

## SUBJECT TEACHING GUIDE

G845 - Network Applications and Services

Degree in Telecommunication Technologies Engineering

Academic year 2019-2020

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	<a href="http://www.tmat.unican.es">http://www.tmat.unican.es</a>				
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	<a href="mailto:alberto.garcia@unican.es">alberto.garcia@unican.es</a>				
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 procedure). 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	%
Practical sessions Assessment	Written exam	Yes	No	20,00
Continuous Assessment	Written exam	No	Yes	24,00
Final exam (theory & practice)	Written exam	Yes	Yes	56,00
<b>TOTAL</b>				<b>100,00</b>

##### Observations

The implementation of practical sessions is mandatory.

The final grade for the course is obtained by applying the following formula, where TEOR is the note of theory and PRAC is the practical sessions note

$$\text{NOTE} = \text{TEOR} * 0.8 * 0.2 + \text{PRAC}$$

The theoretical note TEOR will be calculated from the progress test (Continuous Assessment, EC) and the Final Exam (EF).

In any case, EF will have to be greater or equal to 4.0 (over 10.0) review. In addition, the note of the EC will not prejudice final grade, so:  $\text{TEOR} = \max \{0.7 * 0.3 * \text{EF} + \text{EC}; \text{EF}\}$

##### Observations for part-time students

Continuous assessment is not mandatory; students who do not have their rating of the Laboratory will have their grade based on Laboratory Evaluation and Final Exam

#### 8. BIBLIOGRAPHY AND TEACHING MATERIALS

##### BASIC

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

