

[MHB204] QUANTITATIVE RESEARCH METHODS

GENERAL INFORMATION

Studies	UNIVERSITY MASTER IN INDUSTRIAL ENGINEERING		Subject	?
Semester	1	Course	2	Mention / Field of specialisation ???
Character	OPTIONAL		Language	CASTELLANO
Plan	2022	Modality	Face-to-face	Total hours 28 class hours + 47 non-class hours = 75 total hours
Credits	3	Hours/week	1.56	

PROFESSORS

SOLER MALLOL, DANIEL

REQUIRED PREVIOUS KNOWLEDGE

Subjects	Knowledge
(No specific previous subjects required)	(No previous knowledge required)

LEARNING RESULTS

LEARNING RESULTS	KC	SK	AB	ECTS
MHRA19 - To demonstrate capacity for the management of technological Research, Development and Innovation		x		1,5
MHR125 - To possess and understand knowledge that provides a basis or opportunity to be original in the development and/or application of ideas, often in a research context		x		1,5
Total:				3

KC: Knowledge or Content / SK: Skills / AB: Abilities

ENAAE LEARNING RESULTS

ENA123 - Knowledge and comprehension: Deep knowledge and comprehension of mathematics and other basic sciences inherent in their engineering speciality, allowing them to achieve the other competencies of the degree.	0,75
ENA127 - Analysis in engineering: Ability to analyse new and complex engineering products, processes and systems within a broader multidisciplinary context; select and apply the most appropriate analysis, calculation and experimental methods already established, as well as innovative methods; and critically interpret the results of such analyses.	0,37
ENA130 - Analysis in engineering: Ability to identify, formulate and solve engineering problems in emerging areas of their speciality.	0,37
ENA132 - Engineering projects: Ability to project while applying the knowledge and cutting-edge understanding of their engineering speciality.	0,37
ENA134 - Research and innovation: Ability to carry out bibliographic searches and consult and use databases and other information sources with discretion, in order to carry out simulations with the aim of conducting research on complex topics of their speciality.	0,75
ENA139 - Practical application of engineering: Practical skills, such as the use of computer tools to solve complex problems, carry out complex engineering projects, and design and guide complex investigations.	0,37
Total:	3

CONTENTS

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources	Bibliography
Moodle Platform	Manuales oficiales de Mathworks
Subject notes	Mastering MATLAB 7, Duane C. Hanselman, Bruce L. Littlefield, Prentice Hall
Programmes	Mastering SIMULINK, James B. Dabney, Thomas L. Harman, Prentice Hall
Class presentations	Métodos numéricos para ingeniero, Chapra, Steven C. and Canale, Raymond P., McGraw-Hill
	An engineer's guide to MATLAB, Edward B. Magrab Shapour Azarm, Balakumar Balachandran, James Duncan, Keith Herold, Gregory Walsh, Prentice Hall, 2011
	Applied numerical methods using MATLAB, Yang, W. Y.; Cao, W.; Chung, T.-S. & Morris, J, John Wiley & Sons, 2005