

## Advanced Microeconomics: Game Theory (F001007)

**Course size** *(nominal values; actual values may depend on programme)*

**Credits 6.0**

**Study time 180 h**

**Course offerings in academic year 2024-2025**

A (semester 1)

Dutch, English

Gent

**Lecturers in academic year 2024-2025**

Van de gaer, Dirk

EB21

lecturer-in-charge

**Offered in the following programmes in 2024-2025**

[Bachelor of Science in Mathematics](#)

6

A

[Master of Science in Business Engineering\(main subject Data Analytics\)](#)

6

A

[Master of Science in Business Engineering \(Double Degree\)\(main subject Data Analytics\)](#)

6

A

[Master of Science in Business Engineering \(Double Degree\)\(main subject Operations Management\)](#)

6

A

[Master of Science in Business Engineering\(main subject Operations Management\)](#)

6

A

[Master of Science in Economics](#)

6

A

[Master of Science in Economics \(Double Degree\)](#)

6

A

### Teaching languages

English, Dutch

### Keywords

micro economics, game theory

### Position of the course

The aim of the course is to explain basic concepts of the theory of games. These concepts will be applied to a number of important economic problems.

### Contents

The course deals with non cooperative game theory. First we discuss the major concepts and solutions (dominant strategies, Nash equilibrium, refinements of Nash equilibrium) for games with complete information. Next we discuss games with incomplete information, followed by games with repeated interaction. We end with a discussion of evolutionary games. Each type of game will be illustrated by an application.

### Initial competences

Course microeconomics second BA and familiarity with mathematical notation and techniques.

### Final competences

- 1 Understand game theoretic concepts.
- 2 Use game theoretic concepts in applications.

### Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment

### Conditions for exam contract

Access to this course unit via an exam contract is unrestricted

### Teaching methods

Seminar, Lecture

### Extra information on the teaching methods

Lectures.

### **Study material**

Type: Slides

Name: Game theory

Indicative price: Free or paid by faculty

Optional: no

Language : English

Number of Slides : 300

Available on Ufora : Yes

Online Available : No

Available in the Library : No

Available through Student Association : No

### **References**

- Mas-Colell, A, M.D. Whinston en J.R. Green (1995), Oxford University Press.
- Vega-Redondo, F. (2003), Economics and the theory of games, Cambridge University Press.

### **Course content-related study coaching**

Study coaching will be done by the professor.

### **Assessment moments**

end-of-term assessment

### **Examination methods in case of periodic assessment during the first examination period**

Written assessment

### **Examination methods in case of periodic assessment during the second examination period**

Written assessment

### **Examination methods in case of permanent assessment**

### **Possibilities of retake in case of permanent assessment**

not applicable

### **Extra information on the examination methods**

Written exam.

### **Calculation of the examination mark**