



SUBJECT: Systems and Communications Protocols		
MASTER DEGREE: CONNECTED INDUSTRY 4.0	ECTS: 3	QUARTER: 1

TIMETABLE FOR THE SUBJECT								
WEEK	SESSION	DESCRIPTION OF EACH SESSION	GROUP (X mark)		Indicate if a different lecture room is needed (computer, audiovisual, etc.)	HOMEWORK PER WEEK		
			1	2		DESCRIPTION	ATTENDING HOURS	HOMEWORK Max. 7H/WEEK
1	1	Course introduction. Introduction to computer networks. Protocol. Circuit and packet switching. Internet Architecture and layer model.	X			Read session 1 content in reference book	1.5	3.5
1	2	Application layer. Services offered by the transport layer to the application layer. Application example. DNS.	X			Read session 2 content in reference book	1.5	3.5
1	3	Transport layer principles. Multiplexing. UDP	X			Read session 3 content in reference book	1.5	3.5
1	4	Reliable data transfer. TCP and congestion control.	X			Read session 4 content in reference book	1.5	3.5
2	5	Transport layer exercises.	X			Prepare exercises for the session	1.5	3.5
2	6	Network layer principles. Routing architecture. IP header. Fragmentation.	X			Read session 6 content in reference book	1.5	3.5



2	7	IP addressing. DHCP, NAT, ICMP, IPv6	X			Read session 7 content in reference book	1.5	3.5
2	8	Routing algorithms and protocols. Internet routing. Broadcast routing.	X			Read session 8 content in reference book	1.5	3.5
3	9	Network layer exercises.	X			Prepare exercises for the session	1.5	3.5
3	10	Link layer principles. Link layer services. Multiple access protocols	X			Read session 10 content in reference book	1.5	3.5
3	11	Link layer addressing. Switches	X			Read session 11 content in reference book	1.5	3.5
3	12	Ethernet/Wifi. Physical layer	X			Read session 12 content in reference book	1.5	3.5
3	13	Lab session	X		Lab. room in Leganes	Read lab content and prepare it	1.5	3.5
3	14	Lab session	X		Lab. room in Leganes	Read lab content and prepare it	1.5	3.5
4	15	Link layer exercises.	X			Prepare exercises for the session	1.5	3.5
TOTAL HOURS							22,5	52,5