

## CCNM17-115: Evolutionary Psychology Course Description

### **Aim of the course**

**Aim of the course:** Students shall first learn about the basic principles of evolutionary theory and its applications to psychological phenomena, and develop an understanding of what an evolutionary approach can bring to our knowledge of human behavior and mental processes: that natural selection affects not only morphological features and physiological processes of living beings, but also the nervous system, the brain, and thus mental processes and behavior, even in humans. Then the course proceeds to reviewing state-of-the-art theories and research in evolutionary psychology, with a focus on social psychological topics.

### **Learning outcome, competences**

knowledge:

- broad theoretical knowledge in Evolutionary Psychology
- Knowledge of the most important theories in evolutionary psychology.
- Knowledge of specific state-of-the-art research in evolutionary psychology

attitude:

- comprehensive theoretical interest
- Studying a scientific manner, students shall be able to approach the phenomena investigated by evolutionary psychology in an unbiased way, using the theoretical and methodological tools of the scientific approach

skills:

- is capable of professional cooperation within and outside of his/her discipline;
- Ability to read and assess the professional literature in English, methodological erudition

### **Content of the course**

#### **Topics of the course**

- 1. Introduction: The history of studies on animal thinking. From anecdotal cognitivism to modern cognitive ethology.
- 2. Methods of behaviour observation.
- Traditional comparative psychology and ethology as different approaches. Data collection in nature, modern lab. studies, ways of studying human cognition.
- 3. Understanding physical world: skills and evolutionary compulsions. Object representation abilities, numerical abilities.
- 4. Skills of understanding social worlds. The Machiavellian intelligence. Primate studies and observations on human infants: the emergence of human cognition.
- 5. Levels of intentionality: mentalistic interpretations of others' behaviour. The effect of experimenter on the observations: Clever-Hans effects.
- 6. What is intelligence? A biological approach.
- Measuring intelligence, methodological issues.
- The evolutionary role of play behaviour in the emergence of social cognition.
- 7. The emergence of human and animal communication: evolutionary mechanisms.
- Mentalistic approaches to social learning. Mechanisms and experimental observations.
- 8. Special forms of social learning. Imitation in animal kingdom, human imitative behaviour.

- 9. The ontogenesis of human theory of mind . Self recognition: evolutionary roots and current experiments.
- 10. Understanding knowledge and ignorance in others. Experimental paradigms and methodological issues. The nonverbal studies of complex cognitive skills in humans and animals.
- 11. On modelling human cognition: evolutionary homologies and analogies.
- Human specific aspects of social cognition: the dog as a model species.
- 12. The evolution of human social cognition: the chimpanzee model.
- Cognitive requirements of human linguistic abilities.
- 13. The importance of endophenotype in the study of cognition: Hormonal studies, measuring heart rate frequency, candidate gene analyses.
- 14. Ethical issues in the study of animal mind.
- Welfare problems.
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### **Learning activities, learning methods:**

Lectures and interactive discussions

<b>Evaluation of outcomes</b>
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### **Learning requirements, mode of evaluation, criteria of evaluation: requirements**

- Attendance
- Presentations
- Participation in discussions at class
- Homework

**mode of evaluation:** 5 point grade with a type C exam (continuous work)

### **criteria of evaluation:**

- Quality and quantity of the work done

<b>Reading list</b>
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### **Compulsory reading list**

- Shettleworth, S. D. J. (1998). Cognition, Evolution and Behaviour. Oxford: Oxford University Press.

### **Recommended reading list**

- If any, it shall be specified in the course description for each semester.