

Computer Tools for Economics

SYLLABUS

Information at a glance

Course:	Computer Tools for Economics
Web Site:	<http://www.dma.unive.it/~paolop/ctedeo.html>
Professor:	Paolo Pellizzari (email: paolop@unive.it)
Lectures:	See schedule below
Office Hours:	After class or by appointment

Purpose of course. The course aims to offer a review of computational tools and programs largely used in economic studies and research (typesetting and web publishing, spreadsheets, computer algebra systems, statistical packages, network connectivity and file-sharing).

Prerequisites. No specific knowledge is assumed but a basic familiarity with a PC is helpful.

Teaching method. There will be 10 meetings with an introduction and hands-on computer sessions to practice the covered material. The lectures are intended to stimulate further interest rather than comprehensively cover any subject.

Examination policy. There will be no examination.

Contents. The following topics will be surveyed

1. Network connectivity: telnet, Secure SHell (SSH), File Transfer Protocol (FTP) and Secure FTP (SFTP).
2. Tagged typesetting (I): an introduction to HTML and web publishing;
3. Web resources for the economist (working paper archives, `netec` network, financial and economic data, INOMICS...)
4. Excel: lightspeed introduction, importing text datafiles, simple and multiple regression, optimization and the internal solver;
5. Mupad (Maple, Mathematica): numerical and symbolic calculations, graphic capabilities, regression and optimization, programming basics;

6. Stata: introduction to statistical packages, importing data, multiple regression;
7. Tagged typesetting (II): \LaTeX , `prospcr` and `beamer` for writing good quality documents and delivering Powerpoint-like presentations;
8. R: a programming environment for data analysis and graphics. Some time is spent describing `sweave`, a package for reproducible computations and well-documented \LaTeX reports.
9. If time permits:
 - (a) NEOS: Network Enabled Optimization Server, “you write the problem, they solve”;
 - (b) Introduction to Computational Economics.

Schedule

The classes will be held each Tuesday, starting from September 25-th, 3.45 PM (10 meetings, one hour each). A more detailed tentative program is following:

Lect.	Date	Time	Topic
1	Sep 25	3.45 PM	Introduction and students' ibooks setup and MacOSX
2	Oct 2	3.45 PM	Network connectivity (Telnet, Ssh, FTP, SFTP)
3	Oct 9	3.45 PM	Tagged typesetting I, Html and web publishing
4	Oct 16	3.45 PM	Intro to statistical packages, Stata
5	Oct 23	3.45 PM	Excel (advanced topics)
6	Oct 30	3.45 PM	Maple/MuPAD (Mathematica)
7	Nov 6	3.45 PM	Tagged typesetting II, LaTeX and presentations
8	Nov 13	3.45 PM	Web resources for economists
9	Nov 20	3.45 PM	R (programming environment for statistics and more)
10	Nov 27	3.45 PM	NEOS, <code>sweave</code> or other topics of interest

Reading material

Reading material will be suggested during lectures (manuals, webpages, introductory papers, links...). The CTE homepage is a good repository of links and useful material: <http://www.dma.unive.it/~paolop/ctedeo.html>.