

Specification for the book of courses

Study program		Computing and Informatics		
Module		Data Science		
Type and level of studies		Master studies		
The name of the course		Social Networks Analysis		
Lecturer (for lectures)		Tošić B. Milorad		
Lecturer/associate (for exercises)		Nejković M. Valentina		
Lecturer/associate (for OFE)				
Number of ECTS		4	Course status (obligatory/elective)	Elective
Prerequisites		Exams passed: Information Systems, Graph theory, Web Programming and Artificial Intelligence.		
Course objectives		Gaining practical programming skills, theoretical knowledge and systematic approach required for the design, implementation and operation of systems in which information technologies, computers, the Internet, and humans act in concert to form complex structures that are commonly characterized as social networks.		
Course outcomes		Students are able to identify areas of usage, specific problems and relevant theoretical concepts needed to solve them, possess practical programming skills needed to implement specific examples of usage.		
Course outline				
Theoretical teaching		Common conceptual foundations: data models, basic technologies, mathematical basics. HITS and PageRank based algorithms. Similarity and communities in social networks. Information extraction and analysis in social networks (Social tagging, extraction from content, blog search, intelligent web crawling). Intelligent search. Recommendation, filtering and ranking. Characteristics identification. Advanced classification on social networks.		
Practical teaching (exercises, OFE, study and research)				
Textbooks/references				
1		Online materials for lectures and exercises		
2		Materials available on the Internet		
3		Segaran, Toby. Programming collective intelligence: building smart web 2.0 applications. O'Reilly Media, Incorporated, 2007.		
4		Alag, Satnam. Collective intelligence in action. Manning, 2009.		
5		Zhang, Yanchun, Jeffrey Xu Yu, and Jingyu Hou. Web communities analysis and construction. Springer-Verlag, 2012		
Number of classes of active education per week during semester/trimester/year				
Lectures	Exercises	OFE	Study and research work	Other classes
2	1	0		
Teaching methods		Lectures, Auditorial exercises, Laboratory exercises; Consultations, Independent students' research; students' oral presentation to the selected / given topics; Active students' participation in the classroom using an interactive course Web site		
Grade (maximum number of points 100)				
Pre-exam duties		Points	Final exam	Points
Activity during lectures		30	Written exam	
Exercises		30	Oral exam	40
Colloquia				
Projects				