

Academic Year: ( 2022 / 2023 )

Review date: 20-05-2022

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher: MEDINA DOMINGUEZ, FUENSANTA

Type: Electives ECTS Credits : 6.0

Year : 4 Semester :

## REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Information Skills  
IT Management

## OBJECTIVES

### Objective

The objective of this course is to teach the student, in a practical way, the data and programming structures for the development of macros and applications developed with Visual Basic for Applications (VBA), a programming language that is de facto incorporated into the Microsoft Office suite to automate and extend the capabilities of the programs that make up this suite.

1. Know the proprietary software and free software alternatives that exist in the market to perform accounting and financial data analysis.
2. Learn to analyze macros and applications developed with Visual Basic for Applications.
3. Learn to design macros and applications developed with Visual Basic for Applications.
4. Learn to build macros and applications developed with Visual Basic for Applications.
5. Learn to use macros and applications developed with Visual Basic for Applications.
6. Learn programming syntax and paradigm of the R language

### Competences:

1. Identify alternatives of proprietary and free software on the market for analysis of accounting and financial data.
2. Learn how to use advanced features that allow to carry out accounting or financial analysis using Microsoft Excel.
3. Learn to create and use PivotTables in Microsoft Excel for data analysis.
4. Learn to design, build and use macros and applications developed with Visual Basic for Applications.

## DESCRIPTION OF CONTENTS: PROGRAMME

1. Analysis and application design techniques.
2. Macro construction, recording and automatic generation with Microsoft Excel.
3. Basic Concepts of Programming.
4. Development and debugging environment of Visual Basic for Applications (VBA)
5. Data structure
6. Programming structures
7. Creation of own functions.
8. Creation of forms.
9. Creating menus.
10. Introduction to Language R.

## LEARNING ACTIVITIES AND METHODOLOGY

The subject will be taught in practical classes through which students will learn the data and programming structures for the development of macros and applications developed with Visual Basic for Applications (VBA) and the paradigm of R language

## ASSESSMENT SYSTEM

It will be 100% continuous assessment where students will have evaluable practices.

<b>% end-of-term-examination:</b>	0
<b>% of continuous assessment (assignments, laboratory, practicals...):</b>	100

## BASIC BIBLIOGRAPHY

- John Walkenbach Excel VBA Programming for dummies, John Wiley & Sons, 2015
- Manuel Torres Remon Aplicaciones VBA con excel, S.A. Marcombo, 2016
- Michael Alexander Excel Macros for dummies, John Wiley & sons, 2015
- Walkenbach, John Excel 2010 Bible, Wiley, 2010