

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	2022/2023	Year of study	2	Level	1-2
Type	Semestral	Semester	2	ECTS credits	6.0
			Code	9165-315-2205-00-22	
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. (2023). 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	Ines Monteiro Barbedo de Magalhaes	Luisa Margarida Barata Lopes
24-02-2023	02-03-2023	07-03-2023	13-03-2023