

## SUBJECT TEACHING GUIDE

G690 - Industrial Computer Science

Degree in Computer Systems Engineering

Academic year 2023-2024

1. IDENTIFYING DATA					
Degree	Degree in Computer Systems Engineering			Type and Year	Optional. Year 4
Faculty	Faculty of Sciences				
Discipline	Subject Area: Industrial Computer Science Optional Module				
Course unit title and code	G690 - Industrial Computer Science				
Number of ECTS credits allocated	6	Term	Semester based (2)		
Web					
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. INGENIERÍA INFORMÁTICA Y ELECTRÓNICA				
Name of lecturer	RAMON IGNACIO DIEGO GARCIA				
E-mail	ramon.diego@unican.es				
Office	Facultad de Ciencias. Planta: + 2. LABORATORIO DE INVESTIGACION GRUPO DYVCI (II) (2047)				
Other lecturers	JULIO BARROS GUADALUPE				

### 3.1 LEARNING OUTCOMES

- Capacity to design industrial computing applications using data acquisition systems, programmable logic controllers and monitoring and control systems.

### 4. OBJECTIVES

The aim of the course is to provide to students the ability to design applications using industrial computing systems data acquisition, programmable controllers and control systems supervision.

6. SUBJECT PROGRAM	
CONTENTS	
1	Introduction to industrial computing. General concepts. The role of industrial computing in industrial processes.
2	Data acquisition and control systems. Data acquisition cards programming.
3	PLC, Programmable logic controllers: concepts and programming
4	SCADA, Supervisory Control And Data Acquisition: concepts and design.

7. ASSESSMENT METHODS AND CRITERIA				
Description	Type	Final Eval.	Reassessn	%
Written examination	Written exam	No	Yes	50,00
Laboratory evaluation	Laboratory evaluation	No	Yes	50,00
The final examination of each official announcement consists of a part of theory and problems , consisting of a written test, and part of laboratory practice, consisting of a laboratory examination. The student must be examined each party has failed in th	Written exam	Yes	No	0,00
The final examination of each official announcement consists of a part of theory and problems , consisting of a written test, and part of laboratory practice, consisting of a laboratory examination. The student must be examined each party has failed in th	Laboratory evaluation	Yes	No	0,00
<b>TOTAL</b>				<b>100,00</b>
<b>Observations</b>				
The final examination of each official announcement consists of a part of theory and problems , consisting of a written test, and part of laboratory practice, consisting of a laboratory examination. The student must be examined each party has failed in the due process of continuous assessment. To pass the course is necessary to obtain a minimum score of 5 out of 10; it is also necessary to obtain a minimum score of 5 out of 10 in each of the two parties. The final course grade is formed by the rating of theory and problems with a weighting of 50%, and qualification of laboratory practice with a weighting of 50%.				
<b>Observations for part-time students</b>				
For part-time students, the evaluation of the subject is performed by examining each official announcement , which consists of a part of theory and problems, consisting of a written test, and part of laboratory practice, consisting of a laboratory examination. To pass the course is necessary to obtain a minimum score of 5 out of 10; it is also necessary to obtain a minimum score of 5 out of 10 in each of the two parties. The final course grade is formed by the rating of theory and problems with a weighting of 50%, and qualification of laboratory practice with a weighting of 50%.				

8. BIBLIOGRAPHY AND TEACHING MATERIALS
<b>BASIC</b>
Documentación de la asignatura disponible en el Aula Virtual.

