

Field “Design & Behavior”

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C-SEB

CENTER FOR SOCIAL
AND ECONOMIC BEHAVIOR
UNIVERSITY OF COLOGNE

We look for the **basic economic and psychological principles** of human behavior.

- **Social and economic behavior** shape almost all aspects of our lives.
- Also the success of societies, politics, and markets strongly depends on **behavior as well as the underlying motivation and cognition**.
- Therefore, a sound knowledge about the **determinants** of human behavior, and how it can be ‚managed‘, is of crucial importance for understanding and addressing major challenges to society and humanity.



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- C-SEB aims to develop an **empirically based theory that explains the effects of economic incentives and human information processing** in social and economic contexts.
- To do so, we combine knowledge from **behavioral economics** and **social cognition research**.
- In particular, we seek to build a bridge between **laboratory research** and **real-world contexts** in order to contribute to solutions to contemporary challenges in the economy, e.g. cooperation and trust in negotiations or organizations or the design of incentive systems in companies or markets.

Research Units within C-SEB

- The **DFG Research Unit “Design & Behavior: Economic Engineering of Firms and Markets”** conducts research in order to design mechanisms in firms and markets.
- The **DFG Research Unit “Psychoeconomics”** brings together researchers from different disciplines to develop an integrative, data-driven understanding of how interacting motives affect human decisions and behavior.
- The **DFG Research Unit “Relativity in Social Cognition”** investigates the antecedents and consequences of comparative thinking by incorporating findings from psychology and economics.
- The **UoC Forum “Motivation, Self-Control, and Economic Behavior”** is an interdisciplinary endeavor providing a scientific platform for structuring research in the field of self-control.
- The **UoC Research Group “Behavioral Management Science Group”** is a network of C-SEB members and other researchers of the Faculty of Management, Economics, and Social Sciences at the UoC that conducts research on management practices by employing methods from behavioral economics.

The field „Design & Behavior“- Overview

- The field „Design & Behavior“ may include the following moduls:

Specialisation section	ECTS	CC/EC	Required ECTS	
Seminar Design and Behavior	6	CC	6	18
Economic Engineering	6	EC	12	
Auction Theory	6	EC		
Contract Theory	6	EC		
Behavioral Economics	6	EC		
Behavioral Economic Theory	6	EC		
Topics in Design and Behavior A	6	EC		
Topics in Design and Behavior B	6	EC		
Topics in Design and Behavior C	6	EC		
Topics in Design and Behavior D	6	EC		
Matching and Market Design: Theory and Practice	6	EC		



Specialisation module **Seminar Design and Behavior**

- **Learning objectives**

The students

- independently investigate current issues in research and applied practice in design and behavioral economics, applying the microeconomic knowledge they have acquired on the program.
- critically study the theoretical and practical literature on the subjects.
- summarize their findings in a written paper, present their results and discuss them with the other seminar participants.

- **Module content**

Current issues in design, behavioral and experimental economics.

- **Modul manager**

Univ.-Prof. Dr. Bettina Rockenbach

Specialisation module **Economic Engineering**

▪ **Learning objectives**

The students

- learn how to apply their theoretical and empirical skills to real markets.
- learn methods for identifying problems in markets and developing and discussing possible solutions.
- read literature and are thereby introduced to current research questions and also encouraged to develop and present their own ideas for research.

▪ **Module content**

- Evaluation of the roles of theory and laboratory/field experiments in the development of markets and incentive systems.
- Analysis of relevant behavioral phenomena and institutional details of particular importance for specific designs.
- Discussion of practical applications of economic engineering in matching markets, auctions and other markets.

▪ **Module manager**

Univ.-Prof. Dr. Axel Ockenfels

Specialisation module **Auction Theory**

- **Learning objectives**

The students

- acquire a deeper understanding of the economic theory of auction design.

