Course Unit	Management Information Systems			Field of study	Informatics		
Bachelor in	Management			School	School of Technology and Management		
Academic Year	2023/2024	Year of study	1	Level	1-1	ECTS credits	6.0
Type	Semestral	Semester	1	Code	9147-707-1105-00-23		

Workload (hours)	162	Contact hours	T -	TP 60	PL -	TC -	S -	E -	OT -	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)	António Jorge Ferreira Vaz, Isabel Maria Lopes, Carla Manuela Gomes Martins , Eduardo Carvalho Nunes, Inês Prudência Sena

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:
1. Recognise the need and advantages of automatic processing of information
2. Identify the potential and limitations of a spreadsheet
3. Use consistent tools for processing and analysis of large volumes of data
4. Take advantage of the advanced data manipulation mechanisms of a spreadsheet
5. Solve practical problems using automatic data processing tools
6. Set structures and models of basic data to support the modelling of problems within the experimental sciences
7. Design basic algorithms for solving scientific problems

Prerequisites

Before the course unit the learner is expected to be able to:
Demonstrate basic skills on the use of the Windows operating system

Course contents

Interface and features of Microsoft Excel. Topics related to the introduction of data, formatting and data validation. Managing worksheet. Writing formulas using operators and functions. Data analysis tools. PivotTables reports and PivotCharts. Automation of tasks through macros.

Course contents (extended version)

1. Introduction to Excel
   - Excel is good for. . .
   - Structure of Microsoft Excel document
   - The interface of Microsoft Excel
   - Entering and editing data
   - Copying and moving
   - Formatting
   - Managing worksheet
   - Data validation
   - Importing data
2. Formulas and functions
   - Creating and editing formulas
   - Working with names and cells reference
   - Syntax of the functions
   - Inserting functions on a formula
   - Functions: date/time, math, statistical, logical, lookup and reference, database, financial and text
3. Charts
   - Creating charts
   - Formatting charts
   - Advanced charting
4. Data analysis tools
   - Sorting and filtering
   - Using Excel tables
5. PivotTables reports and PivotCharts
   - About PivotTables
   - Creating a PivotTable
   - Formatting a PivotTable
   - PivotCharts
6. Macros
   - Definition and types of macros
   - Create, edit and run a macro

Recommended reading

1. Rodrigues, L. (2016). Utilização do Excel para Economia & Gestão. FCA.
2. Marques, P. , Costa, N. (2014). Fundamental do Excel 2013. FCA.
3. Carvalho, A. (2017). Excel para Gestão. FCA.
4. Carvalho, A. (2017). Automatização em Excel. FCA.

Teaching and learning methods

Presentation of content using various methodological ways, including: expositive method, study of texts and projects. Analysis and discussion of problematic questions, in small groups or a large group. Resolution of problems.

Assessment methods

1. Alternative 1 - (Regular, Student Worker) (Final)
   - Intermediate Written Test - 60%
   - Final Written Exam - 40%
2. Alternative 2 - (Regular, Student Worker) (Supplementary, Special)
   - Final Written Exam - 100%

Language of instruction

Portuguese

Electronic validation

António Jorge Ferreira Vaz, Isabel Maria Lopes	Tiago Miguel Ferreira Guimaraes Pedrosa	António Borges Fernandes	José Carlos Rufino Amaro
06-10-2023	07-10-2023	09-10-2023	20-10-2023