



Course and Examination Fact Sheet: Spring Semester 2019

6,240: Game Theory and Applications

ECTS credits: 6

Overview examination/s

(binding regulations see below)

Central - Written examination (60%, 90 mins.)

Decentral - Group examination paper (all given the same grades) (30%)

Decentral - Active participation (10%)

Attached courses

Timetable -- Language -- Lecturer

[6,240,1.00 Game Theory and Applications](#) -- Englisch -- [Gizatulina Alia](#)

Course information

Course prerequisites

The target audience of this course is students in economics or business with a strong interest in learning how to solve strategic problems (encountered in economics and business) while reasoning formally, using the language of game theory. To learn effectively from this course, students must have already taken at least one formal course in Microeconomics. However, all relevant concepts will be reviewed during the course as well.

Course content

The key idea of the course is to teach students how to reason formally in game-theoretic terms and how to find optimal behaviour within any possible strategic situation, e.g., encountered in business, politics or even private interaction with friends. The introduction of the material will be gradual, starting with the simplest classical games and proceeding to build up the necessary skills to work with the most recently developed concepts in game theory. Among the applications that we will cover are the models from business, digital economics, politics and financial markets.

The course is divided, roughly speaking, into four large blocks, each corresponding to a specific type of games: static games of complete information, repeated games, static games of incomplete information, dynamic games of incomplete information. Each block will contain three main parts: 1. theoretical concepts; 2. real-life applications; 3. problem sets and exercises.

At the end of the course, the students will be able to articulate formally what is the optimal strategic behaviour in a given business or economic situation. The students will be able to apply the acquired skills to write an independent model of a strategic situation (that could be used, e.g., as one of building blocks of a Bachelor or Master thesis). Knowing the key concept of the game theory will also simplify students' understanding of the material from other microeconomics-based classes and will provide the necessary preparation for Master-level microeconomics courses.

Course structure

The course is held weekly and consists of a mixture between lectures and tutorials focused on problem-set solving.

Course literature

Main textbook:

- Tadelis, Steve (2013), Game Theory: An Introduction, Princeton University Press.

Extra literature:



- Game Theory for Applied Economists, by Robert Gibbons, Princeton University Press
- Microeconomic Theory, by Andreu MasColell, Michael Whinston and Jerry Green, Oxford University Press (chapters 7,8,9)
- Scientific papers relevant for applications will be posted on studynet in due course

Additional course information

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Examination information

Examination sub part/s

1. Examination sub part (1/3)

Examination time and form

Central - Written examination (60%, 90 mins.)

Remark

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Examination-aid rule

Extended Closed Book

The use of aids is limited; any additional aids permitted are exhaustively listed under "Supplementary aids". Basically, the following is applicable:

- At such examinations, all the pocket calculators of the Texas Instruments TI-30 series and mono- or bilingual dictionaries (no subject-specific dictionaries) without hand-written notes are admissible. Any other pocket calculator models and any electronic dictionaries are inadmissible.
- In addition, any type of communication, as well as any electronic devices that can be programmed and are capable of communication such as notebooks, tablets, PDAs, mobile telephones and others, are inadmissible.
- Students are themselves responsible for the procurement of examination aids.

Supplementary aids

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Examination languages

Question language: English

Answer language: English

2. Examination sub part (2/3)

Examination time and form

Decentral - Group examination paper (all given the same grades) (30%)

Remark

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Examination-aid rule

Term papers

- Term papers must be written without anyone else's help and in accordance with the known quotation standards, and they must contain a declaration of authorship.
- The documentation of sources (quotations, bibliography) has to be done throughout and consistently in accordance with the APA or MLA standards. The indications of the sources of information taken over verbatim or in paraphrase (quotations) must be integrated into the text in accordance with the precepts of the applicable quotation standard, while informative and bibliographical notes must be added as footnotes (recommendations and standards can be found, for example, in METZGER, C. (2017), Lern- und Arbeitsstrategien (12th ed., Cornelsen Schweiz).



- For any work written at the HSG, the indication of the page numbers both according to the MLA and the APA standard is never optional.
- Where there are no page numbers in sources, precise references must be provided in a different way: titles of chapters or sections, section numbers, acts, scenes, verses, etc.
- For papers in law, the legal standard is recommended (by way of example, cf. FORSTMOSER, P., OGOREK R. et SCHINDLER B. (2018, Juristisches Arbeiten: Eine Anleitung für Studierende (6. Auflage), Zürich: Schulthess, or the recommendations of the Law School).

Supplementary aids

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Examination languages

Question language: English

Answer language: English

3. Examination sub part (3/3)

Examination time and form

Decentral - Active participation (10%)

Remark

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Examination-aid rule

Practical examination

No examination-aid rule is necessary for such examination types. The rules and regulations of the University of St. Gallen apply in a subsidiary fashion.

Supplementary aids

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Examination languages

Question language: English

Answer language: English

Examination content

- Written central exam: covers all the material studied in the lectures: theory and exercises
- Group paper: an extended referee report on a scientific paper containing a game-theoretic model

Examination relevant literature

Written central exam:

- Lecture slides
- All covered chapters from Tadelis, Steve (2013), Game Theory: An Introduction, Princeton University Press



Please note

We would like to point out to you that this fact sheet has absolute priority over other information such as StudyNet, faculty members' personal databases, information provided in lectures, etc. When will the fact sheets become binding?

- Information about courses and examination time (central/decentral and grading form): from the start of the bidding process on 24 January 2019
- Information about decentral examinations (examination-aid rule, examination content, examination relevant literature): after the 4th semester week on 18 March 2019
- Information about central examinations (examination-aid rule, examination content, examination relevant literature): from the start of the enrolment period for the examinations on 08 April 2019

Please look at the fact sheet once more after these deadlines have expired.