Course Unit	Database Management Systems			Field of study	Informatics		
Bachelor in	Public Management and Administration			School	School of Public Management, Communication and Tourism		
Academic Year	2021/2022	Year of study	2	Level	1-2	ECTS credits	6.0
Type	Semestral	Semester	2	Code	9165-315-2205-00-21		

Workload (hours)	162	Contact hours	T -	TP 30	PL 30	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): Elisabete da Anunciacao Paulo Morais

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:
1. Acquiring the necessary knowledge to develop relational databases projects.
2. Using SQL (Structured Query Language) to perform queries to databases.
3. Accomplishing a proactive approach in relation to IS / IT, looking constantly update itself.

Prerequisites

Before the course unit the learner is expected to be able to:
Not applicable.

Course contents

Introduction to Databases; Relational Databases project; The SQL Language; Microsoft Access Database Management System.

Course contents (extended version)

1. Introduction to Databases
   - Generalities
   - Information Models
   - Specific Languages to Databases
   - Database Manager
   - Database Administrator
   - Database Users
   - Structure of a database management system
2. Relational Databases Project
3. The SQL Language
   - Introduction
   - Basic Structure
   - Operations between sets
   - Operations with multiple tables
   - Operations between an element and the set
   - Tuples of variables
   - Comparing data sets
   - Ordering of tuples
   - Aggregation Functions
   - Data manipulation (Insert , Update and Delete commands). Views.
4. Management System Database Microsoft Access.

Recommended reading

1. DAMAS, L. (2017). SQL. 14ª Edição Actualizada e Aumentada. FCA – Editora de Informática. ISBN 978-972-722-829-4.
2. Pereira, J. L. (1998). Tecnologia de Bases de Dados. (3ª ed.). FCA – Editora de Informática. ISBN 978-972-722-143-1.
3. Morais, E. P. (2022). Sebenta de Sistemas de Informação para a Gestão.
4. Silberschatz, A. ; Korth, H. ; Sudarsham, S. (2020). Database Systems Concepts. (7ª ed.). McGrawHill. ISBN: 978-126-008-450-4
5. Sousa, S. (2012). Domine a 110% Access 2010, FCA – Editora de Informática. ISBN 978-972-722-707-5.

Teaching and learning methods

This curriculum unit will be taught through theoretical and practical lessons (always with the theoretical framework and then examples / exercises), and, if necessary, can be a follow-up lessons to work.

Assessment methods

1. Distributed Evaluation - (Regular, Student Worker) (Final, Supplementary, Special)
   - Final Written Exam - 50% (Minimum score of 8 points.)
   - Practical Work - 50% (Minimum score of 8 points and defense compulsory labor.)
2. Incoming and Outgoing students - (Regular, Student Worker) (Final, Supplementary, Special)
   - Practical Work - 100%

Language of instruction

Portuguese, with additional English support for foreign students.

Electronic validation

Elisabete da Anunciacao Paulo Morais	Bernadete de Lourdes Bittencourt	Elisabete da Anunciacao Paulo Morais	Luisa Margarida Barata Lopes
02-03-2022	03-03-2022	03-03-2022	04-03-2022

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