COMPUTER NETWORKS

Academic Year: (2016 / 2017)   **Review date: 30/05/2011 12:21:30**

Department assigned to the subject:

Coordinating teacher: DIAZ SANCHEZ, DANIEL

Type: Core ECTS Credits : 4.5

Year : 4 Semester : 2

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Telematics (3º), Communication Networks and Services (3º).

OBJECTIVES

The aim of this subject is to show advanced aspect of the Internet transport level and study in depth the application level. With this purporse, the functions of the main types of network applications are shown: e-mail, file transfer, remote terminal, web and others. For each of these application services the design objetives and involved protocols are studied.

DESCRIPTION OF CONTENTS: PROGRAMME

1.DNS Service
2.TCP advanced aspects
3.Classic services:
   3.1.   Remote login: telnet, rlogin
   3.2.   File Transfer: FTP, TFTP
4.E-mail service: SMTP, POP, IMAP y MIME
5.Web service
6.Other application layer protocols

LEARNING ACTIVITIES AND METHODOLOGY

Practical work shall be carried out in the Laboratory. This practical work is related to the different topics of the programme and involves short exercises to improve the understanding of the concepts and principles of the programme.

A collection of problems will be delivered to the students. Some of them will be solved in the classroom to improve the understanding on the concepts shown in the lectures.

Three grading exercises, in sessions 6, 16, and 21, will be offered to students.

ASSESSMENT SYSTEM

The evaluation is contributed by three terms: partial evaluations (EP), laboratory assignment evaluation (PL), and final exam (F).
Student following the "evaluación continua" assessment model will be graded as:

0.5*EP+0.5*(0.25*PL+0.75*F)

This model allows the students to proof their knowledge gradually in three evaluation exercises (scheduled in sessions 6, 16 and 21). All three exercises have the same weight, and their total contribution is 50% of the final grade.

For students not interested in the "evaluación continua" assessment model, they will be graded as:
0.25*PL+0.75*F

In both assessment models, the laboratory assignments will be evaluated.

BASIC BIBLIOGRAPHY

- TANENBAUM, ANDREW S. Computer Networks, , Prentice Hall International, 1996.

- COMER, D.E. Internetworking with TCP/IP vol I. 4ª, Prentice Hall, 2000.

- Stevens, W. R. TCP/IP Illustrated vol.1 The protocols, Prentice Hall, 1994

ADDITIONAL BIBLIOGRAPHY

- ALBITZ, P. and LIU, C. DNS and BIND 4, O'Reilly&Associates, 2001

- B. Forouzan TCP/IP Protocol Suite, 4th Ed., McGraw-Hill, 2009

- J.F. Kurose and K.W. Ross "Computer Networking: A Top-Down Approach", 5th Edition, Addison-Wesley, 2009.

- KRISHNAMURTHY B. and REXFORD, J. Web Protocols and Practice., Addison-Wesley. 2001.