

DENOMINACIÓN ASIGNATURA: Switching		
GRADO: Telematics Engineering, Telecommunication Technologies Engineering, Mobile and	CURSO: 3	CUATRIMESTRE: 2
Space Communications Engineering.	CUR30: 5	COATRIMESTRE: 2

The course includes 29 sessions distributed through 14 weeks. Each week students will have two sessions, except for one week that will include 3 sessions. Due to the COVID-19 pandemic the Lectures and Labs will be in online mode, while the seminars will be in face-to-face mode.

	COURSE WEEKLY SCHEDULE										
WEEK	SE		GROUPS Special room for Mark session YES/NO if	WEEKLY PROGRAMMING FOR							
	SESSION	DESCRIPTION OF THE SESSION CONTENT	LECTURE	SEMINAR	(computer classroom, audiovisual classroom, etc)	it is a session with two professors	DESCRIPTION	CLASS HOURS	HOMEWORK HOURS (Max. 7h week)		
1	1	Introduction. Switching Techniques.		X		NO	Reading of class notes.	1,66			
1	2	<b>Packet Switches</b> . Types and architectures. Flow of packets within a router. Slow vs Fast Path. Memory management. Network processing hardware.	X			NO	Review of class lecture. Reading of next class material.	1,66	5		
2	3	<b>Packet Switches</b> . Types of switching fabrics. HOL. Control Algorithm. Exercises		Х		NO	Review of class lecture. Prepare exercises.	1,66	5		

2		Packet switches. Route Lookup				NO	Review of class lecture.		
	4	Tacket switches. Route Lookup				NO		1.66	
2	4		37				Reading of next class material.	1,66	
			Х			110	~		
		Packet switches. Review. Exercises				NO	Review of class lecture.		
3	5						Prepare exercises.	1,66	
				Х					5
		QoS in packet switching. Introduction				NO	Review of class lecture.		5
3	6						Reading of next class material.	1,66	
			Х						
		Route Look-Up Lab. Session 1.			Computer	YES	Reading and comprehension of Lab document.		
4	7				Classroom	120	Preparation.	1,66	
-	'			Х			Treparation.	1,00	
		QoS in packet switching. Introduction. Classification.		Λ		NO	Review of class lecture.		
		Scheduling algorithms. Concept of Max-Min Fair sharing.				NO	Reading of next class material.		5
							Reading of next class material.		5
4	8	GPS, WFQ, DRR.						1,66	
			V						
—			Х	-	C i	VEC			
_	-	Route Look-Up Lab. Session 2.			Computer	YES	Reading and comprehension of Lab document.	1.66	
5	9				Classroom		Preparation.	1,66	
				Х					5
		QoS in packet switching. Review. Traffic models and				NO	Review of class lecture.		-
5	10	shapers: Leaky Bucket, Token Bucket.					Prepare exercises.	1,66	
			Х						
		Interim Exam 1. Packet switches.				NO	Exam preparation.		
6	11							1,66	
Ŭ								1,00	
				Х					5
		QoS in IP: Diffserv vs Intserv.				NO	Review of class lecture.		
6	12						Reading of next class material.	1,66	
			Х						
		QoS. Review. Exercises				NO	Review of class lecture.		
7	13						Prepare exercises.	1,66	
				Х			-		-
		MPLS. Introduction.				NO	Review of class lecture.		5
7	14						Reading of next class material.	1,66	
-	- ·		Х					-,	
		QoS. Review. Exercises		Х		NO	Review of class lecture.		
		A not tre tre the transferrer	1	4 <b>a</b>	1	110		1	1
8	15						Prepare exercises.	1,66	5

(			v	<u> </u>		NO			T1
		MPLS. Forwarding. Control.	Х			NO	Review of class lecture.	1.00	
8	16	1					Reading of next class material.	1,66	
⊢−−−₽	<b>—</b> — І	MPLS. Review. Exercises		X		NO	Review of class lecture.	·	
	17	MPLS. Review. Exercises		Λ		NU		1.66	
9	1 1/ 1	1					Prepare exercises.	1,66	
<del> </del>	<del> </del>		X	+	+	NO	Review of class lecture.	<sup>'</sup>	5
1	1	MPLS. Applications: Traffic Engineering, Fast Re-route,	Λ			no	Reading of next class material.	1	5
9	18	VPN.					Reading of next class material.	1,66	
1	1	VIII.						1	
	<del>ر ا</del>	1	1	X		NO	Review of class lecture.	· '	1
10	19	MPLS. Review. Exercises					Prepare exercises.	1,66	
	1 - 1	1					Tiepare exclusion.	1,00	
	i – – †	Interconnection networks. Basic concepts. Equivalences.	Х	+	+	NO	Review of class lecture.	'	5
10	20	Crossbars. Multi-stage networks full connectivity. Clos					Reading of next class material.	1.66	
10		networks.					1	1,66	
⊢	<b>ب</b> ا						!	<b> </b> '	ļ
1		MPLS Lab: Session 1		Х	Computer	YES	Reading and comprehension of Lab document.	1 '	
11	21	1			Classroom		Preparation.	1,66	
⊢∔	⊢'	<u> </u>	<u> </u>				!	·	5
1		Interconnection networks. Partial connection networks.	Х			NO	Review of class lecture.	1	-
11	22	Banyan Networks. Sorting and Merging Networks.					Reading of next class material.	1,66	
⊢−−−∔	—┘	ł		v		VEC		ł'	
	1 1	MPLS Lab: Session 2		Х	Computer	YES	Reading and comprehension of Lab document.	1.00	
12	23	MPLS Lad: Session 2			Classroom		Preparation.	1,66	
⊢−−−∔	<b>با</b>	Interconnection networks. Partial connection	X			NO	Review of class lecture.	·	- 5
12		rearrangeable networks. Slepian-Duguid, EBNs.	Λ			NU		1.66	
12	24	realitaligeable lictworks. Steplan-Duguid, EDIAs.					Reading of next class material.	1,66	
ił	<del>ا                                     </del>	Interconnection networks. Review. Exercises.		X	+	NO	Review of class lecture.	ŀ'	┼───┤
13	25	Inter connection networks. Acorew. Exercises.		Λ		no	Prepare exercises.	1,66	
15	25	1					Prepare exercises.	1,00	
<del> </del>	ł	Interconnection networks. RBNs. Self-routed Re-	X			NO	Review of class lecture.		5
13		arrangeable Networks: Batcher-Banyan.	11			110	Reading of next class material.	1,66	
	20						Reading of next class material.	1,00	
†	+	Interim Exam 2. QoS+MPLS	+	X		YES	Exam preparation.		<u> </u>
14	27	Internit Exam 2. 200 miles		21		115	Exam proparation.	1,66	
	<del> </del>	Interconnection networks. Review. Exercises.	X	+	+	NO	Review of class lecture.		5
14	28					1,0	Prepare exercises.	1,66	
	1 20 1	1					Tiepare excrements.	1,00	
t	29	Lab Route-LookUp Exam	+	X	Computer	YES	Exam Preparation		<u> </u>
•		Lub Route Boonep Baum					Enterni i reperanon	1,66	2

						Subtotal 1	48,14	72
	Total 1	(Hours of class a	ınd homewc	ork weeks 1-14)	)		120,14	4
15	Delayed classes, doubts and assignments						1	1
16								
17	Preparation of assessment and assessment.						5	10
18								
Subtotal 2						6	11	
Total 2 (Hours of class and homework weeks 15-18)					17			
TOTAL (Total 1 + Total 2. <u>Máximo 180 horas</u> )					137,14			