LEARNING OUTCOMES
- To deepen the comprehension of supply chain and logistics in the new business configurations.
- To understand the socio-technical, economic and environmental systems that shape a complex decision-making process.
- To Solve the problems location of industrial activities and of distribution networks design.

4. OBJECTIVES

To understand the principles of sustainable development for practical application in planning and design .
To deepen the comprehension of supply chain and logistics in the new business configurations ; to develop skills in eco-innovation and new sustainable business models.
To be able to outline and assess solutions of design according to sustainability criteria on different scales of technical implementation.
To be able to address the problem of the location of industrial activities and knowledge of the most common techniques of distribution networks design.

6. COURSE ORGANIZATION

CONTENTS	
1	Foundations of logistics. Costs of logistics systems. The concept of customer service. Storage activity: location models. Designing the logistics network.
2	Environmental issues: problems and diagnosis. Objectives of environmental policy. Case studies.
3	Case study: modeling and developing decision support tools to locate eco-industrial systems.

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Continuous assessment	Others	No	Yes	100,00
TOTAL				100,00

Observations

To pass on this way, attendance to, at least, 80% of the activities is required.
Delivery of practical exercises for each part of the course.
Delivery of a final written work.

In case of a new health alarm by COVID-19 and if the guidelines of the health and educational authorities do not allow face-to-face evaluation in the classroom, a remote evaluation system will be adopted.

Observations for part-time students

Part-time students are subject to the same conditions as full-time.

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

Ballou, R. Logística. Administración de la cadena de suministro. Pearson, Prentice Hall, 2004.
Anaya Tejero, J.J. Logística integral : la gestión operativa de la empresa. ESIC, 2011.
Ghiani, G. et al. Introduction to logistics systems, planning and control. Wiley & Sons Ltd 2003.
Langevin, A. y Riopel, D. Logistics systems: Design and Optimization. Springer 2005
Rushton, A. et al. Logistics and distribution management. Ed. Kogan Page Limited, 2000
Weber, William L. Production, Growth, and the Environment: An Economic Approach. CRC Press, 2015
Lynch, Daniel R. Sustainable Natural Resource Management Hardback: For Scientists and Engineers. CUP, 2009
Merz, M. Scarce Natural Resources, Recycling, Innovation and Growth. Springer, 2016
Azapagic et al. Sustainable Development in Practice: Case Studies for Engineers and Scientists. Adisa Azapagic,Slobodan Perdan, Roland Clift Eds: Wiley; 2004.