## uc3m Universidad Carlos III de Madrid

Vicerrectorado de Estudios Apoyo a la docencia y gestión del grado

## COURSE: Basics of information technologies DEGREE: Bachelor in Management and Technology YEAR: 1st TERM: 1st

WEEKLY PLANNING								
	s		TEACHING (mark X)			WEEKLY PROGRAMMING FOR STUDENT		
W E K	E S I O N	DESCRIPTION	L E C T U R E S	S E M I N A R S	FOR SESION (computer classroom, audio-visual classroom)	DESCRIPTION	CLASS HOURS	HOMEWORK HOURS (Max. Estim. 6,5h)
4	1	Introduction to Computing	Х			Historical approach to computing (until 2000s)	1,5	
1	2	Introduction to Computing	Х			Historical approach to computing (from 2000s to nowadays)	1,5	0,0
2	3	Applications of Informatics in the enterprise	Х			Introduction to applications of Informatics	1,5	
	4	Applications of Informatics in the enterprise	х			Needs from enterprises, and useful Informatics based solutions	1,5	6,5
3	5	Computer platforms	х			System architectures, hardware characteristics	1,5	6 F
	6	Lab: Computer platforms		х		Practical approach to computer platforms and virtualization strategies	1,5	0,5
4	7	Operating systems	х			What an operating system is, and why it is a fundamental component	1,5	6,5
	8	Operating systems	Х			Characteristics of different OS families	1,5	
5	9	Lab: Operating systems		x		Practical approach to Microsoft Windows and GNU Linux Oses, and their fundamental characteristics	1,5	65

	WEEKLY PLANNING							
	S E S I O N	DESCRIPTION	TEACHING (mark X)			WEEKLY PROGRAMMING FOR STUDENT		
W E K			L E C T U R E S	S E M I N A R S	FOR SESION (computer classroom, audio-visual classroom)	DESCRIPTION	CLASS HOURS	HOMEWORK HOURS (Max. Estim. 6,5h)
5	10	Storage systems and databases	х			How information is stored and preserved. Physical storage systems and filesystems. Introduction to databases	1,5	0,5
	11	Lab: Storage systems and databases		х		Hands-on lab: database storage systems and filesystems	1,5	
6	12	Computer networks and the Internet	х			Cooperation among devices and why it is fundamental nowadays. Introduction to computer networks	1,5	6,5
7	13	Computer networks and the Internet	х			How information is sent and received. Computer network types and networking devices	1,5	6,5
	14	Lab: Computer networks and the Internet		х		Hands-on lab: routers, ethernet and wireless networks	1,5	
8	15	Software and system libraries	х			Software and its fundamental characteristics. Reducing size and keeping homogeneity: system libraries	1,5	6,5
	16	Programming tools	х			Tools used to create software. Main characteristics	1,5	
9	17	Lab: Programming tools		х		Hands-on lab: Integrated Development Environments (IDEs). Basic "hello world" program	1,5	6,5
	18	Mid term exam	Х				1,5	
10	19	Components of an Enterprise Information System	х			Description of ERP, CRM, SCM, BI, and so on and so forth (day 1)	1,5	6.5
	20	Components of an Enterprise Information System	х			Description of ERP, CRM, SCM, BI, and so on and so forth (day 2)	1,5	-,-
11	21	Lab: Components of an Enterprise Information System		х		Hands-on lab: deploy and basic configuration of some EISes	1,5	65

	WEEKLY PLANNING								
	s	DESCRIPTION	TEACHING (mark X)			WEEKLY PROGRAMMING FOR STUDENT			
W E K	E S I O N		L E T U R E S	S E M I N A R S	FOR SESION (computer classroom, audio-visual classroom)	DESCRIPTION	CLASS HOURS	HOMEWORK HOURS (Max. Estim. 6,5h)	
	22	Architecture of an Enterprise Information System	х			How an EIS is architected and built depending on specific needs	1,5	0,5	
	23	The Internet, the Web, and the paradigm of Cloud Computing	Х			Historical origin of the Internet and the Web	1,5		
12	24	The Internet, the Web, and the paradigm of Cloud Computing	х			Transition from classic servers to Cloud Computing paradigm	1,5	6,5	
12	25	From Systems to Services: Service-Oriented Architecture	х			Transition from systems to services and the role of Cloud Computing	1,5	6 F	
15	26	Lab: SOA proposal - mini-project		х		Mini project consisting in the basic design of a Service (first day)	1,5	0,5	
14	27	Lab: SOA proposal - mini-project		х		Mini project consisting in the basic design of a Service (second day)	1,5	6,5	
	28	Final exam	Х				1,5		
						Subtotal 1	42	91	
	Total 1 (Hours of class plus student homework)						13	33	

15		Tutorials, handing in, etc					3,6	-
16								
17		Assessment					3	10
18								
Subtotal 2							6,6	10
		Total 2 (Hours of class plus student homework)				1	7	

TOTAL ( <u>Maximun 150 horas</u> )	150
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