Advanced knowledge of Spreadsheets

Academic Year: (2022 / 2023) **Review date: 20-05-2022**

Department assigned to the subject: Transversal matters

Coordinating teacher: ALVAREZ RODRIGUEZ, JOSE MARIA

Type: Compulsory ECTS Credits : 1.5

Year : 4 Semester : 2

OBJECTIVES

The main objective of this course is to be equipped with the proper skills to apply spreadsheet tools for providing practical solutions through the automation of tasks and data lifecycle management (load, clean, reconcile and exploit using differen techniques depending on the problem specification).

DESCRIPTION OF CONTENTS: PROGRAMME

Teaching Unit 1: A first contact

1.1-Structure of a spreadsheet: book, sheets and cells.and basic operations
1.2-Working with cells and sheets, data import and references.
1.3-Task automation for this unit

Teaching unit TU2: Building, understanding and exploiting data.
2.1-Formula and functions
- Boolean operators and functions
- Text
- Database
- Descriptive statistics

2.2-Tables and pivot tables
2.3-Data analysis
2.4-Task automation for this unit

Teaching unit TU3: Representation of data and information, task automation and applications

3.1-Visualization (pivot charts)
3.2-Spreadsheet applications: forms, mail merge, printing, document generation, etc.
3.3-Task automation for this unit

LEARNING ACTIVITIES AND METHODOLOGY

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THEORETICAL-PRACTICAL CLASSES. [12 hours with 100% classroom instruction, 0.48 ECTS]

Knowledge and concepts students must acquire. Student receive course notes and will have basic reference texts to facilitate following the classes and carrying out follow up work. Students partake in exercises to resolve practical problems and participate in workshops and evaluation tests, all geared towards acquiring the necessary capabilities.

TUTORING SESSIONS. [1 hours of tutoring with 100% on-site attendance, 0.08 ECTS]

Individualized attendance (individual tutoring) or in-group (group tutoring) for students with a teacher.

STUDENT INDIVIDUAL WORK OR GROUP WORK [24,5 hours with 0 % on-site, 0.98 ECTS]

METHODOLOGY

THEORY CLASS. Classroom presentations by the teacher with IT and audiovisual

support in which the subject`s main concepts are developed, while providing material and bibliography to complement student learning.

PRACTICAL CLASS. Resolution of practical cases and problems, posed by the teacher, and carried out individually or in a group.

TUTORING SESSIONS. Individualized attendance (individual tutoring sessions) or in-group (group tutoring sessions) for students with a teacher as tutor.

Additional note about software resources:

-Excel 2013 or higher (Office 365 provided by the University would be recommended). Spanish or English language version, depending on the language of the enrollment group.

-To do exercises, a personal computer can be used or you can also connect to the virtual classroom service provided by UC3M.

ASSESSMENT SYSTEM

TOTAL CONTINUOUS ASSESSMENT [100%]

Due to the applied nature or special characteristics of the subject, the evaluation is of papers, projects, presentations, exercises, internships and workshops throughout the course. Represents 100% of the final grade,
thus evaluation is not possible with a final exam.

- Final case development (teamwork, including a partial delivery): 40%
- 1 minute quizz: 10%
- Individual practical exercise: 50%

A minimum grade of 5.0 both in the final case development and in the individual practical exercise is required to pass the course.

% end-of-term-examination:	0
% of continuous assessment (assigments, laboratory, practicals…):	100

BASIC BIBLIOGRAPHY

- Conrad Carlberg Predictive Analytics: Microsoft Excel, Que Publishing, 2012
- John Walkenbach Excel 2016 Bible, Willey, 2016
- Matthew MacDonald. Excel 2010: The Missing Manual. , O'Reilly., 2010

ADDITIONAL BIBLIOGRAPHY

- Cole Nussbaumer Knaflic Storytelling with Data: A Data Visualization Guide for Business Professionals, Willey, 2015
- Jordan Goldmeier Advanced Excel Essentials, APress, 2014
- Jordan Goldmeier Dashboards for Excel, APress, 2015

BASIC ELECTRONIC RESOURCES

- Delft University . Aprende a efectuar análisis de datos usando Excel: https://www.edx.org/es/professional-certificate/delftx-analisis-y-visualizacion-de-datos-con-excel?index=spanish_product&queryID=63f9eb802c0d10329c10eeb503c5c317&position=10
- Microsoft . MSExcel videos: https://support.microsoft.com/en-us/office/excel-video-training-9bc05390-e94c-46af-a5b3-d7c22f6990bb