



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Introduction to cognitive science

### Course

Field of study

Artificial Intelligence

Area of study (specialization)

Computing

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

1/2

Profile of study

general academic

Course offered in

english

Requirements

compulsory

### Number of hours

Lecture

16

Laboratory classes

Other (e.g. online)

Tutorials

16

Projects/seminars

### Number of credit points

3

### Lecturers

Responsible for the course/lecturer:

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Responsible for the course/lecturer:

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### Prerequisites

Student has engineering abilities and teamwork skills. Student is capable to summarise the most important information from scientific and research references.

### Course objective

The objective of the course is to introduce the actual knowledge about the mind and attempt to understand the human with the reference the various sources and fields of knowledge.

### Course-related learning outcomes

#### Knowledge

Student has knowledge about the cognitive processing and its impact on the economic environment, including business activities [K2st\_W8] [K2st\_W9].

#### Skills

Student has ability to apply the approaches, such as: phrenology, introspection, artificial intelligence, empirical theory of mind to describe the cognitive processing and to use the information and communication techniques applied during the Information Technology projects.

Student has ability to communicate using the different techniques in professional and others environments [K2st\_U11].

Student has ability to apply the knowledge from modeling the performance of environment with the application of SI [K2st\_U11] [K2st\_U9].

#### Social competences

Student knows and apply in social life the main standards and values. Student cooperates with team. Student realizes tasks with engagement and on target [K2st\_K4] [K2st\_K2].

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: maximum score is 100 points (50 points for essay, 50 points for written assignment).

Tutorial: maximum score is 100 points (teamwork in preparation and participation in Oxford debate - 80 points, summary and reasoning - 20 points).

Marks: 2.0 – from 50 points, 3.0 – from 51 to 60 points, 3.5 – from 61 to 70 points, 4.0 – from 71 to 80 points, 4.5 – from 81 to 90 points, 5.0 – from 91 to 100 points.

### Programme content

Introduction to the issue of cognitive science.

The concept of two systems in the act of human mind.

Heuristics and cognitive bias, i.e., judgements in uncertain conditions.

The intuition in experts evaluations.



The approach to risk in decision making processes.

The elements of framing effect in relation to cognitive processing.

### Teaching methods

Lecture, presentation, discussion, teamwork, Oxford debate.

### Bibliography

#### Basic

Kahneman, D. (2012). Thinking, Fast and Slow, Penguin Books.

#### Additional

Kahneman, D., Slovic, S. P., Slovic, P., & Tversky, A. (Eds.). (1982). Judgment under uncertainty: Heuristics and biases. Cambridge university press.

Kahneman, D., & Tversky, A. (2013). Prospect theory: An analysis of decision under risk. In Handbook of the fundamentals of financial decision making: Part I (pp. 99-127).

Levin, M., & Hayes, S. C. (2009). ACT, RFT, and contextual behavioral science.

Klawiter, A. (2008). Formy aktywności umysłu. Ujęcia kognitywistyczne. Emocje, percepcja, świadomość, 1.

Magrini, M. (2019). Mózg. Podręcznik użytkownika.

Ohme, R. (2017). Emo sapiens: harmonia emocji i rozumu. Wydawnictwo Bukowy Las.

### Breakdown of average student's workload

	Hours	ECTS
Total workload	70	3,0
Classes requiring direct contact with the teacher	35	1,5
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) <sup>1</sup>	40	1,5

<sup>1</sup> delete or add other activities as appropriate