SUBJECT TEACHING GUIDE

M873 - Introduction to Research

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	Transversal Competences for R&D&I Module - Sustainable Design in Industrial Systems Electroenergetic Module Electromechanic / Mechatronics Module				
Course unit title and code	M873 - Introduction to Research				
Number of ECTS credits allocated	5	Term		Semester based (1)	
Web	https://aulavirtual.unican.es/				
Language of instruction	Spanish	English Friendly	Yes	Mode of delivery	Face-to-face

Department	DPTO. INGENIERIA ELECTRICA Y ENERGETICA
Name of lecturer	CARLOS JAVIER RENEDO ESTEBANEZ
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Office	E.T.S. de Ingenieros Industriales y de Telecomunicación. Planta: - 3. DESPACHO PROFESOR (S3028)
Other lecturers	CESAR ANTONIO OTERO GONZALEZ PEDRO CORCUERA MIRO QUESADA

3.1 LEARNING OUTCOMES

- Verbal and written communication, teamwork, innovation, critical thinking, learning orientation.
Theoretical and practical foundation related to the legal framework of the research.
Sources of scientific information in general. Scientific literature. Indexing in scientific publications. Indexed journal databases.
Industrial and Intellectual Protection. Patent databases. Technology transfer. Spin-off and Technology-Based Companies.
Regional, national and international R&D plans. Structure. Strategic lines and actions.
Ability to search, understand and criticize information related to patents and R + D + i projects.
Use of computer and multimedia resources.

4. OBJECTIVES

The course's main objective is to introduce the student to the scientific world that develops around industrial engineering.

The aim is to provide the student with both the basic knowledge of the research environment and their own tools for: searching for information, preparing new scientific materials, editing these materials, and disseminating them.

6. COURSE ORGANIZATION

CONTENTS	
1	Research legal framework
2	Search for scientific information and use of scientific databases.
3	The scientific publication: the research article
4	Patents
5	Research projects
6	Editing of scientific texts
7	Multimedia elements
8	Design and elaboration of multimedia documentation

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Continuous assessment	Others	No	No	20,00
Course works	Work	No	Yes	80,00
TOTAL				100,00

Observations

Students who do not pass the evaluation in the ordinary period will be able to recover the part corresponding to the 'Assignment work' in a final exam to be held on the date assigned by the center.

IT IS EXPECTED THAT, IN THE EVENT THAT THE SOCIAL DISTANCE MEASURES ESTABLISHED BY THE SANITARY AUTHORITIES DO NOT ALLOW THE ASSESSMENT OF THE EXAMINATION OF THE EXTRAORDINARY CALL, THIS EVALUATION WILL DEVELOP VIRTUALLY; IN MOODLE THE SPECIFIC CONDITIONS OF REALIZATION WITH THE SUFFICIENT ADVANCE WILL BE EXPLAINED.
IN THIS CASE, THE STUDENTS WILL NEED TO HAVE THE DAY OF THE EXAMINATION OF: INTERNET CONNECTION, COMPUTER AND HAVE THE REQUESTED PROGRAMS INSTALLED.

Observations for part-time students

The same as those used for full-time students

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

Apuntes, transparencias y materiales alojados en el Moodle de la asignatura.

How to write and publish a scientific paper. R. A. Day, B. Gastel. Cambridge University Press, 2012

LaTeX in 24 Hours: A Practical Guide for Scientific Writing, D. Datta, Springer, 2017

Edición de Textos Científicos con LaTeX, W. Mora,. A, Borbón, Instituto Tecnológico de Costa Rica, 2018 (https://tecdigital.tec.ac.cr/revistamatematica/Libros/LaTeX/LaTeX_2018.pdf)

Digital Video and Audio Broadcasting Technology, W. Fischer, Springer, 2020

Learning Web Design, Jennifer Niederst, O'Reilly, 2018

Writing for Publication, M. Renck Jalongo, O.N. Saracho, Springer, 2016