

UČNI NAČRT PREDMETA / COURSE SYLLABUS (leto / year 2017/18)						
Predmet:		Izbrana poglavja iz praktične matematike				
Course title:		Topics in practical mathematics				
Študijski program in stopnja Study programme and level		Študijska smer Study field		Letnik Academic year	Semester Semester	
Visokošolski strokovni študijski program Praktična matematika		ni smeri		3	prvi ali drugi	
First cycle professional study programme Practical Mathematics		none		3	first or second	
Vrsta predmeta / Course type				izbirni / elective		
Univerzitetna koda predmeta / University course code:				M0456		
Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje work	Druge oblike študija	Samost. delo Individ. work	ECTS
30		30			90	5
Nosilec predmeta / Lecturer:		viš. pred. mag. Matija Lokar, prof. dr. Emil Žagar				
Jeziki / Languages:		Predavanja / Lectures:		slovenski / Slovene		
		Vaje / Tutorial:		slovenski / Slovene		
Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:				Prerequisites:		
Vpis v letnik študija.				Enrolment in the programme.		
Vsebina:				Content (Syllabus outline):		

<p>Predmet je namenjen predstavitvi izbranih tem, ki so zanimiva zaradi novih odkritij, nedavnih metodoloških prebojev ali pa zaradi velike uporabnosti v praksi, pa niso zajeta v ostalih predmetih v programu. Predmet je med drugim namenjen tudi vključevanju uveljavljenih zunanjih strokovnjakov in predavateljev v pedagoški proces na UL FMF.</p> <p>Podrobna vsebina se določi vsako leto posebej glede na predloge in strokovno usmeritev izbranega predavatelja.</p>	<p>The course is intended for introducing students to topics which are interesting due to recent theoretical findings, methodological breakthroughs or for their applicative value, and are not included into the existing curriculum. The purpose of the course is to include visiting established experts, researchers and lecturers in the teaching process on FMF. The specific topic is determined yearly and depends on the specifics of the invited lecturer.</p>
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Temeljna literatura in viri / Readings:

<p>Temeljna literatura se predpiše vsako leto posebej glede na vsebino in predloge izbranega predavatelja.</p> <p>Determined yearly, with respect to the current topic of the course.</p>

Cilji in kompetence:

<p>Cilj predmeta je spoznati metodološke osnove in praktične implementacije ter uporabo izbranih najnovejših pristopov in tehnologij s področja računalništva in informatike.</p>

Objectives and competences:

<p>The goal of the course is to introduce basic methodological concepts as well as practical implementations and the use of specific recent approaches and technologies in computer and information science</p>

Predvideni študijski rezultati:

<p>Znanje in razumevanje:</p> <p>Študenti spoznavajo nova področja in prijeme, ki v obstoječem predmetniku še niso zajeti.</p> <p>Uporaba:</p> <p>Uporaba najnovejših pristopov in tehnik z izbranega področja praktične matematike.</p>
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Intended learning outcomes:

<p>Knowledge and understanding:</p> <p>A broader overview and understanding of the field of study, and of up to date methods and concepts.</p> <p>Application:</p> <p>Applying current approaches and techniques</p>
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<p>Refleksija:</p> <p>Razumevanje primernosti izbranih pristopov za reševanje praktičnih primerov v poslovnih okoljih.</p> <p>Prenosljive spretnosti – niso vezane le na en predmet:</p> <p>Reševanje kompleksnih problemov, razvoj kompleksnih sistemov.</p>	<p>from the specific field of practical mathematics.</p> <p>Reflection:</p> <p>Understanding the advantages of the chosen approaches in solving specific practical tasks.</p> <p>Transferable skills:</p> <p>Solving complex problems, designing complex systems.</p>
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Metode poučevanja in učenja:

<p>predavanja, vaje, uporaba metod študija na daljavo, domače naloge, konzultacije</p>
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Learning and teaching methods:

<p>Lectures, exercises, usage of distance learning techniques, home works, consultations</p>
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Načini ocenjevanja:	Delež (v %) / Weight (in %)	Assessment:
<p>študenti dobijo eno oceno iz preverjanja domačih nalog in seminarske naloge</p> <p>Ocene: 1-5 (negativno), 6-10 (pozitivno) (po Statutu UL).</p>	100%	<p>the grade is given according to solved home works and a project</p> <p>Grading: 1-5 (fail), 6-10 (pass) (according to the Statute of UL).</p>

Reference nosilca / Lecturer's references:

<p>Matija Lokar:</p> <p>LOKAR, Matija, KOKOL-VOLJČ, Vlasta. Projekt EdUmaths - kako pomagati učiteljem matematike pri vpeljavi IKT v poučevanje = Project EdUmaths - how to support math teachers to integrate technology within their classrooms. V: RAJKOVIČ, Vladislav (ur.), BERNIK, Mojca (ur.), URBANČIČ, Tanja (ur.). Vzgoja in izobraževanje v informacijski družbi : zbornik povzetkov referatov 15. mednarodne multikonference Informacijska družba - IS 2012, 12. oktober 2012 = Education in information society : book of abstracts of the 15th International Multiconference Information Society - IS 2012, 12th October 2012, Ljubljana, Slovenia. Kranj: Moderna organizacija, 2012, str. 58-59. [COBISS.SI-ID 16557657]</p> <p>MARKOVIČ, Katja. Izdelava vodičev za uporabo programa GeoGebra : diplomska naloga. Ljubljana:</p>

[K. Markovič], 2011. 73 f., ilustr. [COBISS.SI-ID 16189529]

LOKAR, Matija. Designing tasks for CAS/DGS classrooms. V: TIME 2010, Technology and its Integration into Mathematics Education, July 6th-10th, 2010, Málaga, Spain. Proceedings of TIME 2010 : Technology and its Integration into Mathematics Education. Málaga: Universidad de Málaga, 2011, 17 str. [COBISS.SI-ID 15643993]

Emil Žagar:

JAKLIČ, Gašper, KOZAK, Jernej, VITRIH, Vito, ŽAGAR, Emil. Lagrange geometric interpolation by rational spatial cubic Bézier curves. Computer Aided Geometric Design, ISSN 0167-8396, 2012, vol. 29, iss. 3-4, str. 175-188. [COBISS.SI-ID 16207449]

KOZAK, Jernej, ŽAGAR, Emil. On geometric interpolation by polynomial curves. SIAM journal on numerical analysis, ISSN 0036-1429, 2004, vol. 42, no. 3, str. 953-967. [COBISS.SI-ID 13398617]

ŽAGAR, Emil. On G^2 continuous spline interpolation of curves in R^d . BIT, ISSN 0006-3835, 2002, vol. 42, no. 3, str. 670-688. [COBISS.SI-ID 12027993]