INSTITUTO POLITÉCNICO DE BRAGANÇA

Course Unit	Services and Systems Administration II		Field of study	Network and Computer Systems	
Bachelor in	Informatics and Communications		School	School of Public Management, Communication and Tourism	
Academic Year	2021/2022	Year of study	3	Level	1-3

Level	1-3		ECTS credits	6.0	
Type	Semestral	Semester	2	Code	9188-320-3201-00-21

Workload (hours)	162	Contact hours	T	15	TP	-	PL	45	TC	-	S	-	E	-	OT	20	O	-

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s)	Luis Paulo Alves dos Santos

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:
1. To know the major Internet protocols.
2. To know which services support the information and communication needs of an organization.
3. To know how to install, configure and optimize the Internent services that which can be found in an organization.
4. Describe the purpose, characteristics and the use of protocols in the TCP/IP architecture.
5. To know the purpose, the functions, and how to install, configure and optimize servers that support the main Internet services: Web, Mail, FTP, SMTP, POP3, IMAP, iCal, LDAP, VPN and Proxy.

Prerequisites

Before the course unit the learner is expected to be able to:
To know system administration basic concepts.

Course contents

Applications, services, application layer protocols. Services management.

Course contents (extended version)

1. Applications, services, application layer protocols
   - Domain Name Service (DNS).
   - Hypertext Transfer Protocol (HTTP)
   - Version Control System
   - Mail protocols (SMTP/POP3, IMAP).
   - Directory Services (X. 500, LDAP).
   - Groupware services.
   - Remote access service: VPN.
   - Proxy Server.
2. Installation, configuration and optimization in the following types of servers
   - Web server
   - DNS server.
   - CVS server.
   - SMTP mail server.
   - POP3/IMAP4 server.
   - LDAP server.
   - Groupware server.
   - VPN server.
   - Proxy server.

Recommended reading

1. Sousa, J. P. (2012). Apontamentos de Administração de Sistemas e Serviços II. ESACT.
2. Limoncelli, T. A. (2007). The Practice of System and Network Administration. Second Edition. Addison Wesley. ISBN-13: 978-0321492661
3. Nemeth, E. et. al (2010), UNIX and Linux System Administration Handbook (4th Edition). Prentice Hall. ISBN-13: 978-0131480056
4. Redmond, T. (2010). Microsoft Exchange Server 2010 Inside Out. Microsoft Press. ISBN-13: 978-0735640610
5. IETF. RFCs disponíveis no Web Site do Internet Engineering Task Force. www. ietf. org/rfc. retrieved: 2012.

Teaching and learning methods

Every working module has: content explanation; problem solving orientation; practical use cases; work discussion.

Assessment methods

1. Continuos assessment - (Regular, Student Worker) (Final)
   - Practical Work - 70% (The student has to do a project. The minimum grade is 8 values.)
   - Intermediate Written Test - 30% (Two written test. Minimum grade is 8 values.)
2. Distributed assessment - (Regular, Student Worker) (Supplementary, Special)
   - Practical Work - 70% (The student has to do a project. The minimum grade is 8 values.)
   - Final Written Exam - 30% (A written test. Minimum grade is 8 values.)
3. Erasmus Students - (Regular) (Final, Supplementary)
   - Practical Work - 100% (A practical work about a subject.)

Language of instruction

Portuguese, with additional English support for foreign students.

Electronic validation

Luis Paulo Alves dos Santos	Vítor José Domingues Mendonça	Elisabete da Anunciacao Paulo Morais	Luisa Margarida Barata Lopes
05-03-2022	10-03-2022	16-03-2022	20-03-2022