

UČNI NAČRT PREDMETA / COURSE SYLLABUS (leto / year 2016/17)							
<b>Predmet:</b>		Aktualno raziskovalno področje II					
<b>Course title:</b>		Topical research themes II					
<b>Študijski program in stopnja</b> Study programme and level		<b>Študijska smer</b> Study field			<b>Letnik</b> Academic year		<b>Semester</b> Semester
Interdisciplinarni magistrski študijski program Računalništvo in matematika		ni smeri			1 ali 2		drugi
Interdisciplinary Master's study programme Computer Science and Mathematics		none			1 or 2		second
<b>Vrsta predmeta / Course type</b>					izbirni / elective		
<b>Univerzitetna koda predmeta / University course code:</b>					63546		
<b>Predavanja</b> Lectures	<b>Seminar</b> Seminar	<b>Vaje</b> Tutorial	<b>Klinične vaje</b> work	<b>Druge oblike študija</b>	<b>Samost. delo</b> Individ. work	<b>ECTS</b>	
45		30			105	6	
<b>Nosilec predmeta / Lecturer:</b>		prof. dr. Marko Robnik Šikonja					
<b>Jeziki / Languages:</b>		<b>Predavanja / Lectures:</b> slovenski / Slovene, angleški / English					
		<b>Vaje / Tutorial:</b> slovenski / Slovene, angleški / English					
<b>Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:</b>				<b>Prerequisites:</b>			
Vpis v letnik študija.				Enrolment in the programme.			
<b>Vsebina:</b>				<b>Content (Syllabus outline):</b>			

Predmet izvajajo (mlajši) učitelji, ki bodo pokrivali novosti iz teoretično usmerjenega raziskovalnega dela. Predstavili bodo nove ideje, metodološke preboje ali nove usmeritve na področju teoretičnega računalništva in informatike, ki še niso vključene v vsebine obstoječih predmetov.

Podrobna vsebina in predavatelj se določi vsako leto posebej glede na predloge, potrebe programa in zadnje raziskovalne smernice v svetu.

The course is lectured by (younger) professors who present novelties from theoretically oriented research work. Currently uncovered topics interesting due to recent theoretical findings or methodological breakthroughs are presented. The lecturer and specific contents of the course are determined annually according to the propositions, programme needs, and latest research trends.

#### **Temeljni literatura in viri / Readings:**

M. Li, P. Vitányi, An Introduction to Kolmogorov Complexity and Its Applications, 3rd edition. Springer, 2008

J. E. Hopcroft, R. Motwani, J. D. Ullman, Introduction to Automata Theory, Languages, and Computation, 3rd edition. Prentice Hall, 2006.

Dodatna literatura se predpiše vsako leto posebej glede na vsebino in predloge izbranega predavatelja.

Additional literature is given annually, with respect to the current topic of the course.

#### **Cilji in kompetence:**

Cilj predmeta je prenesti raziskovalne novosti v učni program in študentom omogočiti, da spoznajo njihove teoretične osnove, metodološke novosti in posledice za razvoj novih metod in tehnologij na področju računalništva in informatike.

#### **Objectives and competences:**

The goal of the course is a transfer of recent research results into the curriculum. Students will be introduced to novel theoretical ideas as well as their possible impact for development of new methods and technologies in the field of computer and information science.

#### **Predvideni študijski rezultati:**

#### **Intended learning outcomes:**

Znanje in razumevanje: Študenti spoznavajo teoretične novosti, ki v obstoječem predmetniku še niso zajeta.

Uporaba: Uporaba najnovejših teoretičnih pristopov in tehnik z izbranega področja računalništva in informatike.

Refleksija: Razumevanje primernosti izbranih konceptov in pristopov s področja računalništva in informatike za reševanje problemov v poslovnih okoljih.

Prenosljive spretnosti - niso vezane le na en

predmet: Reševanje kompleksnih problemov, razvoj kompleksnih sistemov.

Knowledge and understanding: A broader overview and understanding of the field of study, and recent new theoretical approaches and concepts.

Application: Applying current approaches and techniques from the specific field of computer and information science.

Reflection: Understanding the advantages of the chosen concepts and approaches in computer and information science in solving specific problems in business and research.

Transferable skills: Solving complex problems, designing complex systems.

**Metode poučevanja in učenja:**

Predavanja, laboratorijske vaje

**Learning and teaching methods:**

Lectures, lab work.

**Načini ocenjevanja:**

Delež (v %) /  
Weight (in %)

**Assessment:**

Način (pisni izpit, ustno izpraševanje, naloge, projekt):

Sprotno preverjanje (domače naloge, kolokviji in projektno delo)

Končno preverjanje (pisni in ustni izpit)

Ocene: 6-10 pozitivno, 1-5 negativno

(v skladu s Statutom UL)

50%

50%

Type (examination, oral, coursework, project):

Continuing (homework, midterm exams, project work)

Final: (written and oral exam)

Grading: 6-10 pass, 1-5 fail.

---

**Reference nosilca / Lecturer's references:**

ROBNIK ŠIKONJA, Marko, VANHOOF, Koen. Evaluation of ordinal attributes at value level. Data mining and knowledge discovery, ISSN 1384-5810, 2007, vol. 14, no. 2, str. [225]-243, ilustr. [COBISS.SI-ID 5801556]

ROBNIK ŠIKONJA, Marko, KONONENKO, Igor. Theoretical and empirical analysis of ReliefF and RReliefF. Machine learning, ISSN 0885-6125. [Print ed.], 2003, vol. 53, str. 23-69, graf. prikazi. [COBISS.SI-ID 3813460]

ROBNIK ŠIKONJA, Marko, KONONENKO, Igor. Explaining classifications for individual instances. IEEE transactions on knowledge and data engineering, ISSN 1041-4347. [Print ed.], May 2008, vol. 20, no. 5, str. 589-600, ilustr. [COBISS.SI-ID 6528340]

ŠTRUMBELJ, Erik, ROBNIK ŠIKONJA, Marko. Online bookmakers' odds as forecasts : the case of European soccer leagues. International journal of forecasting, ISSN 0169-2070. [Print ed.], 2010, vol. 26, no. 3, str. 482-488. [COBISS.SI-ID 7706964]

ROBNIK ŠIKONJA, Marko, KONONENKO, Igor, ŠTRUMBELJ, Erik. Quality of classification explanations with PRBF. Neurocomputing, ISSN 0925-2312. [Print ed.], Nov. 2012, vol. 96, str. 37-46, graf. prikazi. [COBISS.SI-ID 9365588]