Course Unit Descriptor

Study Programme: Ph.D. in Computer Science	
Course Unit Title: Artificial Intelligence	
Course Unit Code: ID109	
Name of Lecturer(s): Miloš Racković, Miloš Radovanović, Vladimir Kurbalija	
Type and Level of Studies: Doctoral Academic Degree	
Course Status (compulsory/elective): Elective	
Semester (winter/summer): Summer	
Language of instruction: Serbian (primary), English (secondary)	
Mode of course unit delivery (face-to-face/distance learning): Face-to-face	
Number of ECTS Allocated: 7	
Prerequisites: None	

Course Aims:

Enabling students to apply advanced concepts pf artificial intelligence in solving various problems in the field of computer science.

Learning Outcomes:

Minimal: At the end of the course it is expected from a successful student to create an application based on an appropriate

concept of artificial intelligence, and use it on an illustrative example.

Desirable: At the end of the course it is expected from a successful student to demonstrate thorough understanding of the

principles of functioning of selected advanced concepts of artificial intelligence, through implementation of an appropriate

problem.

Syllabus:

Theory
Intelligent agents. Knowledge and reasoning. Reasoning based on uncertain knowledge and incomplete information. Using knowledge in learning. Communication as an aspect of artificial intelligence. Agents that communicate. Intelligent systems. Elements of robotics.
Practice
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Required Reading:

1. Stuart J. Russell, Peter Norvig, Artificial Intelligence, A Modern Approach, Third Edition, Prentice Hall, 2010

Weekly Contact Hours: 2	**Lectures:** 2	**Practical work:** 0

Teaching Methods:
Lectures will be held in blocks of through consultations. Students are predominantly instructed to individually study appropriate literature. Advanced concepts of application of artificial intelligence algorithms are studied in solutions of appropriate problems. Students are given the option to select an area of artificial intelligence and through preparation of a seminar paper demonstrate the implementation of an algorithm that solves an illustrative problem using an appropriate concept of artificial intelligence. The defense of the seminar paper is conducted prior to the oral exam. At the oral exam the student demonstrated deeper understanding of the principles of functioning of the implemented concept of artificial intelligence by answering questions.

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	Points	**Final exam**	Points
Seminar paper	60	Oral exam	40

The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam,

project presentation, seminars, etc.