

## Thinking and Decision Making

**Subject area:** Industrial Engineering

<b>University:</b>	Technion
<b>Level:</b>	BA all years, MA all years, PhD
<b>Teaching mode:</b>	completely online, at specific time
<b>Instructor(s):</b>	Ido Erev

### Short description

The course reviews basic research in behavioral economics, and examines how this research can be used to predict the impact of new technologies and policies.

### Full description

The course reviews basic research in behavioral economics, and examines how this research can be used to predict the impact of new technologies and policies. It starts by considering three lines of studies of human decision making. The first focuses on rational economic theory. The second focuses on experiments designed to clarify the way human behavior deviates from the prediction of rational economics theory in simple choice tasks. The third line focuses on the way people learn from experience, and extends the analysis to environments in which rational economic theory cannot be used to derive clear predictions. The second part of the course examines the practical implications of the research reviewed in the first part. It considers the impact of nudges and behavioral mechanism design.

The final grade will be determined by four factors:

10% Class participation (answering question using google form during the classes).

20% Presentations of research/engineering ideas (during the tutorial sessions).

20% Participation in a choice prediction competition

50% Final multiple-choice exam that focuses on predicting choice behavior.

Topics by week

- 1 The impact of money, and the value of the rationality assumption
- 2 Expected utility theory and the Allie's paradox
- 3 The JDM separation assumption, prospect theory
- 4 Probability judgment
- 5 The DE-gap
- 6 Six contradictory deviations
- 7 The potential of Nudges
- 8 The replication crises
- 9 Choice prediction competitions
- 10 Mega intervention studies
- 11 Fake news

- 12 Rule enforcement
- 13 Student presentations and summary

### Learning outcomes

Better understanding of the implications of basic research in behavioral economics, and the value of quantitatively model of human decision making

### Recommended in particular for students of the following study programmes

Economics, Industrial Engineering, Business/Management

### General information

**Contact hours per week:** 3  
**Total workload:** 70 (in student hours for the whole course)  
**ECTS credits:** 2.5  
**Language:** English

**Course start date:** 21 March 2023  
**Course end date:** 07 June 2023  
**Add. info about start date:**  
**Weekly teaching day/time:**  
**Time zone:** CET +1 (Estonia, Israel)  
**Further information:**

**Prerequisites:** Basic programing skills  
**Activities and methods:** Lectures, Exercises, Tutorial sessions  
**Presence on campus:** no

### Final examination

**Form:** written  
**Date:**  
**Location/format:** online  
**Re-sit possibility:** yes

**Transcript available:** end of semester

**Add. info/requirements:**

## Registration

To register for this course, follow the registration requirements of your **home university** as specified here: [www.euroteq.eu/courses-registration](http://www.euroteq.eu/courses-registration).

## Administration

**Number of places:** 30

**Minimum participants:**

**Internal course code:** 096617

**Contact:** [erevido@gmail.com](mailto:erevido@gmail.com)

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*This course is part of the EuroTeQ Engineering University joint course catalogue 2023. This is a collaborative activity of the partner universities DTU, L'X, TU/e, TalTech, CTU, TUM as well as Technion. Students from these universities can participate in the offered courses. It is the responsibility of the student to check if you fulfil the requirements to participate in a specific course. Students are also advised to check with their home institution how to get recognition of the ECTS credits gained in courses of the EuroTeQ course catalogue. For further information about EuroTeQ Engineering University, visit [www.euroteq.eu](http://www.euroteq.eu) or get in touch with the above-mentioned point of contact.*