

DESCRIPTIVE CONTENT OF THE SUBJECT

GENERAL INFORMATION		
Name:	Network and service technologies.	
ECTS credits:	6	
Semester:	1st	
Type:		Compulsory
Module:	Telecommunication technologies	
Department:	Telecommunication engineering	
Area of knowledge:	Computer network engineering	
Language:	English	

Pre-requisites (if necessary)
There are no pre-requisites for this subject

ACTIVITIES AND ITS DISTRIBUTION IN ECTS CREDITS, METHODOLOGIES, AND LIST OF LEARNT COMPETENCES				
Activities/Methodologies	ECTS Cr.	Attend. (hours)	Private work (hours)	Competences (codes)
Lectures and tutorials:	3	30	45	ITM1, ITM2,ITM5
Lab work:	3	30	45	ITM1, ITM2,ITM5
TOTAL	6	60	90	

LEARNING RESULTS	
Results 1	Knowledge about the principles of communication network planning and configuration
Results 2	Knowledge about the principles of communication network management.
Results 3	Introducing to some technologies of transport network.
Results 4	Knowledge about the principles of communication network design.
Results 5	Knowledge about the technologies of services and telematic applications.

ASSESSMENT METHOD			
Aspect	Criteria	Instrument	Importance
Attendance and participation	-Active participation in lectures and tutorials. - Active participation in lab work. -Attendance to individual tutorial and activities.	Observation.	10%
Subject concepts	-Practical and theoretical assimilation of subject concepts.	Written exam.	50%
Proposed works	-Documentation delivery. The revision for each document includes: - Structure - Quality - Novelty - Clarity of presentation	Revision of the documentation.	40%
The assessment method must fulfil the RD 1125/2003 of September the 5th in which is established the European system of credits and the assessment system for the academic studies with official character. The mark obtained in the topic "Subject concepts" has to be greater than 4 out of 10 in order to pass.			

SUBJECT SUMMARY
<ol style="list-style-type: none"> 1. Introduction to computer networks. Local area networks. TCP/IP networks. Routing protocols in TCP/IP networks. 2. Configuration of IP networks. Network planning. Configuration of network components. 3. Network management. Management architectures. SNMP. Management techniques and tools. 4. Transport networks. IP over WDM. Gigabit Ethernet. MPLS. Traffic engineering. 5. Design and dimensioning communications networks Modeling and simulation of IP networks. 6. Technologies of telematic applications.

Web service.
J2EE applications.

Lab work:

Planning, cabling, testing, troubleshooting and configuring a LAN.
Network management with SNMP.
Modeling and simulation of IP networks with NS2.
Web services design.