UNIVERSIDAD DE CASTILLA - LA MANCHA

GUÍA DOCENTE

1. General information

Course: DIGITAL ELECTRONICS II
Code: 56505
Type: CORE COURSE
ECTS credits: 6
Degree: 360 - UNDERGRAD. IN INDUSTRIAL ELECTRONICS AND AUTOMAT. ENGINEERING (TO)
Academic year: 2022-23
Center: 303 - E.DE INGENIERÍA INDUSTRIAL Y AEROESPOACIAL DE TOLEDO
Group(s): 40
Year: 3
Duration: First semester
Main language: Spanish
Second language:
Use of additional languages:
English Friendly: Y
Web site:
Bilingual: N

Lecturer: **JOSE MANUEL GILPEREZ AGUILAR** - Group(s): **40**

Building/Office	Department	Phone number	Email	Office hours
Sabatini 1.57	INGENIERÍA ELÉCTRICA, ELECTRÓNICA, AUTOMÁTICA Y COMUNICACIONES	5721	josemanuel.gilperez@uclm.es	

2. Pre-Requisites

Not established

3. Justification in the curriculum, relation to other subjects and to the profession

Not established

4. Degree competences achieved in this course

Course competences

Code	Description
A02	To know how to apply knowledge to work or vocation in a professional manner and possess the competences that are usually demonstrated by the formulation and defence of arguments and the resolution of problems in the field of study.
A05	To have developed the learning skills necessary to undertake subsequent studies with a greater degree of autonomy.
A07	Knowledge of Information Technology and Communication (ITC).
A08	Appropriate level of oral and written communication.
A12	Knowledge of basic materials and technologies that assist the learning of new methods and theories and enable versatility to adapt to new situations.
A13	Ability to take the initiative to solve problems, take decisions, creativity, critical reasoning and ability to communicate and transmit knowledge, skills and abilities in Industrial Engineering and Automation.
A15	Ability to work to specifications and comply with obligatory rules and regulations.
D03	Knowledge of the fundamentals and applications of digital electronics and microprocessors.
D07	Knowledge and ability for modelling and simulation of systems.

5. Objectives or Learning Outcomes

Course learning outcomes

Description

Ability to analyze and design digital systems based on microprocessors

6. Units / Contents

Unit 1:
Unit 2:
Unit 3:
Unit 4:
Unit 5:

7. Activities, Units/Modules and Methodology

Training Activity	Methodology	Related Competences (only degrees before RD 822/2021)	ECTS	Hours	As	Com	Description
Class Attendance (theory) [ON-SITE]	Lectures		1.2	30	N	-	
Problem solving and/or case studies [ON-SITE]	Combination of methods		0.4	10	N	-	
Laboratory practice or sessions [ON-SITE]	Practical or hands-on activities		0.6	15	Y	Y	
Formative Assessment [ON-SITE]	Assessment tests		0.2	5	N	-	

Study and Exam Preparation [OFF-SITE]	Self-study		3.6	90	Y	N	
		Total:	**6**	**150**			
		Total credits of in-class work: 2.4					**Total class time hours: 60**
		Total credits of out of class work: 3.6					**Total hours of out of class work: 90**

As: Assessable training activity
Com: Training activity of compulsory overcoming (It will be essential to overcome both continuous and non-continuous assessment).

8. Evaluation criteria and Grading System

Evaluation System	Continuous assessment	Non-continuous evaluation*	Description
Mid-term tests	60.00%	0.00%	
Assessment of problem solving and/or case studies	15.00%	15.00%	
Laboratory sessions	25.00%	25.00%	
Final test	0.00%	60.00%	
Total:	**100.00%**	**100.00%**	

According to art. 4 of the UCLM Student Evaluation Regulations, it must be provided to students who cannot regularly attend face-to-face training activities the passing of the subject, having the right (art. 12.2) to be globally graded, in 2 annual calls per subject , an ordinary and an extraordinary one (evaluating 100% of the competences).

9. Assignments, course calendar and important dates

Not related to the syllabus/contents

Hours	hours
Class Attendance (theory) [PRESENCIAL][Lectures]	30
Problem solving and/or case studies [PRESENCIAL][Combination of methods]	10
Laboratory practice or sessions [PRESENCIAL][Practical or hands-on activities]	15
Formative Assessment [PRESENCIAL][Assessment tests]	5
Study and Exam Preparation [AUTÓNOMA][Self-study]	90

Global activity

Activities	hours
Study and Exam Preparation [AUTÓNOMA][Self-study]	90
Problem solving and/or case studies [PRESENCIAL][Combination of methods]	10
Class Attendance (theory) [PRESENCIAL][Lectures]	30
Laboratory practice or sessions [PRESENCIAL][Practical or hands-on activities]	15
Formative Assessment [PRESENCIAL][Assessment tests]	5
Total horas:	150

10. Bibliography and Sources

Author(s)	Title/Link	Publishing house	City	ISBN	Year	Description
Fernando E. Valdés, Ramón Pallás	Microcontroladores. Fundamentos y aplicaciones con PIC	Marcombo		8426714145	2007	
N. Senthil Kumar, M. Saravanan, S. Jeevananthan	Microprocessors And Microcontrollers	Oxford University Press		978-0198066477	2011	
Enrique Mandado	Microcontroladores PIC	Marcombo		9788426714312	2007	
Enrique Palacios	Microcontrolador PIC16f84 Desarrollo De Proyectos	Rama		978-84-7897-917-2	2009	
Angulo Usategui J.M., Romero Yesa S., Angulo Martínez I.	Microcontroladores PIC. Diseño práctico de aplicaciones, 2.a parte: PIC16F87X y PIC18FXXX	McGraw Hill		9788448128586	2000	