Course title: Methods and techniques of artificial intelligence	
Teacher(s): Vanja V. Luković and Danijela M. Milošević	
Course status: elective	
Number of ECTS credits: 10	
Condition: No	

Course objectives

Students will acquire new theoretical and practical knowledge in the field of artificial intelligence and will be able to apply them in various fields. Acquiring knowledge for further independent research work in one of the fields of artificial intelligence.

Learning outcomes

The student has theoretical and practical knowledge in the current fields of artificial intelligence. He understands the algorithms and models he studies and successfully recognizes practical problems to which he can apply them in various domains through the development of intelligent software applications.

Contents

Theoretical teaching

Knowledge presentation and reasoning. Intelligent search. Machine learning. Probabilistic models and intelligent reasoning. Neural networks. Analysis and understanding of the text. The Semantic Web and ontologies.

Practical teaching

Application of software tools and practical implementation of projects from selected areas of artificial intelligence.

Recommended literature

[1] Stuart Russell, Peter Norvig: „*Artificial intelligence: a modern approach, third edition*", Copyright 2010, 2003, 1995 by Pearson Education, Inc., Upper Saddle River, New Jersey 07458., ISBN-13: 978-0-13 -604259-4, ISBN-10: 0-13-604259-7.

[2] Proceedings of the International Conference *AAAI Conference on Artificial Intelligence* (http://www.aaai.org/Conferences/AAAI/aaai.php)

[3] Sebastian Raschka: „*Python Machine Learning*", Packt Publishing - ebooks Account, 2015, ISBN: 978-1783555130.

Scientific papers from the journal from the SCI list in accordance with the affinities of the student

Number of active classes: 10	Theory: 5	Practice: 2

Teaching methods

Presentations and practical study examples related to certain techniques and software tools. Work with software tools in the laboratory and independent development of projects in the field of artificial intelligence.

Evaluation (maximum number of points 100)

Seminar paper - 20

Experimental research work with presentation - 30

Oral exam - 50

Ways of testing the knowledge may vary: (written tests, oral exam, project presentation, seminars etc.)

*maximum length 1 A4 page