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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	2023/2024	Year of study	3	Level	1-3	ECTS credits	6.0
Type	Semestral	Semester	2	Code	9188-320-3201-00-23	

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)	Pedro Filipe Fernandes Oliveira

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. Curso "Administração de Sistemas e Serviços de Infraestrutura de TI - Google", plataforma Coursera, 2024
4. Curso "Introduction to Open-Source Operating Systems - Bachelor's - Illinois Tech", plataforma Coursera, 2024
5. Curso "Programa de cursos integrados Aprendendo Linux para a certificação LFCA - LearnQuest", plataforma Coursera, 2024

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 7 values.)
    - Intermediate Written Test - 30% (Two written test. Minimum grade is 7 values.)
2. Final assessment - (Regular, Student Worker) (Supplementary, Special)
    - Practical Work - 70% (The student has to do a project. The minimum grade is 7 values.)
    - Final Written Exam - 30% (A written test. Minimum grade is 7 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

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08-04-2024	09-04-2024	10-04-2024	19-04-2024