

Curriculum «Behavioral Economics»

Approved

MP Academic Council

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Number of credits	4
Contact hours	56
Self-study	96
Year of study	2nd year
Format of study	Offline

I. PURPOSE, RESULTS AND PEREQUISITES

PURPOSE

The course aims at getting the students familiar with the main approaches and problems of contemporary behavioural economics – a relatively new, interdisciplinary area which stems from the basic paradigm of economic science (rational behaviour), extending it towards a greater descriptive accuracy in the light of the achievements of contemporary psychology. Topics studied within this discipline cover various aspects of individual and interactive decision making in laboratory and real settings, and are closely connected with experimental studies at all levels – from cognitive neuroscience to field experiments.

RESULTS

Students who have successfully completed the course are expected to

- understand the basic principles of economic analysis of human behaviour,
- be familiar with the key theoretical and experimental papers in the area,
- be able to analyse individual behaviour in the light of this literature and apply this

knowledge in their research practice, as confirmed by their completion of an original research project.

PEREQUISITES

- working knowledge of English as necessary to communicate and read scientific literature
- working knowledge of mathematics (calculus and probability theory)
- knowledge of the basics of cognitive psychology and economic theory (microeconomics)

II. CONTENT

1. **Introduction. Economic and psychological approaches to human behaviour**

Differences between economic and psychological approaches: rationality, behaviour, observational vs. experimental studies. Examples of economic theories and economic experiments. Key names in the field.

2. **Rationality and economic way of thinking.**

Basic tenets of rationality and its concepts. Ordered preferences and their representation by utility functions. Consistency of preferences. Choice functions. Revealed preferences, their types and their relation to choices and utilities. Examples.

3. **Heuristics and biases.**

Deviations from normative rationality. Heuristics and biases paradigm by Kahneman and Tversky. Examples of heuristics and their meaning. Classroom experiments.

4. **Behaviour under risk and uncertainty.**

Definitions of risk and uncertainty. History of the concepts. Expected utility theory of von Neumann-Morgenstern and its axioms. Experimental evidence: the Allais paradox. Subjective expected utility. Rank-dependent utilities and Prospect Theory by Kahneman-Tversky. Examples.

5. **Models of individual decision: statics.**

Characteristic properties of individual decisions: loss aversion, reference points, status quo, and their implications for human decisions. R.Thaler: mental accounting, nudging and applications to transportation behaviour, saving, honesty, health studies, education etc. Nudge units around the globe and their practice.

6. **Models of individual decision: dynamics.**

Intertemporal preferences and intertemporal inconsistency. Exponential and hyperbolic discounting. Multiple selves models and their applications to temptation, self-control, procrastination.

7. **Behavioural game theory.**

Game theory and behavioural games. Ultimatum, dictator, trust game – theoretical predictions and empirical evidence. Deviations from theoretical predictions and their explanations. Behavioural theories of collective decision making: inequity aversion, fairness, reciprocity, guilt aversion etc. Experimental evidence.

8. **Social preferences.**

Social dilemmas and collective choice. The public goods game and cooperation across the globe. Punishment in experiments and in the field. Explanation to behavioural puzzles.

9. Experimental methods and data processing techniques.

Principles of experimental design and tenets of economic experiments. Types of experiments. Hypotheses testing, parametric and non-parametric statistics. Examples and applications.

III. GRADING

Course grade is formed of the following components:

Home assignment (one per topic) – 20%

Course project (preliminary and final presentation and a written report) – 30%

Final examination – 50%

Pass grade is 34%. Excellent grade is 70% and above.

IV. EXAMPLES OF ASSESSMENT QUESTIONS

1. Two players play the trust game: if the first player decides not to trust, then both players receive 5 (payoff (5,5)). If he trusts, the second player gets the move, and may either honor the trust of the first with payoffs (10, 10), or betray with payoffs (1, 19).

Suppose player 1 is the conventional expected value maximizer, and player 2 has inequity aversion preferences with

$$u_2 = 20 - x - 2\max(x - (20 - x), 0) - b \max((20 - x) - x, 0) \quad (1)$$

Utility of player 2, including the value of b parameter, is common knowledge.

(a) Determine how would player 2 behave depending on the values of b

(b) How player 1 will respond in these cases? Characterise equilibria of the game

2. Read Kahneman and Tversky (1979) Prospect theory: an analysis of decision under risk, and answer the

following questions:

(a) Is prospect theory compatible with the independence axiom A2 of the von Neumann-Morgenstern EUT?

(b) Is it compatible with continuity axiom A3?

(c) Are preferences governed by prospect theory compatible with rationality?

V. RESOURCES

1. Core literature

Angner, Erik. (2016) A course in Behavioural Economics. 2nd ed, Palgrave Macmillan.

Wilkonson, Nick and Klaes, Matthias. (2012). *An introduction to Behavioural Economics*.
Palgrave Macmillan

2. Additional literature

Kahneman, D., Slovic, P., & Tversky, A., eds. (1982). *Judgment Under Uncertainty: Heuristics and Biases*. New York: Cambridge University Press. (2008 edition, есть рус.пер.)

Kahneman, D. & Tversky, A., eds. (2000). *Choices, values and frames*. Cambridge: Cambridge University Press.

Camerer C., Loewenstein G., Rabin M., eds. (2004). *Advances in Behavioural Economics*. Princeton: Princeton University Press.

Plous, Scott (1993). *The Psychology of Judgment and Decision Making*. New York: McGraw Hill.

Gigerenzer, Gerd, and Selten, Reinhard, eds. (2002) *Bounded Rationality: The Adaptive Toolbox*. Cambridge: Cambridge University Press.

Camerer, Colin. (2003) *Behavioural Game Theory: Experiments in Strategic Interaction*. Princeton University Press.

3. Software

№	Name	Access conditions
1.	Microsoft Windows 7 Professional RUS Microsoft Windows 10 Microsoft Windows 8.1 Professional RUS	<i>From the local network of HSE (agreement)</i>
2.	Microsoft Office Professional Plus 2010	<i>From the local network of HSE (agreement)</i>
3	R Development Core Team (2008). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. ISBN 3-900051-07-0, URL http://www.R-project.org .	Open license software

4. Material and technical support of the discipline

Classrooms for lectures on the discipline enable the use and demonstration of thematic illustrations that correspond with the program disciplines and includes:

- Personal computers with Internet access (operating system, office software, antivirus software);
- Multimedia projector with the remote control.

Classrooms for practical and laboratory classes of the discipline have the Internet access to the electronic informational and educational environment of the HSE.