- **Module content**

- Auctions with “private values”: second-price auctions, first-price auctions, reservation prices, revenue equivalence theorem, extensions
- Mechanism design: revelation principle, optimal mechanisms, efficient mechanisms
- Auctions with “interdependent values”: comparisons of auction proceeds, linkage principle

- **Module manager**

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Specialisation module **Contract Theory**

- **Learning objectives**

The students

- recognise the concepts of information economics.
- describe and model situations with information asymmetries between several parties.
- analyse and discuss causal relationships in contract theory.
- apply methods for solving contract theory problems.

- **Modul content**

- Principal-agent models
- Mechanism design
- Hold-up problem
- Incomplete contracts

- **Module manager**

Univ.-Prof. Dr. Patrick W. Schmitz

Specialisation module **Behavioral Economics**

- **Learning objectives**

The students

- are able to understand behavioral models and follow formal arguments.
- can apply microeconomic concepts.
- are able to challenge arguments.

- **Module content**

Using the concept of the homo economicus, the module presents behavioral theory concepts that are based on findings from empirical and experimental research. The lectures provide an introduction to bounded rationality theories, focusing on those theories' criticism of the homo economicus concept.

- **Modul manager**

Univ.-Prof. Dr. Bettina Rockenbach



Specialisation module **Behavioral Economic Theory**

- **Learning objectives**

The students

- are able to understand formal concepts and follow formal arguments.
- can apply elementary microeconomic concepts.
- can challenge arguments.

- **Module content**

- Static behavioral equilibrium
- Behavioral dynamics
- Behavioral preference models
- Multiple-self models
- Thinking about thinking

- **Module manager**

Univ.-Prof. Dr. Carlos Alós-Ferrer

Specialisation module **Topics in Design and Behavior A - D**

- **Learning objectives**

The students

- investigate current theoretical and applied issues in market and institution design with the methods and theories used in behavioral economics and microeconomics.
- examine and assess the applicability of various economic concepts.
- discuss the results in class with other course participants.

- **Module content**

Latest issues in institution and market design, plus methods and theories used in behavioral economics and applied microeconomics.

- **Module manager**

Univ.-Prof. Dr. Bettina Rockenbach



Specialisation module **Matching and Market Design:**

Theory and Practice

- **Learning objective**

The students

- learn about leading theoretical models of matching markets.
- learn how a mixture of theory, experiments, and empirics can be used to analyse existing matching mechanisms and, if necessary, design better ones.

- **Module content**

- One-sided matching: House allocation and organ exchange
- Two-sided matching: Entry-level labor markets
- School choice and random assignment
- Matching with contracts: Distributional constraints and internet-ad auctions
- Large matching markets
- Combinatorial assignment and course allocation

