

Practical Course in Computer Use (B.1.1.2.3)

Degree: Bachelor

Year: 1

Semester: Spring and Fall

General workload: 4 ECTS credits, 144 academic hours.

Course goals and objectives

- To form an applied basis for computer technologies-based mathematical methods use;
- To acquire knowledge of computational methods used for building mathematical objects and models used in economics and finance, and of mathematical research findings visualization means;
- To acquire practical skills of using computer technology for solving computing and presentation problems in economics and finance.

Key didactic units

- Introduction to MS Excel
- Mathematical object handling in MS Excel
- Introduction to R and RStudio
- Mathematical object handling in R
- Applied computational problems in economics and finance

Place of the course within the curriculum

It is a mandatory course, a part of professional training cycle within the curriculum of the program in Economics (program No. 38.03.01) (all concentrations, mathematics and computer science module B.1.1.2.3.) The course is based on the knowledge gained in the secondary school when taking a course of computer science or relevant courses in post-secondary training schools. It is one of the courses that provide practical training in the field of computational technologies and quantitative data visualization.

Upon completing the course, the students should:

Know: computational methods used when solving basic mathematical problems in economics and finance;

Be able to: use computer technologies when using mathematical methods and building mathematical models for describing and examining applied problems;

Have: skills in using Excel and R for computation purposes.

Course structure: practical training in a computer class, independent student work.

Summative assessment: pass/fail examination at the end of each semester.