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Course Unit	Computer System Architecture			Field of study	Network and Computer Systems		
Bachelor in	Informatics and Communications			School	School of Public Management, Communication and Tourism		
Academic Year	2022/2023	Year of study	1	Level	1-1	ECTS credits	6.0
Type	Semestral	Semester	2	Code	9188-320-1102-00-22		

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 Fatima Goncalves Liberal

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:
1. Identify and describe the various hardware components of a common computer system.
2. Install and configure hardware to a common computer system.
3. Identify the importance of configuration, maintenance and optimization of a basic operating system in a user's perspective.
4. Install, configure and optimize the operation of operating systems (Windows, Linux) on a user's perspective.
5. Demonstrate the ability to work in various operating systems.

Prerequisites

Before the course unit the learner is expected to be able to:
Without prerequisites.

Course contents

Computer hardware, assembling a PC, BIOS setup, diagnosis of errors and software.

Course contents (extended version)

1. Computer
2. The Microprocessor
3. Bus and Ports
4. Memories
5. Storage Units
6. Computer Assembling and Maintenance
7. BIOS Setup
8. Error Diagnosis and Resolution
9. Monitors
10. Display Adapters
11. Software

Recommended reading

1. Magalhães, J. , Gouveia, A. , (2019). Hardware - tecnologias e soluções. FCA. ISBN: 9789727228928.
2. Branco, A. , (2015). Manual de Instalação e Reparação de Computadores. 3ª Edição. FCA. ISBN: 9789727228089.
3. Delgado, J. , Ribeiro, C. (2014). Arquitectura de computadores. (5ª ed.). Lisboa: FCA. ISBN: 978-972-722-789-1
4. Hennessy, J. L. , Patterson, D. A. , (2011) Computer Architecture: A Quantitative Approach. Morgan Kaufmann. Fifth Edition. ISBN: 978-0123838728
5. Harris, D. , Harris, D. , (2012) Digital Design and Computer Architecture, Second Edition. (2 edition), Morgan Kaufmann. ISBN: 0123944244

Teaching and learning methods

For each topic of the program will be an introduction to the theory that using the expository method using a video projector. Will also apply the method interrogative, questioning systematically pupils themselves to develop the capacity of reasoning.

Assessment methods

1. Continuous evaluation - (Regular, Student Worker) (Final)
    - Intermediate Written Test - 40% (Two written test. Minimum grade: 8.0 values.)
    - Practical Work - 60% (Includes the completion of two projects. Minimum grade: 8.0 values.)
2. Distributed evaluation - (Regular, Student Worker) (Supplementary, Special)
    - Final Written Exam - 40% (Written test. Minimum grade: 8.0 values.)
    - Practical Work - 60% (Includes the completion of two projects. Minimum grade: 8.0 values.)

Language of instruction

Portuguese, with additional English support for foreign students.

Electronic validation

Luis Fatima Goncalves Liberal	Vítor José Domingues Mendonça	Elisabete da Anunciacao Paulo Morais	Luisa Margarida Barata Lopes
08-03-2023	26-04-2023	26-04-2023	02-05-2023