UNIVERSIDADE LUSÍADA
LISBOA

Course Unit Program
Operating Systems

Academic Year 2023/2024

1. Organic Unit

Faculty of Business and Economic Sciences

2. Course

Computer Engineering

3. Cycle

1st

4. Course Unit

Operating Systems (L9022)

5. Scientific Area

6. Curricular Year

3rd

7. Type of Curricular Unit / Semester

1st Semester

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8. Class type and workload (work time)

Theoretical classes:	
Practical classes:	
Theoretical-Practical Classes	30,00
Tutorial Guidance:	20,00

9. ECTS Credits

6,00

10. Scientific Area Coordinator

11. Regent

Prof. Doutor PEDRO RAMOS DOS SANTOS BRANDÃO

12. Assistants

13. Teaching Language

Portuguese

14. General Objectives

O1 ? To understand the architecture of a client operating system.
O2 ? To understand the architecture of a server operating system.
O3 ? To understand the operation of a client operating system.
O4 ? To understand the operation of a server operating system.
O5 ? To understand the operation of a Domain.
O6 ? To learn how to develop a structured network architecture.
O7 ? To understand the operation of an Active Directory and its components.
O8 ? To learn how to manage a network from the ce

15. Specific Objectives

16. Skills to be acquired

The goals O1 to O4 are to provide students with in-depth knowledge on the architecture and operation of operating systems, so they can then learn how to manage computer networks through an Active Directory properly.
This UC will cover contents that allow the student to know the principles of a structured network based on an Active Directory. In this perspective, the UC will begin with introductory concepts to prepare students for the more technical contents. Then, to meet the goals of O5 to O8,

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17. Teaching Methodology

The programmatic contents were divided into nine major themes. For each topic, pedagogical material (documentary, audiovisual, among others) will be made available in addition to the mandatory bibliography, these contents may be presented synchronously (sessions by videoconference) or asynchronously.
There will also be recourse to discussion forums and clarification of doubts, with collaboration among peers guided by the teacher (or tutor) of the discipline, seeking to promote collaborative w

18. Course Unit Program

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1. The current network infrastructures
1.1. Network technologies
1.2. Addressing
2. DNS
3. Authentication
4. Solutions to common problems
4.1. Ping
4.2. Traceroute
4.3. MTR
4.4. Interrogating a DNS server
4.5. Netsat
4.6. Nmap
4.7. Iperf
4.8. TCPdump
5. Windows Server 2019: settings and initial environments
5.1. Initial settings
5.2. Server Roles
5.3. Features
5.4. Administration tools
5.5. PowerShell
6. Active Directory
6.1. Introduction
6.2. Settings
6.3. Workgroup
6.4. Domain
6.5. Domain Controller
6.6. Organizational Units
6.7. Site
6.8. Trees
6.9. Forests
6.10. Active Directory Benefits
6.11. New Administrative Tools
6.12. FSMO Roles
7. Users Management
8. File Server
9. Internet
9.1. Web server installation
9.2. Web server installation test
9.3. Creating a Web Application
9.4. Boundaries configuration
9.5. Registry setup
9.6. Web Applications
9.7. Creating Application Pools
9.8. Virtual directories setup
10. Linux Administration

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19. Assessment Methods

There will also be recourse to discussion forums and clarification of doubts, with collaboration among peers guided by the teacher (or tutor) of the discipline, seeking to promote collaborative work and asynchronous communication.
There will also be proposed formative activities of reading, reflection and production, which will culminate in the digital portfolio of the discipline.

20. Didactic Resources

21. Sustainability Objectives

The methodology will focus on interactivity between the various educational agents, starting with the teacher and extending to all students, involving students in the teaching process, learning critically and actively through the forums. With a debate approach and using the platforms and supporting documents inherent to the themes addressed, it is expected that there will be a strong motivation and participation by students in the activities to be developed. Thus, using active methodologies in w

22. Keywords

Operative Systems

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23. Main Bibliography

Author(s): Krause, Jordan
Title: Mastering Windows Server 2019: The complete guide for IT professionals to install and manage Windows
Edition: Year: 2019
Local: EUA
Publisher: Packt Publishing.

Author(s): Rosa, A.
Title: Windows Server 2016: Curso Completo
Edition: Year: 2018
Local: Lisboa
Publisher: FCA

Author(s): Thomas, O.
Title: Windows Server 2019 Inside Out
Edition: Year: 2019
Local: EUA
Publisher: Microsoft Press

24. Complementary Bibliography

Author(s): Peterson, R.
Title: Ubuntu - Server Administration
Edition: Year: 2019
Local: EUA
Publisher: Xenial

Author(s):
Title:
Edition: Year:
Local:
Publisher:

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Ficha técnica MIP / MIP Datasheet	
Título / Title	Course Unit Program 'SISTEMAS OPERATIVOS': Academic Year 2023/2024
Autor / Author	Prof. Doutor PEDRO RAMOS DOS SANTOS BRANDÃO
Classificação / Classification	-
Descritores / Descriptors	-
Colaborador(es) / Colaborator(s)	-
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