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## **Outline of syllabus Cognitive Science BSCS 2019**

Lecturer: Dr. Vladimíra Čavojová

Time: September 9 – September 13, 2019, 9AM to 1:30 PM

Office hours: One hour after classes from Monday to Thursday.

Classes will be generally divided into four blocks: (1) Lecture, (2) Discussion about the assigned readings, (3) Hands-on activity, (4) Summary.

There will be required reading for each class that will provide background or more details to the lecture and will be basis for the subsequent discussion. Students should choose one of the mandatory readings and they are required to fill in pre-discussion handout before each discussion students. In the handout they (1) identify three passages suitable for discussion and note the reasons for their choice, (2) identify and define two psychological terms or difficult vocabulary for each passage, and (3) create five open-ended questions encouraging critical thinking about the read text. The discussion points should be sent to [vcavojova@gmail.com](mailto:vcavojova@gmail.com) until 23:59 before the respective session (or any time sooner).

During the course of discussion students take turns in leading discussion and they should get to discussing at least one of their chosen passage and at least 2 questions. The evaluation will be based on written discussion points and group discussion presentation during class.

Hands-on activity will be either participating in research, thought experiments, or devising and evaluating simple cognitive experiments.

Each day will end with a summary of the main take-away points.

At the end of the week students will hand in the final paper discussing a topic related to cognitive science and providing interdisciplinary view, using relevant sources and providing own critical view. The paper should have proper form: informative title, abstract, text divided into subsections, clear citation, using APA style.

Assessment: Readings 25 %, Group discussion 25 %, Paper 50%

### Grading

0-50 %	Fx
51-60 %	E
61-70 %	D
71-80 %	C
81-90 %	B
91-100 %	A

## Preliminary outline of topics

### 1. What is cognitive science & Historical roots of cognitive science

- Philosophical roots (Body-mind problem, The knowledge acquisition problem)
- Psychological roots (Scientific method, preview of psychological movements that preceded cognitive revolution)
- Case study: Scientific methods
- Reading:  
Stanovich, K.E. (2013). *How to Think Straight About Psychology*. 10<sup>th</sup> edition. Pearson. Chapter 1: Psychology Is Alive and Well (and Doing Fine Among the Sciences), pp. 1-20.

### 2. Interdisciplinarity and integration challenge

- Cognitive revolution (Historical landmarks)
- Integration challenge
- Case study: neurophilosophy
- Reading:  
Churchland, P. S. (2017). Neurophilosophy. (Chapter 4). In D. Livingstone Smith (Ed.), *How Biology Shapes Philosophy: New Foundations for Naturalism*. Cambridge University Press. pp. 72—94.

### 3. Information-processing models of the mind

- Physical symbols theory
- Neural networks & distributed cognition
- Case study: Problem of consciousness
- Reading:  
McEwan, I. (2019). *Machines Like Me*. Pinguin books. Chapter 5 – 7 (from bottom of p. 127—182).

### 4. Organization of the mind

- Modularity
- Dynamical systems & situated cognition
- Case study: theory of mind and empathy
- Reading:  
Mercier, H. & Sperber, D. (2017). *Enigma of Reason*. Pinguin books. Part II. Understanding Inference, pp. 49 – 106.