NEF1000  Mathematics, 7.5 credits  
Matematik, 7,5 högskolepoäng  
Third-cycle level / Forsknivå  

Confirmation  
This syllabus was confirmed by the Department of Economics on 2018-12-06, and is valid from Autumn semester 2018.  

Responsible department/equivalent  
Department of Economics, - No translation available -  

Entry requirements  
To be eligible for the course the participant must be admitted to third cycle studies at the Department of Economics, Gothenburg University or other departments, faculties or universities.  

Learning outcomes  
On successful completion of the course, the third-cycle student is expected to:  

Knowledge and understanding  
- understand the mathematical terminology  
- intuitively understand the various mathematical tools used in economic theory  
- have a solid foundation for taking subsequent courses within the PhD program  

Competence and skills  
- be able to acquire skills in calculus, matrix algebra, optimization (static and dynamic) and probability theory  

Judgment and approach  
- be able to determine which methods to use when addressing a wide range of questions
Course content
The purpose of the course is to introduce students to the most central mathematical tools for economic analysis, including calculus, matrix algebra, static and dynamic optimization and probability theory.

Types of instruction
The course consists of lectures outlining the theory, illustrated by examples, and exercises where concrete problems are solved.

Language of instruction
The course is given in English.

Grades
The grade Pass (G) or Fail (U) is given in this course.

Types of assessment
The examination consists of a written exam and hand-in assignments, which are to be solved individually. The points from the assignments and the exam will be added up to give a total score for the course as a whole and this score is the basis for a grade on the grading scale. To obtain a pass grade, the student has to obtain at least 50% of the total score.
A student who has failed the examination twice has the right to change examiner, if practically possible. Such request must be submitted in writing to the Deputy Head of the Department of Economics.

Course evaluation
A written anonymized course evaluation will be carried out at the end of the course. The results of the evaluation will be communicated to the students and will function as a guide for the development of the course.

Other information
Students registered for Third Cycle studies at another faculty or university must apply for admission to the course to the Deputy Head of the Department of Economics.

Appendix 1: Reading list

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