



UNIVERSITÄT  
BAYREUTH

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**Winter Semester 2024/2025**

## **Interactive Case-Study Seminar: (30026 - 2 SWS)**

### **Introduction to Decision and Game Theory**

(Fallstudienseminar in englischer Sprache)

#### **1. Course Description**

The domain of Decision Theory seeks to answer the question, "What is rational decision making?", which can be divided into three fundamental domains. The first concerns individual decision making where no other actors are involved, such as whether Person A should buy car insurance. The second pertains to strategic decision-making involving few actors, for instance, whether Company A should enter a market dominated by Companies B and C. Lastly, Decision Theory explores how social groups make collective decisions, such as determining the best voting system for international organizations.

The primary aim of this course is to equip students with practical techniques for solving these complex problems. Throughout the course, students will be given the opportunity to work independently on case studies and present their findings. The course will be taught entirely in English so that students learn to communicate and present effectively in international contexts.

#### **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, and
5. 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 Programme**

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)

Course materials will be made available via the e-learning platform after each session.

## 5. Seminar Course Schedule

The course will take place according to the following schedule:

<i>Session No.</i>	<i>Day</i>	<i>Date</i>	<i>Time</i>	<i>Room</i>
01	Thursday	07.11	16:00 – 20:00	S66
02	Friday	08.11	09:00 – 18:00	S44
03	Saturday	09.11	09:00 – 18:00	S44

## 6. Assessment

Economics (BA) and IWE students & P&E (BA) students aiming for an accreditation under Module E6 (or Ö6 under the previous examination regulations) (5 CP):

- One hour unseen written examination. If the total number of participating students for the written examination is less than five, an oral examination may replace the written one. (Students will be informed about the form of examination as soon as possible.)
- 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 Ann-Kathrin Schrickel: ann-kathrin.schrickel@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.
- The registration deadline is one week in advance to the date of the examination. Later registrations will not be accepted.

P&E (BA) Students aiming for an accreditation as a 'P4\*-Seminar' (or 'P3-Seminar under the previous examination regulations) (2 CP):

- Report based on a selected case study of the seminar course. Further information will be announced and published during the seminar.

P&E (BA) Students aiming for an accreditation as a 'P6.iv-Seminar' (5 CP) (or 'P3-Seminar' under the previous examination regulations (6 CP)):

- Seminar paper ('Hausarbeit') based on a case study. Further information will be announced and published during the seminar.

Furthermore, for passing the seminar course students are expected to participate in all seminar sessions.

## 7. Reading Resources

- Required pre-reading: none
- Recommended reading: Peterson, M. (2017). An introduction to decision theory. Cambridge University Press.

## 8. Accreditation

- Economics (BA):  
Modulbereich SQ: Schlüsselqualifikation / Modul SQ3: Fallstudienseminar in englischer Sprache
- IWE:  
Modulbereich SQ: Schlüsselqualifikation / Modul SQ2b: Fallstudienseminar
- P&E (BA):  
Modulbereich P: Philosophie / Modul P4\*: Grundlagen des Entscheidens II (Seminar)  
Modulbereich P: Philosophie / Modul P6.iv: Entscheidungstheorie (Seminar)  
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:

- **33026**  
***Interactive Case Study Seminar: Introduction to Decision and Game Theory***  
(Tim Baule)
- **33030**  
***Interactive Case-Study Seminar: Fundamentals of Decision Theory***  
(Frank Steffen)

Further information on all seminars can be found under Teaching Winter Semester 2024/2025 on [www.governance.uni-bayreuth.de](http://www.governance.uni-bayreuth.de).

Students must register via e-mail by sending an e-mail to [Felix.Hauenstein@uni-bayreuth.de](mailto:Felix.Hauenstein@uni-bayreuth.de) until **18:00h on Fri 18 October 2024**. 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, 15614, Econ, 1, 33026

Rawls, John, 18752, IWE, 2, 34011, 33026

Smith, Adam, 12501, P&E, 4, 33026=34011

Allocation of seminar places will be made by **Sun 20 October 2024**. 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 1<sup>st</sup> and 2<sup>nd</sup> semester. The number of participants that can be accepted for each seminar is restricted to 20 students.

## 10. Responsible Student Assistants for this Seminar

- Felix Hauenstein:

E-mail: [felix.hauenstein@uni-bayreuth.de](mailto:felix.hauenstein@uni-bayreuth.de)

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