Mathematical Methods in Economics

Single subject and programme course

7.5 credits

Matematiska metoder i nationalekonomi

770G17

Valid from: 2020 Autumn semester

Determined by
Course and Programme Syllabus Board
at the Faculty of Arts and Sciences

Date determined
2019-12-03

Main field of study

Economics

Course level

First cycle

Advancement level

G1F

Course offered for

- Business and Economics Programme
- Business and Economics Programme - International - French
- Business and Economics Programme - International - German
- Business and Economics Programme - International - Spanish
- Bachelor´s Programme in Political science and economics

Entry requirements

- Economics, basic course, 30 ECTS credits, with at least 15 ECTS credits
passed

Intended learning outcomes

On completion of the course, the student should be able to
- account for the mathematical methods that are used in the economics to solve
equilibrium - and optimization problem
- solve mathematical problems of the kind that is covered in the course.

Course content

The course contains the following parts:
- Static equilibrium analysis; basic linear algebra
- Comparative static analysis; derivatives and differentials for functions with an
and several variables
- Optimisation problems; extreme values for functions with one and multiple
variables, optimisation under constraints
- Dynamic analysis; integrals, basic differential and difference equations

Teaching and working methods

The teaching is given as full-time studies and comprises lectures and teacher-
supervised exercises. Independent studies are a necessary complement to the
teaching. Language of instruction: Swedish and/or English.

Examination

Final written exam, grading scale UV.

Detailed information can be found in the study guide.

If the LiU coordinator for students with disabilities has granted a student the right to an adapted examination for a written examination in an examination hall, the student has the right to it. If the coordinator has instead recommended for the student an adapted examination or alternative form of examination, the examiner may grant this if the examiner assesses that it is possible, based on consideration of the course objectives.

Students failing an exam covering either the entire course or part of the course twice are entitled to have a new examiner appointed for the reexamination.

Students who have passed an examination may not retake it in order to improve their grades.

Grades

Three-grade scale, U, G, VG

Other information

Planning and implementation of a course must take its starting point in the wording of the syllabus. The course evaluation included in each course must therefore take up the question how well the course agrees with the syllabus.

The course is carried out in such a way that both men´s and women´s experience and knowledge is made visible and developed.

Department

Institutionen för ekonomisk och industriell utveckling