

School of Industrial Engineering and Telecommunications

SUBJECT TEACHING GUIDE

G427 - Fundamentals of Computation

Degree in Mechanical Engineering First Degree in Mechanical Engineering

Academic year 2023-2024

1. IDENTIFYING DATA									
Degree	Degree in Mechanical Engineering First Degree in Mechanical Engineering				Type and Year	Core. Year 1 Core. Year 1			
Faculty	School of Industrial Engineering and Telecommunications								
Discipline	Subject Area: Computer Science Basic Training Module								
Course unit title and code	G427 - Fundamentals of Computation								
Number of ECTS credits allocated	6	Term S		Semeste	Semester based (1)				
Web									
Language of instruction	Spanish	English Friendly	No	Mode of a	delivery	Face-to-face			

Department	DPTO. MATEMATICA APLICADA Y CIENCIAS DE LA COMPUTACION
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Other lecturers	

3.1 LEARNING OUTCOMES

- Knowing what is the main purpose of computer science and the computer programs and what are the fundamentals of this field.

- Knowing the basic terminology of computer science.

- Knowing and understanding the basic concepts related to computer science, hardware and software.

- Be able to understand and apply the main concepts and basic techniques of programming.

- Acquire the knowledge and skills to be able to study a programming language autonomously.



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4. OBJECTIVES

Ability to understand the basic computer working and operational principles.

Ability to understand and know how to apply the basic principles of computer programming.

6. COURSE ORGANIZATION						
CONTENTS						
1	Fundamentals of computing. Basic concepts, hardware, software, computer applications, databases, using a computer and operating systems.					
2	Computer programming, Fundamentals of programming. Structured programming methodology.					

7. ASSESSMENT METHODS AND CRITERIA								
Туре	Final Eval.	Reassessn	%					
Others	No	Yes	50,00					
Others	No	Yes	20,00					
Others	Yes	Yes	30,00					
TOTAL 100,00								
Observations								
Given the uncertain current health situation, in case the competent health and educational authorities not allow any assessment activity to be carried out in person in the classroom, a distance assessment method will be adopted using online tools.								
Observations for part-time students								
Part-time students enrolled in the course will be assessed in a similar way to full-time students.								
	Type Others Others Others Others others competent health and educational authorities essroom, a distance assessment method will lease ed in a similar way to full-time students.	Type Final Eval. Others No Others No Others Yes Competent health and educational authorities not allow any issroom, a distance assessment method will be adopted usi ed in a similar way to full-time students.	Type Final Eval. Reassessn Others No Yes Others No Yes Others Yes Yes					

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

A. Prieto Espinosa, B. Prieto Campos: "Conceptos de Informática". McGraw-Hill (2005).

F. Alvarez García, et al: "Informática General". Servitec (2006)

A. Kaw, D. Miller: "Introduction to programming concepts using MATLAB. 2nd. edition" (2011).

M. Austin, D. Chancogne: "Introduction to engineering programming: in C, Matlab and Java". John Wiley (1999).

D. Etter: "Solución de problemas de ingeniería con Matlab. 2da Ed.". Prentice Hall (1997)