# Intermediate knowledge of Spreadsheets

**Academic Year: ( 2019 / 2020 )** **Review date: 05-05-2020**

**Department assigned to the subject: Transversal matters**

**Coordinating teacher: IVAÑEZ DEL POZO, INES**

**Type: Basic Core ECTS Credits : 3.0**

**Year : 5 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 2013 or higher. 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 (45%)
- Creation of multimedia resources about a concept or technique: 25%
- 1 minute quizz: 10%
- SPOC Tests: 10%

FINAL EVALUATION (55%) - Individual
- 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 for the Journalism area: data loading, analysis, visualization and document generation.

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| **% end-of-term-examination:** | 55 |
| **% of continuous assessment (assigments, laboratory, practicals…):** | 45 |

BASIC BIBLIOGRAPHY


- John Walkenbach Excel 2010 Bible, Willey, 2010
- 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 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-upvalenciax-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