

课程大纲 COURSE SYLLABUS

1.	课程代码/名称 Course Code/Title	博弈与行为
2.	课程性质 Compulsory/Elective	专业选修课
3.	开课单位 Offering Dept.	商学院
4.	课程学分/学时 Course Credit/Hours	3 学分
5.	授课语言 Teaching Language	英文
6.	授课教师 Instructor(s)	董璐
7.	开课学期 Semester	秋学期
8.	是否面向本科生开放 Open to undergraduates or not	否
9.	先修要求 Pre-requisites	(如面向本科生开放, 请注明区分内容。 If the course is open to undergraduates, please indicate the difference.) No.

10. 教学目标 Course Objectives

(如面向本科生开放, 请注明区分内容。 If the course is open to undergraduates, please indicate the difference.)

1. 培养学生的行为洞察力和直觉, 使他们能够更好地理解、预测和解释现实世界中的战略互动。
2. 通过分析实验证据及其与博弈之间的关系, 帮助学生了解人类行为如何受到潜在的商业和社会利益驱动, 并将这些洞察应用于现实生活案例分析。
3. 结合课堂游戏和体验式学习, 让学生亲身体验战略互动, 并运用所学的直觉和商业分析能力更好地处理现实生活中出现的问题。
4. 通过讨论经济、商业和政治背景下的实际案例, 使学生能够应用行为洞察和直觉来深入理解各种现实世界的战略问题。
5. 鼓励学生之间以及与教师之间的讨论和合作, 共同学习和理解游戏理论, 以提高解决现实生活中战略问题所需的行为洞察和直观知识。

1. Cultivate students' behavioral insight and intuition, enabling them to better understand, predict, and interpret strategic interactions in the real world.
2. Help students understand how human behavior is driven by potential business and social interests by analyzing empirical evidence and its relationship with games, and apply these insights to real-life case analysis.
3. Combine classroom games and experiential learning to allow students to experience strategic interaction firsthand and use their learned intuition and business analysis skills to better handle problems encountered in real life.
4. Enable students to apply behavioral insights and intuition to in-depth understanding of various real-world strategic issues through discussion of actual cases in economic, business, and political contexts.
5. Encourage discussions and collaborations between students and teachers to learn and understand game theory together, improving behavioral insights and intuitive knowledge needed to solve strategic problems in real life.

11. 教学方法

Teaching Methods

(如面向本科生开放, 请注明区分内容。 If the course is open to undergraduates, please indicate the difference.)

1. 课堂游戏和实验: 通过组织课堂博弈和实验, 让学生亲身参与战略互动, 从而提高直观理解和行为洞察力。
2. 传统的游戏理论分析: 在介绍各种游戏类型的同时, 运用传统的博弈论分析方法, 教授学生如何寻找和分析纳什均衡、混合策略均衡等关键概念。
3. 实验数据及案例分析: 结合实验室实验数据和现实生活案例, 分析阐述行为与理论预测之间的差异, 以及应用行为洞察和改进的理论模型来更准确地预测人类行为。
4. 勾画行为模型: 介绍行为经济学的核心概念和模型, 如社会偏好模型、不完全觉悟均衡等, 并教授如何在实际博弈环境中应用这些行为模型。

1. Classroom games and experiments: By organizing classroom games and experiments, students can participate in strategic interactions to improve their intuitive understanding and behavioural insights.
2. Traditional game theory analysis: Introduce various game types and use traditional game theory analysis methods to teach students how to find and analyse key concepts such as Nash equilibrium and mixed strategy equilibrium.
3. Experimental data and case analysis: Combine laboratory experimental data and real-life cases to analyse and explain the differences between behaviour and theoretical predictions, and apply behavioural insights and improved theoretical models to more accurately predict human behaviour.
4. Sketching behavioural models: Introduce the core concepts and models of behavioural economics, such as social preference models, quantal response equilibrium (QRE), and imperfect awareness equilibrium, and teach how to apply these behavioural models in actual game environments.

12. 教学内容

Course Contents

(如面向本科生开放, 请注明区分内容。 If the course is open to undergraduates, please indicate the difference.)

