

ACADEMIC YEAR 2016-2017

Seminar: Introduction to Excel and data computation

Prof. Gianpaolo Scalia Tomba

Semester 1st

from 15/09/2016 to 1/12/2016

N.B. Any variation in the calendar will be communicated.

Classes will be held on Thursday 17.00-20.00

Total lectures n.8 + final test

Students are required to attend n. 8 lectures at minimum and to pass the final test in order to have 4 CFU as Other Activities.

Course contents:

The aim of the seminar series is to make attending students proficient in the use of Excel for data management and analysis, for simple calculations and programming tasks. Students are warmly recommended to bring with them their own laptops or notebooks, with Excel or equivalent freeware installed. The statistical (freeware) package R will also be demonstrated, since it will be used in later courses. Part of each seminar will be dedicated to exercises. In general, computers and software are available in LUISS computer rooms.

1st lecture 15/09/2016 : Acquaintance with computers and software; some generalities about Excel and other software. General notions about software versions, data formats and entry. Introduction to computational tasks that computers are good at...Direct computation, recursion and other structures.

2nd lecture 29/09/2016 room 308a: Using functions in Excel. Writing simple recursive tasks with the Fill function.

3rd lecture 6/10/2016 room 308a: How to write an Excel spreadsheet to calculate mortgage plans.

4th lecture 13/10/2016 room 308a: Data Analysis with Excel. Notions of basic data analysis and statistics. How to organize data and computations using worksheets.

5th lecture 20/10/2016 room 308a: Data Analysis with Excel. How to use simple statistical functions and graphics. Data summaries and the Pivot Table.

6th lecture 27/10/2016 room 308a: Data Analysis with other software. Demonstration of various software and a presentation of R.

7th lecture 10/11/2016 room 308a: Data Analysis with R. Demonstration of the capabilities of R and comparison with Excel.

8th lecture 24/11/2016 room 308a: A mathematical modelling application, solving a simple system of differential equations describing information or rumour spread in a population.

Final test 1/12/2016 room INFO306

N.B. Please, check the room before each seminar.

Assessment method: Final test in computer room, at the end of the seminar series. The test will involve simple tasks involving data and Excel. The test will be only be graded as Sufficient or Not Sufficient.

Suggested reference reading material: There are many books about Excel. However, personal practice and experience is better... As an introduction to how Excel works, one can e.g. have a look at "Excel basics in 30 Minutes" by Ian Lamont, The Digital Media Machine 2013 (easiest way to get it is via Amazon...). However, any other book about Excel might also work... Further reading material and exercises will be made available on the (teacher) course web page.