



APPLIES TO ACADEMIC YEAR 2015/2016

## GRA 6035 Mathematics

### Programme

Core Course, Master of Science in Business, Master of Science in Financial Economics

### 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

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.

### 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

#### Honor Code

Academic honesty and trust are important to all of us as individuals, and represent values that are encouraged and promoted by the honor code system. This is a most significant university tradition. Students are responsible for familiarizing themselves with the ideals of the honor code system, to which the faculty are also deeply committed.

Any violation of the honor code will be dealt with in accordance with BI's procedures for cheating. These issues are a serious matter to everyone associated with the programs at BI and are at the heart of the honor code and academic integrity. If you have any questions about your responsibilities under the honor code, please ask.