

## Intermediate knowledge of Spreadsheets

Academic Year: ( 2020 / 2021 )

Review date: 10-07-2020

Department assigned to the subject: Transversal matters

Coordinating teacher: CALDERON PASTOR, MARIA CARMEN

Type: Basic Core ECTS Credits : 3.0

Year : 2 Semester : 2

Branch of knowledge: Social Sciences and Law

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

Experience in the use of computers will be valuable.

## OBJECTIVES

- Be able to create books and spreadsheets organizing data and the management of data cells.
- Acquire the skills to create series and insert comments including the spreadsheet styling and formatting.
- Be able to manage spreadsheets: copy and paste operations, insert, remove cells, rows and columns.
- Use different types of formula, absolute and relative references and management of operations and operators.
- Be able to link different spreadsheets.
- Understand the structure of a formula, sorting and filtering data.
- Understand the use of tables: formatting, management and sorting and filtering of data.
- Understand the creation and management of charts: titles, captions, edges, images, etc.

## DESCRIPTION OF CONTENTS: PROGRAMME

## Teaching Unit 1: A first contact

1. Introduction to the use of spreadsheets.
  - 1.1. Foundations and concepts.
  - 1.2. Spreadsheet as a concept.
  - 1.3. Use of spreadsheets.
  - 1.4. Online spreadsheets and collaborative work.
2. Structure of a spreadsheet: book, sheets and cells.
  - 2.1. Foundations and concepts.
  - 2.2. Basic functionalities to edit and manage books.
  - 2.3. Basic functionalities to edit and manage sheets. Importing data and data sources.
  - 2.4. Functionalities to edit and manage books: copy and paste.
  - 2.5. Add, remove, show and hide rows and columns.
  - 2.6. Add and manage comments.
  - 2.7. Printing a spreadsheet: printing area, configuration and preview.
3. Working with cells and sheets.
  - 3.1. Datatypes.
  - 3.2. Formatting cells (styles). Paste special.
  - 3.3. Autofill options. Design and use of macros. Series.

## Teaching unit 2. Designing and understanding data.

4. Formula and references.

- 4.1. Basic operations: arithmetic, string and comparison operators.
- 4.2. Building references: types and creation between books and sheets.
- 4.3. Linking spreadsheets.
- 4.4. Linking books.
- 4.5. Debugging formula
  - 4.6. Functions and formula within the Journalism area.
  - 4.7 Understanding formula and functions.
5. Tables and Pivot tables.
  - 5.1. Creating a pivot table. Definition and fields.
  - 5.2. Operations and management: filtering and sorting data.
  - 5.3. Formatting pivot tables.
  - 5.4. Data forms. Database functions.
  - 5.5. How to create a pivot table. Definition and fields.
  - 5.6 Understanding tables.

#### Teaching unit 3. Representation of data and information

6. Data visualization.
  - 6.1. Chart types.
  - 6.2 Selecting the proper chart.
  - 6.3. Data sources.
  - 6.4. Edge customization
  - 6.5. Formatting the chart area: title, caption and colors.
  - 6.6. Inserting images.
7. Spreadsheets as a starting point.
  - 7.1 Document generation.
  - 7.2 Data export.
  - 7.3 Add-ins and third-party tools to visualize and manage data.

- There is a SPOC related with all these concepts.

#### LEARNING ACTIVITIES AND METHODOLOGY

Students are encouraged to bring their portable equipment.

Requirements: Excel 365. Spanish or English language version, depending on the language of the enrollment group.

##### LEARNING ACTIVITIES

Theoretical Lectures:

- Show foundations and main concepts

Practical Lectures:

- Exercise resolution
- General tutoring

Team Work:

- Design and development of multimedia resources: videos and/or info-graphics
- Exercises

Individual Work:

- SPOC
- Exercises
- Contribution to team project
- Final case development
- Study and preparation of final exam

#### ASSESSMENT SYSTEM

##### CONTINUOUS EVALUATION (100%)

- Creation of multimedia resources about a concept or technique: 25%
- 1 minute quizz: 10%
- SPOC Tests: 10%
- Final case development: 25%
- Final examination: 30%

A minimum grade of 5.0 both in the final case development and in the final examination is required to

pass the course.

Final case development:

-Development of a case to cover the life-cycle of a data analysis process: data loading, analysis, visualization and document generation.

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

#### BASIC BIBLIOGRAPHY

- John Walkenbach Excel 2010 Bible, Wiley, 2010
- John Walkenbach Excel 2016 Bible, Wiley, 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, Wiley, 2015
- Jordan Goldmeier Dashboards for Excel, Apress, 2015
- Jordan Goldmeier Advanced Excel Essentials, APress, 2014
- Mike Smart Learn Excel 2016 Expert Skills with The Smart Method: Courseware Tutorial teaching Advanced Techniques , Mike Smart , 2016

#### BASIC ELECTRONIC RESOURCES

- Dany Hoter . Analyzing and Visualizing Data with Excel: <https://www.edx.org/course/analyzing-visualizing-data-excel-microsoft-dat206x-6>
- Felienne Hermans . Data Analysis: Take It to the MAX(): <https://www.edx.org/course/data-analysis-take-it-max-delftx-ex101x-1>
- Jaime Busquets . Excel: <https://www.edx.org/course/excel-upvalenciex-xls101x-1>
- Jana Schaich Borg . Mastering Data Analysis in Excel: <https://www.coursera.org/learn/analytics-excel>
- Wayne Winston . Essential Statistics for Data Analysis using Excel: <https://www.edx.org/course/essential-statistics-data-analysis-using-microsoft-dat222x-0>