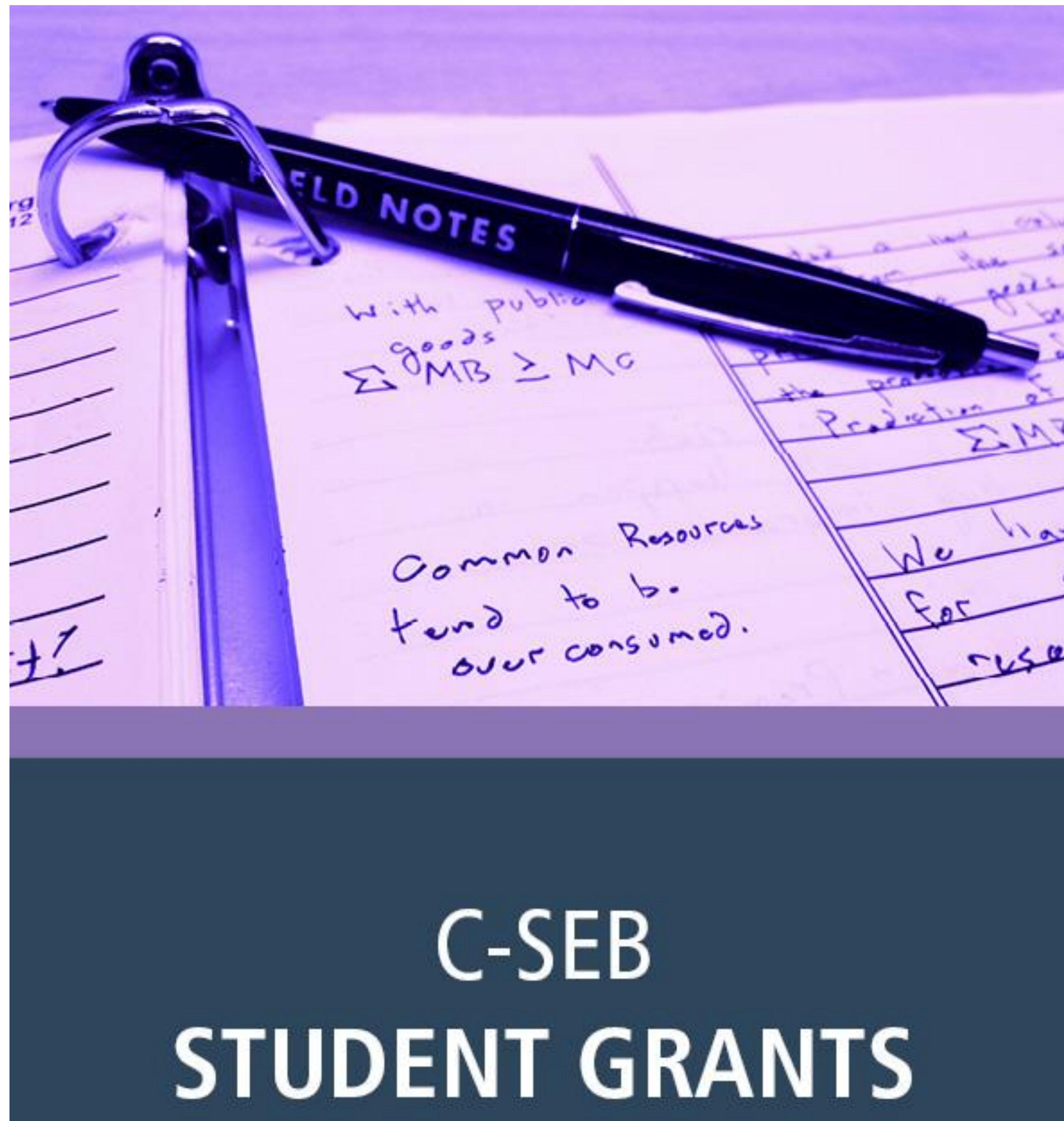
Module manager

Univ.-Prof. Dr. Alexander Westkamp

Upcoming courses

- Seminar Design and Behavior: “Topics in Behavioral Economics” (14289.0602), SS17, Dr. Wenner,
Seminar “Topics in Market Design” (14289.1100), SS17, Prof. Dr. Westkamp,
Seminar “Topics in Decision and Game Theory” (14289.0304), WS17/18, Prof. Dr. Alós-Ferrer
- Economic Engineering: Lecture/Exercise “Economic Engineering” (14289.0000/14289.0001), WS17/18, Prof. Dr. Ockenfels, Prof. Dr. Westkamp and Prof. Dr. Cramton (International Faculty)
- Auction Theory: Lecture/Exercise “Auction Theory” (14289,0200/14289.0201), SS17, N.N.
- Contract Theory: Lecture/Exercise “Contract Theory” (14289.0100/14289.0101), SS17, Prof. Dr. Schmitz
- Behavioral Economics: Lecture/Exercise “Behavioral Economics” (14289.0600/14289.0601), WS17/18, Dr. Lauer
- Behavioral Economic Theory: Lecture/Exercise “Behavioral Economic Theory (Adv.)” (14289.0304/14289.0305), SS17, Prof. Dr. Alós-Ferrer
- Matching and Market Design: Theory and Practice: Lecture/Exercise “Matching and market design: theory and applications” (14289.1100), WS17/18, Prof. Dr. Westkamp
- Topics in Design and Behavior A-D: “Conducting Experiments with zTree” (14289.0603), SS17, Dr. Lauer

Funding opportunity for experimental master theses



For further information: <http://c-seb.de/>