SUBJECT TEACHING GUIDE

G845 - Network Applications and Services

Degree in Telecommunication Technologies Engineering

Academic year 2023-2024

1. IDENTIFYING DATA				
Degree	Degree in Telecommunication Technologies Engineering		Type and Year	Optional. Year 4
Faculty	School of Industrial Engineering and Telecommunications			
Discipline	Subject Area: Telematic Applications and Services			
Course unit title and code	G845 - Network Applications and Services			
Number of ECTS credits allocated	6	Term	Semester based (1)	
Web	http://www.tlmat.unican.es			
Language of instruction	Spanish	English Friendly	Yes	Mode of delivery	Face-to-face

Department	DPTO. INGENIERIA DE COMUNICACIONES
Name of lecturer	ALBERTO ELOY GARCIA GUTIERREZ
E-mail	alberto.garcia@unican.es
Office	Edificio Ing. de Telecomunicación Prof. José Luis García García. Planta: - 1. DESPACHO (S130)
Other lecturers	MARTA GARCIA ARRANZ

3.1 LEARNING OUTCOMES
- The student identifies and interprets the structure and operation of most important services and protocols, including their present and future applications.
- The student will be able to decide, design and develop an application / communication service based on assumptions and specific problems
- Students will be able to identify and fully describe a network service or application

4. OBJECTIVES

Extend and apply knowledge acquired in the course of the previous level "Network Interconnection Protocols", deepening the understanding of the different services and applications supported by networks
To know the specification of key parameters associated with the application layer model and its different variants over the client/server model: centralized, distributed and virtual.
To develop the technologies and implementations used for the development of application servers and their services.
To apply basic examples of existing services including of emerging services.

6. COURSE ORGANIZATION

CONTENTS	
1	Chapter I: Applications and basic services: Telnet. FTP (File Transfer Protocol). TFTP (Trivial FTP). RPC (Remote Call precedure). Portmap. NFS (Network File System)
2	Chapter II: Applications and distributed services: DNS (Domain Name System). NNTP (Network News Transport Protocol). SMTP (Simple Mail Transport Protocol). Directory services (LDAP, ACAP).
3	Chapter III: Applications and Web services: World Wide Web. Web 2.0. WebServices. PeerToPeer services (P2P).
4	Chapter IV: Applications and mobile services: Voice over IP (VoIP), Lightweight Web services, Instant Messaging

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Laboratory Assessment	Activity evaluation with Virtual Media	Yes	Yes	40,00
Continuous Assessment	Activity evaluation with Virtual Media	Yes	Yes	30,00
Final exam	Activity evaluation with Virtual Media	Yes	Yes	30,00
TOTAL				100,00

Observations
In any case, in the Continuous Assessment (EC), the Laboratory Assessment (PRAC) and Final Exam (EXAM), it will be mandatory to obtain a grade greater than or equal to 4.0 (on each one), otherwise the FINAL NOTE (NOTE) will be equal to: NOTE = minimum (EC, PRAC, EXAM) In the rest of the cases, the FINAL NOTE of the subject is obtained by applying the following formula: NOTE = 0.3 * EC + 0.4 * PRAC + 0.3 * EXAM where EXAM corresponds to the note of the Final Exam.

Observations for part-time students
In the event that the student is unable to complete the Continuous Assessment and / or the Laboratory Assessment, they may opt for their recovery under the same conditions as the rest of the students.

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC
"TCP/IP Illustrated, Vol 1. The Protocols", W. Richard Stevens. Addison Wesley, 1994