**Study programmes**: Bachelor studies - Informatics

Course name: O44 - Zetetics - critical thinking

**Lecturers**: Gordana Pavlović-Lažetić and other lecturers of the Department of Informatics and Computer Science

Status: Optional

**ECTS**: 3

Attendance prerequisites: No prerequisites

Course aims: Zetetics is a discipline consisting in development of critical spirit. The name itself comes from the Greek word for search, giving it a meaning of critical search or critical exploration and investigation. The aim of the zetetics is to explore statements that are not scientifically provable and explanation of which cannot be tied to any of commonly accepted scientific theories. Thus the contents of zetetics lie at the edge between science and cognitive disciplines. This kind of study enables students to introduce themselves with criteria for assessment of research scientificity, and even broader, with scientific methodology. The discipline has been introduced into university course by Henri Broch, professor of Physics at the University of Nice.

**Course outcome**: After completing the course students are able to assess quality and reliability of available information.

## **Course content:**

- Development of critical thinking so as not to fall into classic traps rooted in statistics, probability, erroneous reasoning, rhetoric turn, etc. Student learns to extract objective information from a bulk of available information.
- Main topics include critical analysis of numerous everyday situations aiming at information consumer coming to a wrong conclusion. Topics to be included are:
- 1. Fault inference based on statistical data
- 2. Mistakes based on wrong estimation of a probability of an event. Incident and prediction
- 3. Logical paradoxes and rhetoric figures. Fault inference
- 4. Sensor delusion and wrong perception of an order of magnitude
- 5. Manipulation methods
- 6. Scientific methodology and hoaxes in science
- 7. Reliability of information
- 8. Pseudoscience (astrology, ufology, parapsychology)

## Literature:

- 1. Normand Baillargeon, A Short Course in Intellectual Self-Defense, UQAM, Seven Stories Press, 2008.
- 2. Robert Cialdini, Influence: The Psychology of Persuasion, HarperBusiness, 1984 (2006).
- 3. Veronique Campion-Vincent, Jean-Bruno Renard, Legendes urbaines, Rumeurs d'aujourd'hui, Payot, 2002 (Kovačević, I. Urbane legende, Beograd, 2009,

 $http://www.anthroserbia.org/Content/PDF/Publications/39\_IK\_Urbane\_legende.pdf)$ 

4. Milivoj Čatipović, Podvale obmane i zablude u svijetu nauke, Školska knjiga, Zagreb, 1980.

(a lecturer may recommend other literature sources if deemed appropriate)

Number of hours: 2	Lectures: 2	Tutorials: -	Laboratory: -	Research: -
Teaching and learning methods: Lectures / Exercises				
Assessment (maximal 100 points)				
Course assignmen	nts poi	nts	Final exam	
Lectures	-	Written	exam	-
Exercises / Tutorials	-	Oral exa	Oral exam	
Colloquia	20	0 Written	-oral exam	50
Essay / Project	30	0		