

**1. General information****Course:** COMPUTER ENGINEERING**Type:** BASIC**Degree:** 357 - UNDERGRADUATE DEGREE PROGRAMME IN ELECTRICAL ENGINEERING**Center:** 303 - E.DE INGENIERÍA INDUSTRIAL Y AEROSPOACIAL DE TOLEDO**Year:** 1**Main language:** Spanish**Use of additional languages:****Web site:****Code:** 56304**ECTS credits:** 6**Academic year:** 2019-20**Group(s):** 40 41 42**Duration:** First semester**Second language:****English Friendly:** Y**Bilingual:** N

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Lecturer: FRANCISCO MOYA FERNANDEZ - Group(s): 40 41 42				
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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
A07	Knowledge of Information Technology and Communication (ITC).
A12	Knowledge of basic materials and technologies that assist the learning of new methods and theories and enable versatility to adapt to new situations.
B03	Basic understanding of the use and programming of computers, operating systems, data bases information programs used in engineering.

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

Description

Knowledge of basic materials and technologies that aid the preparation for learning new methods and theories and provide the versatility to adapt to new situations

Knowledge of the basics of the use and programming of computers, operating systems, data bases and information programmes with an application in engineering.

Knowledge of Information and Communication Technologies (ICT)

6. Units / Contents

Unit 1:
Unit 2:
Unit 3:
Unit 4:
Unit 5:
Unit 6:
Unit 7:
Unit 8:
Unit 9:
Unit 10:
Unit 11:
Unit 12:

7. Activities, Units/Modules and Methodology								
Training Activity	Methodology	Related Competences (only degrees before RD 822/2021)	ECTS	Hours	As	Com	R	Description
Class Attendance (theory) [ON-SITE]	Lectures		0.68	17	N	-	-	
Workshops or seminars [ON-SITE]	Case Studies		0.68	17	N	-	-	
Computer room practice [ON-SITE]	Guided or supervised work		0.52	13	Y	N	Y	
Group tutoring sessions [ON-SITE]	Debates		0.18	4.5	N	-	-	
Other off-site activity [OFF-SITE]	Self-study		2.8	70	N	-	-	
Writing of reports or projects [OFF-SITE]	Project/Problem Based Learning (PBL)		0.8	20	Y	N	Y	
Progress test [ON-SITE]	Assessment tests		0.2	5	Y	N	Y	
Progress test [ON-SITE]	Assessment tests		0.04	1	Y	N	Y	
Final test [ON-SITE]	Assessment tests		0.1	2.5	Y	N	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

R: Rescheduling training activity

8. Evaluation criteria and Grading System			
Evaluation System	Grading System		Description
	Face-to-Face	Self-Study Student	
Laboratory sessions	25.00%	0.00%	
Progress Tests	25.00%	0.00%	
Final test	40.00%	0.00%	
Test	10.00%	0.00%	
Total:	100.00%	0.00%	

9. Assignments, course calendar and important dates	
Not related to the syllabus/contents	
Hours	hours
Computer room practice [PRESENCIAL][Guided or supervised work]	13
Group tutoring sessions [PRESENCIAL][Debates]	4.5
Other off-site activity [AUTÓNOMA][Self-study]	70
Writing of reports or projects [AUTÓNOMA][Project/Problem Based Learning (PBL)]	20
Progress test [PRESENCIAL][Assessment tests]	4
Progress test [PRESENCIAL][Assessment tests]	2
Final test [PRESENCIAL][Assessment tests]	2.5
Unit 1 (de 12):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	1
Workshops or seminars [PRESENCIAL][Case Studies]	1
Unit 2 (de 12):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	1
Workshops or seminars [PRESENCIAL][Case Studies]	1
Unit 3 (de 12):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	1.5
Workshops or seminars [PRESENCIAL][Case Studies]	1.5
Unit 4 (de 12):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	1
Workshops or seminars [PRESENCIAL][Case Studies]	1
Unit 5 (de 12):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	1
Workshops or seminars [PRESENCIAL][Case Studies]	1
Unit 6 (de 12):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	2
Workshops or seminars [PRESENCIAL][Case Studies]	2
Unit 7 (de 12):	
Activities	Hours

Class Attendance (theory) [PRESENCIAL][Lectures]	1
Workshops or seminars [PRESENCIAL][Case Studies]	1
Unit 8 (de 12):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	1
Workshops or seminars [PRESENCIAL][Case Studies]	1
Unit 9 (de 12):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	1.5
Workshops or seminars [PRESENCIAL][Case Studies]	1.5
Unit 10 (de 12):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	1.5
Workshops or seminars [PRESENCIAL][Case Studies]	1.5
Unit 11 (de 12):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	1.5
Workshops or seminars [PRESENCIAL][Case Studies]	1.5
Unit 12 (de 12):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	3
Workshops or seminars [PRESENCIAL][Case Studies]	3
Global activity	
Activities	hours
Workshops or seminars [PRESENCIAL][Case Studies]	17
Class Attendance (theory) [PRESENCIAL][Lectures]	17
Computer room practice [PRESENCIAL][Guided or supervised work]	13
Group tutoring sessions [PRESENCIAL][Debates]	4.5
Other off-site activity [AUTÓNOMA][Self-study]	70
Writing of reports or projects [AUTÓNOMA][Project/Problem Based Learning (PBL)]	20
Progress test [PRESENCIAL][Assessment tests]	4
Progress test [PRESENCIAL][Assessment tests]	2
Final test [PRESENCIAL][Assessment tests]	2.5
Total horas: 150	

10. Bibliography and Sources						
Author(s)	Title/Link	Publishing house	Citv	ISBN	Year	Description
Andrés Marzal, Isabel Gracia	Introducción a la programación con Python http://www.uji.es/bin/publ/edicions/ippython.pdf			978-84-692-5869-9		Libro de contenido libre, nivel introductorio. Puede complementar al de texto.
Francisco Moya Fernández	Informática para ingenieros http://rawgit.com/FranciscoMoya/informatica-doc/gh-pages/docs/index.html				2017	Libro de texto interactivo recopilado a partir de notas de clase.
John V. Guttag	Introduction to Computation and Programming using Python https://mitpress.mit.edu/books/introduction-computation-and-programming-using-python-0	MIT Press		9780-262-51963-2	2013	Excelente libro de introducción que sigue la misma filosofía que este curso.
Mark Pilgrim	Inmersión en Python 3 http://code.google.com/p/inmersionenpython3				2009	Libro de contenido libre, algo más avanzado.
	Documentación de referencia de Python http://docs.python.org/					Fundamentalmente serán necesarios los manuales de referencia del lenguaje y de la biblioteca de funciones
Allen Downey, Jeffrey Elkner, Chris Meyers	Aprenda a pensar como un programador con Python http://gnumbrella.org/2012/05/aprenda-a-pensar-como-un-programador-con-python/	Green Tea Press		0-9716775-0-6	2002	Libro introductorio en castellano, de contenido libre