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Interactive Case-Study Seminar: Fundamentals of Decision Theory and Human Behavior (FallstudienSeminar in englischer Sprache)

1. Course Description

Decision theory is concerned with three domains of problems: how a decision-making agent should make the best possible decisions given uncertain and risky circumstances in the environment; how a decision-making agent should make the best possible decision when faced by other decision-making agents who may have contrary interests; and how a group of agents acting together in a committee should make the best possible decisions. During this course students will be introduced to the fundamental concepts and principles of decision theory, such as normal and extensive form games, solution concepts, and aggregation procedures. In the last part of this course students will be introduced to a recent and now very popular methodology in economics, allowing to test for the validity of theoretical predictions, through a behavioral analysis: laboratory experiments.

This is an innovative and interactive seminar course. The goal is to create a structured problem-solving 'learning laboratory' in which students develop their abilities to think in decision-theoretic terms when presented with practical real-world decision-making problems taken from professional and business experience. All theory will be embedded in case studies which will be used to contrast 'intuitive' approaches to decision-making problems with unstructured and systematic approaches.

2. Intended Learning Outcomes

At the end of this seminar course students will have acquired

- 1) an understanding of the key concepts of classical decision theory, game theory, and collective choice,
- 2) a basic ability to systematically structure real-world problems within a decision-theoretic framework,
- 3) a basic ability to analyze a real-world problem with decision-theoretic solution concepts at an introductory level,
- 4) a basic ability to compare foundational decision-theoretic solutions with an intuitive approach to solving decision-making problems,
- 5) a basic ability to reproduce key problems of classical decision theory, game theory, and collective choice in the laboratory,
- 6) a basic ability to interpret the behavioral results of laboratory experiments, and to compare them with the decision-theoretic solutions
- 7) an ability to communicate the results of a decision-theoretic analysis in a non-technical manner to a wider audience.

3. Pre-requisites

None.

4. Teaching and Learning Strategies / Seminar Program

This is an intensive seminar course that will provide students with an introduction to the three main areas of decision theory:

- 1) Decisions under uncertainty and risk (classical decision theory)
- 2) Strategic decision-making (game theory)
- 3) Committee decision-making (collective choice)

In addition, the course will introduce students to the methodology of:

- 4) Experimental economics

Complementing the lectures on these topics, students will define and solve a selection of case studies in working groups of 4 or 5 and present their analyses in class.

Course materials will be made available via the e-learning page of the course.

5. Seminar course schedule

The seminar course is provided via seven sessions. These will take place as follows:

Session no.	Day	Date	Time	Room
1	Tuesday	14 June	18:00-22:00	TBA
2	Wednesday	15 June	18:00-22:00	TBA
3	Friday	17 June	14:00-18:00	TBA
4	Saturday	18 June	14:00-18:00	TBA
5	Sunday	19 June	14:00-18:00	TBA
6	Tuesday	21 June	18:00-22:00	TBA
7	Wednesday	22 June	18:00-22:00	TBA

6. Assessment

- For passing the seminar course, students are expected to participate in all seminar sessions.
- Group work on case studies and its presentations will count for 30% of the final mark.
- One hour unseen written examination will count for 70% of the final mark.
- The date of the examination can be found on <https://www.bwl5.uni-bayreuth.de/de/studiendekan/Klausurtermine/>.
- Students must register for the examination via CAMPUSonline. Only if students cannot register via CAMPUSonline they can register via e-mail by sending an e-mail to Manja Melcher: manja.melcher@uni-bayreuth.de. This e-mail must only contain the title of the course, the student's surname, first name, ID number, and degree of study as well as a brief indication why registration via e-mail is required.
- Later registrations will not be accepted.

7. Reading resources

- **Required pre-reading:** none. As the teaching and learning concept is based on structuring intuitive analyses no prior reading material will be distributed as this would interfere with the didactical concept.
- **Recommended reading:** students will be given a list of recommended reading at the end of each of the seminar session. These reading resources will be available via the e-learning page of the course.

8. Accreditation

- Economics (BA):
Modulbereich SQ: Schlüsselqualifikation / Modul SQ3: FallstudienSeminar in englischer Sprache
- IWE:
Modulbereich SQ: Schlüsselqualifikation / Modul SQ2b: FallstudienSeminar
- P&E (BA):
Modulbereich E: Economics / Modul E6: Spezialisierung

9. Registration

There is joint registration procedure for both case-study seminars in English language offered this summer semester:

- **33008**
Interactive Case Study Seminar: Introduction to Decision and Game Theory
(Jonathan Schiller)
- **34011**
Interactive Case-Study Seminar: Fundamentals of Decision Theory and Human Behavior
(Michela Chessa)

Further information on all seminars can be found under Teaching Summer Semester 2022 on www.governance.uni-bayreuth.de.

Students have to register via e-mail by sending an e-mail to manja.melcher@uni-bayreuth.de until **18:00h on Fri 29 April 2022**. To register the content of the e-mail should **exactly** follow the instructions as given. Those failing to do so **will not be registered**.

- **Subject line**
FallstudienSeminar in englischer Sprache
- **Content**
In the mail please give the following information in a comma-delimited list without any further details exactly as follows:
Last name,First name,Mat-Nr.,Degree,Semester,Seminar Preference
Note: No spaces between commas.
For the degree use the following coding:
Degree = Econ, IWE, P&E

Seminar Preference:

Students should use the above seminar numbers of the alternatives (33008, 34011) to order the seminars according to their preference. In case students would like to apply for one seminar only, they should only use this seminar's number. In case students are indifferent between both seminars an '=' should be written between the numbers.

▪ **Examples**

Ricardo,David,1561,Econ,1,33008

Rawls,John,18752, IWE,2, 34011,33008

Smith,Adam,12501,P&E,4,33008=34011

Allocation of seminar places will be made by **Sun 01 Mai 2022**. Students will be notified by e-mail.

Note: Given the nature of the seminar course priority in the allocation of places will be given to Economics students in the 1st and 2nd semester. The number of participants, which can be accepted for each seminar, is restricted to 20 students.

10. Responsible student Assistants for this Seminar

All requests regarding this seminar should, in the first instance, be addressed to:

- **Manja Melcher:** manja.melcher@uni-bayreuth.de