Section 1 基础博弈论 Foundations of Game Theory	本部分介绍博弈论的基础框架和策略的基本类型。我们将讨论博弈的表示方法, 理性玩家的行为以及策略的支配性。 This section introduces the foundational framework of game theory and basic types of strategies. We discuss ways to represent games, how rational players behave, and the dominance of strategies.
Section 2 均衡概念 Equilibrium Concepts	探索寻找博弈均衡的方法, 包括纳什均衡和混合策略均衡, 以及在没有支配策略的博弈中求解均衡的技巧。 Explore methods for finding game equilibria, including Nash equilibria and mixed strategy equilibria, and techniques for solving equilibria in games without dominated strategies.
Section 3 高级博弈论 Advanced Game Theory	本部分涉及复杂博弈结构, 如非矩阵博弈和多个均衡的选择问题, 以及如何在多种可能的均衡中做出选择。 This section covers complex game structures, such as non-matrix games and issues of multiple equilibria, and how to choose among several possible equilibria.
Section 4 顺序博弈和信息不对称 Sequential Games and Information Asymmetry	深入探讨顺序博弈和信息不完全的博弈, 学习如何解决这些博弈中的纳什均衡和子博弈完美均衡。 Dive into sequential games and games with incomplete information, learning to solve for Nash equilibria and subgame perfect equilibria in these settings.
Section 5	探索在有信息不对称的情况下玩家如何通过信号传递策略影响对手的行为, 包括成本信号和廉价闲聊博弈。

战略行为和信号 Strategic Behavior and Signaling	Explore how players influence opponents' behavior through signaling strategies in the presence of information asymmetry, including costly signaling and cheap talk games.
Section 6 议价和社会困境 Bargaining and social dilemma	讨论博弈论中的议价问题和社会困境，如公共物品博弈和共享资源的管理。 Discuss bargaining issues in game theory and social dilemmas, such as public goods games and the management of common pool resources.

13. 课程考核

Course Assessment

(考核形式 Form of examination; .分数构成 grading policy; 如面向本科生开放, 请注明区分内容。 If the course is open to undergraduates, please indicate the difference.)

1. 课堂考勤 (10%) 每次课程开始时记录学生出勤情况。无故缺席将影响总成绩。全勤得满分 (10%) , 每缺席一次扣除 1%。
 2. 论文汇报 (30%) 以个人汇报的形式在期末有一次论文汇报。老师会给出需要汇报的论文, 汇报时需使用 PowerPoint 或其他视觉辅助工具。
 3. 课堂测验 (60%) 每学期共进行 2 次随堂测验, 每次占总成绩的 30%。会提供例题, 覆盖至测验前所讲授的课程内容。
1. Class Attendance (10%) Attendance is recorded at the beginning of each class. Unexcused absences will impact the overall grade. Full attendance earns a full score (10%), with 1% deducted for each absence.
 2. Paper Presentation (30%) At the end of the term, there is a paper presentation session where students present individually. The instructor will assign the papers to be presented. Presentations must use PowerPoint or other visual aids.
 3. In-class Quizzes (60%) There are two quizzes throughout the semester, each accounting for 30% of the total grade. Sample questions will be provided, covering the course content taught up to the quiz.

14. 教材及其它参考资料

Textbook and Supplementary Readings

主要教材: Carpenter, J., & Robbett, A. (2022). Game Theory and Behavior. The MIT Press
参考书目:

1. Pinker, S. (2021). Rationality: What It Is, Why It Seems Scarce, Why It Matters. Penguin Press.
2. Jackson, M. O. (2018). The Human Network. Pantheon Books.
3. 卡尼曼, D. (2012). 思考, 快与慢. 机械工业出版社.
4. 阿克洛夫, G., & 席勒, R. J. (2009). 动物精神: 如何运用人性理解经济. 中信出版社.
5. 泰勒, R., 桑斯坦, C., (2018) 助推: 关于健康、财富与幸福的决策. 复旦大学出版社.
6. 其他国内外关于行为经济学的经典论文和著作, 以及实证研究与案例分析。

Main Textbook: Carpenter, J., & Robbett, A. (2022). Game Theory and Behavior. The MIT Press

Reference Books:

- Pinker, S. (2021). Rationality: What It Is, Why It Seems Scarce, Why It Matters. Penguin Press.
- Jackson, M. O. (2018). The Human Network. Pantheon Books.
- Kahneman, D. (2012). Thinking, Fast and Slow. China Machine Press.
- Akerlof, G., & Shiller, R. J. (2009). Animal Spirits: How Human Psychology Drives the Economy, and Why It Matters for Global Capitalism. CITIC Press.
- Thaler, R., Sunstein, C. (2018) Nudge: Improving Decisions About Health, Wealth, and Happiness.

Fudan University Press.

- Other classic papers and works on behavioral economics from both domestic and international sources, as well as empirical research and case analysis.