

**1. General information****Course:** ELECTRONICS**Type:** CORE COURSE**Degree:** 357 - UNDERGRADUATE DEGREE PROGRAMME IN ELECTRICAL ENGINEERING (TO)**Center:** 303 - E.DE INGENIERÍA INDUSTRIAL Y AEROESPACIAL DE TOLEDO**Year:** 2**Main language:** Spanish**Use of additional languages:****Web site:****Code:** 56402**ECTS credits:** 6**Academic year:** 2023-24**Group(s):** 40**Duration:** C2**Second language:****English Friendly:** N**Bilingual:** N**Lecturer:** ALFONSO ISIDRO LÓPEZ DÍAZ - Group(s): 40

Building/Office	Department	Phone number	Email	Office hours
Sabatini / 1.37	INGENIERÍA ELÉCTRICA, ELECTRÓNICA, AUTOMÁTICA Y COMUNICACIONES	34926051364	Alfonso.Lopez@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
A01	To understand and have knowledge in an area of study that moves on from the general education attained at secondary level and usually found at a level that, while supported in advanced text books, also includes some aspects that include knowledge found at the cutting edge of the field of study.
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.
A04	To be able to transmit information, ideas, problems and solutions to both a specialist and non-specialist audience.
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 Electrical Engineering.
A15	Ability to work to specifications and comply with obligatory rules and regulations.
C04	Knowledge and use of the principles of the theory of circuits and electrical machinery.
C05	Knowledge of the fundamentals of electronics.
C06	Knowledge of the fundamentals of automatisms and methods of control.

5. Objectives or Learning Outcomes**Course learning outcomes**

Description

Application in electrical installations

Ability to analyze and design combinational and sequential digital circuits

Interpret and simplify block and flow diagrams

Ability to mathematically model physical systems

Ability to analyze analogue circuits with operational amplifiers

Ability to analyze analogue and digital circuits using simulation tools

Ability to analyze simple electronic circuits

Know and know how to use the procedures employed for the analysis of circuits in sinusoidal regime

Use the main information support tools

6. Units / Contents**Unit 1:****Unit 1.1****Unit 1.2****Unit 1.3****Unit 1.4****Unit 1.5**

Unit 1.6
Unit 1.7
Unit 2:
Unit 2.1
Unit 2.2
Unit 2.3
Unit 2.4
Unit 2.5
Unit 2.6
Unit 2.7
Unit 2.8
Unit 2.9
Unit 3:
Unit 3.1
Unit 3.2
Unit 3.3
Unit 3.4
Unit 3.5
Unit 3.6
Unit 4:
Unit 4.1
Unit 4.2
Unit 4.3
Unit 4.4
Unit 4.5
Unit 4.6
Unit 4.7
Unit 4.8
Unit 4.9
Unit 4.10
Unit 5:
Unit 5.1
Unit 5.2
Unit 5.3
Unit 5.4
Unit 6:
Unit 6.1
Unit 6.2
Unit 6.3
Unit 6.4
Unit 7:
Unit 7.1
Unit 7.2

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]	Problem solving and exercises		0.4	10	N	-	
Laboratory practice or sessions [ON-SITE]	Practical or hands-on activities		0.6	15	N	-	
Self-study [OFF-SITE]	Self-study		3.6	90	N	-	
Progress test [ON-SITE]	Assessment tests		0.12	3	Y	N	
Final test [ON-SITE]	Assessment tests		0.08	2	Y	Y	
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
Practicum and practical activities reports assessment	0.00%	30.00%	
Final test	0.00%	70.00%	
Total:	0.00%	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
Progress test [PRESENCIAL][Assessment tests]	3
Final test [PRESENCIAL][Assessment tests]	2
Unit 1 (de 7):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	4.5
Self-study [AUTÓNOMA][Self-study]	14
Unit 2 (de 7):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	4.5
Problem solving and/or case studies [PRESENCIAL][Problem solving and exercises]	2
Laboratory practice or sessions [PRESENCIAL][Practical or hands-on activities]	5
Self-study [AUTÓNOMA][Self-study]	14
Unit 3 (de 7):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	4.5
Problem solving and/or case studies [PRESENCIAL][Problem solving and exercises]	2
Laboratory practice or sessions [PRESENCIAL][Practical or hands-on activities]	5
Self-study [AUTÓNOMA][Self-study]	14
Unit 4 (de 7):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	4.5
Problem solving and/or case studies [PRESENCIAL][Problem solving and exercises]	2
Self-study [AUTÓNOMA][Self-study]	14
Unit 5 (de 7):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	4.5
Problem solving and/or case studies [PRESENCIAL][Problem solving and exercises]	2
Laboratory practice or sessions [PRESENCIAL][Practical or hands-on activities]	3
Self-study [AUTÓNOMA][Self-study]	14
Unit 6 (de 7):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	4.5
Problem solving and/or case studies [PRESENCIAL][Problem solving and exercises]	2
Laboratory practice or sessions [PRESENCIAL][Practical or hands-on activities]	2
Self-study [AUTÓNOMA][Self-study]	14
Unit 7 (de 7):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	3
Self-study [AUTÓNOMA][Self-study]	6
Global activity	
Activities	hours
Problem solving and/or case studies [PRESENCIAL][Problem solving and exercises]	10
Laboratory practice or sessions [PRESENCIAL][Practical or hands-on activities]	15
Class Attendance (theory) [PRESENCIAL][Lectures]	30
Final test [PRESENCIAL][Assessment tests]	2
Self-study [AUTÓNOMA][Self-study]	90
Progress test [PRESENCIAL][Assessment tests]	3
Total horas: 150	

10. Bibliography and Sources						
Author(s)	Title/Link	Publishing house	Citv	ISBN	Year	Description
Hermosa Donate, Antonio	Electrónica Digital Fundamental y Programable	Marcombo		9788426716644	2010	Constituye la bibliografía fundamental de la asignatura. Son proporcionados a los
Malvino, Albert	Principios de electrónica	Mc Graw Hill		13. 978-8448156	2007	
L. Cuesta - A. Gil Padilla - F. Remiro	Electrónica Digital	Mc Graw Hill		84-7615-843-2	1993	
L. Cuesta - A. Gil Padilla - F. Remiro	Electrónica Analógica	Mc Graw Hill		84-7615-664-2	2000	
Alfonso Isidro López Díaz	Apuntes del profesor					

