



APPLIES TO ACADEMIC YEAR 2016/2017

GRA 6035 Mathematics

Programme

Core Course, Master of Science in Business, Master of Science in Finance

Responsible for the course

Eivind Eriksen

Department

Department of Economics

Term

According to study plan

ECTS Credits

6

Language of instruction

English

Introduction

In finance and economics, the mathematical language and techniques of mathematical analysis are extensively used. The mathematical requirements of a graduate student go beyond the material usually taught in undergraduate courses. This course introduces the students to the most frequently used subjects.

Learning outcome

After completing the course, the student will be familiar with several mathematical methods and techniques that are used in advanced courses in economics and finance. The student will have developed skills in solving relevant problems.

Prerequisites

All courses in the Masters programme will assume that students have fulfilled the admission requirements for the programme. In addition, courses in second, third and/or fourth semester can have specific prerequisites and will assume that students have followed normal study progression. For double degree and exchange students, please note that equivalent courses are accepted.

Compulsory reading

Books:

Simon, Carl P. and Lawrence Blume. 1994. Mathematics for economists. International student ed. Norton

Recommended reading

Books:

Sydsæter, Knut ... [et al.]. 2008. Further mathematics for economic analysis. 2nd ed. Financial Times/Prentice-Hall

Course outline

- Linear algebra
- Optimization in several variables
- Differential and difference equations

Computer-based tools

Not applicable

Learning process and workload

A course of 6 ECTS credits corresponds to a workload of 160-180 hours. The course is taught through lectures and problem assignments. In addition there will be problem sessions. Please see syllabus (on It's learning) for further details.

Please note that while attendance is not compulsory in all courses, it is the student's own responsibility to obtain any information provided in class that is not included on the course homepage/It's learning or text book.

Examination

| Form of assessment | Weight | Group size |
|-----------------------------|--------|------------|
| Multiple choice examination | 20% | Individual |
| Written examination 3 hours | 80% | Individual |
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Specific information regarding student assessment will be provided in class. This information may be relevant to requirements for term papers or other hand-ins, and/or where class participation can be one of several components of the overall assessment. All parts of the assessment must be passed in order to get a grade in the course. Candidates may be called in for an oral hearing as a verification/control of written assignments.

Examination code(s)

GRA 60352 for the 1 hour multiple choice mid-term examination (20% of the final grade)

GRA 60353 for the 3 hour written exam (80% of the final grade)

Both evaluations must be passed in order to get a grade in the course.

Examination support materials

BI approved exam calculator

Bilingual dictionary

Permitted examination support materials for written examinations are detailed under examination information in the student portal @bi. The section on support materials and the use of calculators and dictionaries should be paid special attention to.

Re-sit examination

It is only possible to retake an examination when the course is next taught. The assessment in some courses is based on more than one exam code. Where this is the case, you may retake only the assessed components of one of these exam codes. All retaken examinations will incur an additional fee. Please note that you need to retake the latest version of the course with updated course literature and assessment. Please make sure that you have familiarised yourself with the latest course description.

Additional information

Honour code. Academic honesty and trust are important to all of us as individuals, and are values that are integral to BI's honour code system. Students are responsible for familiarising themselves with the honour code system, to which the faculty is deeply committed. Any violation of the honour code will be dealt with in accordance with BI's procedures for academic misconduct. Issues of academic integrity are taken seriously by everyone associated with the programmes at BI and are at the heart of the honour code. If you have any questions about your responsibilities under the honour code, please ask. The learning platform itslearning is used in the teaching of all courses at BI. All students are expected to make use of itslearning.