Course description

Name of the course: Topics in cognitive psychology

Instructor: Zoltan Jakab, PhD. habil.

Aims:

The goal of the course is to offer an overview of the field of cognitive psychology with a focus on current theoretical and methodological approaches. We will address perception, attention, memory, language, theories of concepts, thinking, and problem solving; the controversies surrounding learning (the nature-nurture debate). In presenting models of cognition, we will also make a comparison of with current AI and analyse on a non-technical level, the similarities and differences between the two fields (human vs. artificial intelligence). The emphasis is on selecting interesting topics and areas, offering an atmosphere of intellectual adventure, instead of a systematic course in cognitive psychology.

Learning outcomes and competences:

Knowledge:

- experimental investigation of human and animal cognition
- computational models, theoretical debates surrounding the origin of knowledge

Skills:

- understanding and thinking about problems in cognitive psychology
- using knowledge in one's own profession (e.g., pedagogy)

Attitude:

- interest in the discussed field
- intellectual openness wrt potentially interesting / useful areas of research to one's profession

Autonomy and responsibility:

- growing independence in thinking about psychological theory
- activity in participation, and fulfilling course requirements

The content of the course:

Main content and topics:

1. The subject and methods of cognitive psychology

2. Sensation and perception

3. Attention

4. Learning 1: Learning and the environment; types and mechanisms of learning

5. Learning 2: Mindreading

6. Memory

7. Problem solving, heuristics, and decision making

8. Mental imagery. Analog and propositional representation

9. Cognition and emotion; consciousness in cognitive psychology and neuroscience

10. Computatiponal models: human cognition and artificial intelligence

11. Cognitive development from the point of view from cognitive psychology: nativism, constructivism, and core cognition

System of evaluation: term paper (take-home exam)

Relevant literature:

Recommended books:

1. Sternberg, R. J., & Sternberg, K. (2016). *Cognitive Psychology* (7th ed.). Wadsworth Publishing.
2. Dehaene, S. (1997). *The number Sense*. Oxford University Press.
3. Pinker, S. (2015). *The Language Instinct*. Penguin Books.
4. Carey, S. (2009). *The origin of concepts*. Oxford University Press.

I will recommend (and make available) further readings (mainly research articles) based on the students' individual interest and chosen term paper topic.