COT-6931 Topics in Cognitive Science (3 credits)

Catalog Description
A "top-down" view of Computer Science, in particular artificial intelligence, by studying the computational aspects of human cognition.

Prerequisites
Permission of the instructor.

Type
Elective for CS Master and Ph.D. students
Particularly relevant for the Intelligent Systems and Cognitive Science PhD tracks

Course Objectives
The course objectives are to understand and discuss answers to questions such as, "What is artificial intelligence and is it possible?" and "How does the human mind work and what can computers teach us about it?" Students learn about the limitations of existing computer programs and compare them to human memory, learning, and language capabilities.

Sample Topics Covered
- Foundations of cognitive science
- Human memory
- Meaning and mental representations
- Representation and computation
- Language, linguistics and semantics
- Computational linguistics
- Innateness and connectionist perspective on development
- Physiology of behavior
- Embodied cognition
- Emotions and consciousness
- Situated cognition

Textbook
- Paul Thagard. *Mind: Introduction to Cognitive Science*. MIT Press, Second Edition, 2005, ISBN 0-262-70109-X
- William Clancey. *Situated Cognition, On Human Knowledge and Computer Representations*. Cambridge University Press, 1997.
- A collection of articles available online which may vary each year.

Last Update
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