

UNIVERSIDAD DE CASTILLA - LA MANCHA

GUÍA DOCENTE

1. General information

Course: WIRELESS DEVICES AND NETWORKS Type: ELECTIVE				Code: 42371 ECTS credits: 6			
406 - UNDERGRADUATE DEGREE IN COMPUTER SCIENCE AND ENGINEERING (AB)			ER SCIENCE AND Aca	lemic year: 2022-23			
Center: 604 -	SCHOOL OF COMPUTER SCIE	ENGINEERING (AB)	Group(s): 17				
Year: 4	Duration: C2						
Main language: Spar	ige: Spanish Second language: English						
Use of additional languages:	of additional English Friendly: Y						
Web site:	Web site: Bilingual: N						
Lecturer: FRANCISCO M	ANUEL DELICADO MARTINEZ -	Group(s): 1	7				
Building/Office	Department	Phone number	Email	Office hours			
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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						
IC08	Ability to design, develop, manage, and administrate computer networks.						
INS05	Argumentative skills to logically justify and explain decisions and opinions.						
SIS05	Creativity.						
TI04	Ability to select, design, develop, integrate, and manage communication networks and infrastructures in a organisation.						
TI06	Ability to foster systems, applications, and services based on network technologies, including the internet, web, electronic commerce, mulimedia, interactive sercices, and mobile computation.						

5. Objectives or Learning Outcomes

Course learning outcomes

Description

Creation of client / server applications for PDAs.

Provision of security and authentication to a wireless network.

Ability to choose and use the most appropriate wireless communication protocol.

Installation and configuration of applications on specific networks, such as sensor networks.

Knowledge about the architectures, operating principles and hardware and software components of specific networks, such as sensor networks. Development of applications for mobile devices.

6. Units / Contents	
Unit 1:	
Unit 1.1	
Unit 1.2	
Unit 2:	
Unit 2.1	
Unit 2.2	
Unit 3:	
Unit 3.1	
Unit 4:	
Unit 4.1	
Unit 4.2	
Unit 5:	
Unit 5.1	
Unit 5.2	
Unit 6:	

7. Activities, Units/Modules and Methodology								
Training Activity	Methodology	Related Competences	ECTS	Hours	As Com	Description		

Class Attendance (theory) [ON-	Lectures	IC08 TI04 TI06	0.5	12.5	Ν	-	
SITE							
Writing of reports or projects [OFF- SITE]	Project/Problem Based Learning (PBL)	IC08 SIS05 TI04 TI06	3	75	Y	Y	
Study and Exam Preparation [OFF- SITE]	Self-study	IC08 TI04 TI06	0.6	15	N	-	
Other on-site activities [ON-SITE]	Assessment tests	INS05 TI04 TI06	0.1	2.5	Y	Y	
Computer room practice [ON-SITE]	Cooperative / Collaborative Learning	INS05 SIS05	1.8	45	Y	Y	
Total:				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			
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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				
Laboratory sessions	30.00%	30.00%					
Projects	60.00%	60.00%					
Oral presentations assessment	10.00%	10.00%					
Total:	100.00%	100.00%					

According to art. 6 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. 13.2) 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	
Unit 1 (de 6):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	2
Other on-site activities [PRESENCIAL][Assessment tests]	.3
Other on-site activities [PRESENCIAL][Assessment tests]	7
Study and Exam Preparation [AUTÓNOMA][Self-study]	2
Computer room practice [PRESENCIAL][Cooperative / Collaborative Learning]	9
Unit 2 (de 6):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	3.8
Other on-site activities [PRESENCIAL][Assessment tests]	.4
Other on-site activities [PRESENCIAL][Assessment tests]	10
Study and Exam Preparation [AUTÓNOMA][Self-study]	2
Computer room practice [PRESENCIAL][Cooperative / Collaborative Learning]	9
Unit 3 (de 6):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	1.5
Other on-site activities [PRESENCIAL][Assessment tests]	.5
Other on-site activities [PRESENCIAL][Assessment tests]	5
Study and Exam Preparation [AUTÓNOMA][Self-study]	2
Computer room practice [PRESENCIAL][Cooperative / Collaborative Learning]	6
Unit 4 (de 6):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	1.5
Other on-site activities [PRESENCIAL][Assessment tests]	.5
Other on-site activities [PRESENCIAL][Assessment tests]	6
Study and Exam Preparation [AUTÓNOMA][Self-study]	2
Computer room practice [PRESENCIAL][Cooperative / Collaborative Learning]	10
Unit 5 (de 6):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	3.7
Other on-site activities [PRESENCIAL][Assessment tests]	.5
Other on-site activities [PRESENCIAL][Assessment tests]	8
Study and Exam Preparation [AUTÓNOMA][Self-study]	2
Computer room practice [PRESENCIAL][Cooperative / Collaborative Learning]	11
Unit 6 (de 6):	
Activities	Hours
Writing of reports or projects [AUTÓNOMA][Project/Problem Based Learning (PBL)]	75
Other on-site activities [PRESENCIAL][Assessment tests]	.3

Other on-site activities [PRESENCIAL][Assessment tests]	6	
Study and Exam Preparation [AUTÓNOMA][Self-study]	5	
Global activity		
Activities	hours	
Computer room practice [PRESENCIAL][Cooperative / Collaborative Learning]	45	
Class Attendance (theory) [PRESENCIAL][Lectures]	12.5	
Writing of reports or projects [AUTÓNOMA][Project/Problem Based Learning (PBL)]	75	
Study and Exam Preparation [AUTÓNOMA][Self-study]	15	
Other on-site activities [PRESENCIAL][Assessment tests]	2.5	
	Total horas: 150	

Author(s)	Title/Link	Publishing	Citv	ISBN	Year	Description			
The Things NetworksT	Learn The Things Networks	nouse							
	https://www.thethingsnetwork.org/d	ocs/							
Bluetooth SIG, Inc	Bluetooth Technology Overview								
	https://www.bluetooth.com/learn-about-bluetooth/tech-overview/								
The ThingsBoard Authors	ThingsBoard Documentation								
	https://thingsboard.io/docs/								
FIWARE Foundation	NGSI-V2 Step-By-Step								
	https://fiware-tutorials.readthedocs.	io/en/latest/							
Academia de Networking de Cisco	Fundamentos de Redes	Pearson		070 04 0000 007 4	0000	Texto básico para la			
Systems	Inalámbricas	Educación		978-84-8322-287-4	2009	asignatura, que abarca la totalidad del temario			
	ciscopress.com								
						Texto opcional para la			
Krishna Sankar, Sri	Cisco Wireless LAN Security	Cisco Press		978-1-58705-154-8	2004	asignatura, que			
Sundaralingam, Darrin Miller						profundiza en aspectos de			
	Getting starting with Bluetooth Low					Texto opcional para el			
Kevin Townsend, Carles Cufí,	Energy: tools and techniques for	O'Reillv Media		978-1491949511	2014	seguimiento de la			
Akiba Robert Davidson	low-power networking	· · , · · ·			-	temática Bluetooth.			
MOTT org	MQTT: The Standard for IoT								
Night.org	Messaging								
	https://mqtt.org/								
Carsten Bormann	CoAP - Constrained Application								
	Protocol								
	nups://coap.tecnnology/								