

UČNI NAČRT PREDMETA / COURSE SYLLABUS						
Predmet:		Zgodovina matematike				
Course title:		History of mathematics				
Študijski program in stopnja Study programme and level		Študijska smer Study field		Letnik Academic year	Semester Semester	
Enoviti magistrski študijski program Pedagoška matematika		ni smeri		4 ali 5	prvi	
Integrated Master's study programme Pedagogical Mathematics		none		4 or 5	first	
Vrsta predmeta / Course type				obvezni		
Univerzitetna koda predmeta / University course code:				M0572		
Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje work	Druge oblike študija	Samost. delo Individ. work	ECTS
30		30			90	5
Nosilec predmeta / Lecturer:		doc. Gregor Cigler, prof. Aleš Vavpetič				
Jeziki / Languages:		Predavanja / Lectures:		slovenski/Slovene		
		Vaje / Tutorial:		slovenski/Slovene		
Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:				Prerequisites:		
Vsebina:				Content (Syllabus outline):		

<p>Matematika v starem Egiptu in Mezopotamiji. Pitagorejska matematika. Matematika Evklidovih Elementov. Arhimed in Apolonij. Helenistična matematika v rimskem imperiju. Matematika stare Indije in Kitajske. Matematika v arabskem imperiju. Srednji vek in renesansa evropske matematike. Fermat, Descartes in Pascal. Newton in Leibniz. Euler, Lagrange in Laplace. Gauss in Legendre. Algebra, analiza, geometrija in teorija števil v devetnajstem stoletju. Teorija množic in osnove matematike. Sodobna matematika in njena uporaba.</p>	<p>Mathematics in antient Egypt and Mesopotamia. Pythagorean mathematics. Mathematics of Euclid's Elements. Archimedes and Apollonius. Hellenistic mathematics in the Roman Empire. Mathematics in antient India and China. Mathematics in the Arab Empire. Middle ages and the renaissance of European mathematics. Fermat, Descartes and Pascal. Newton and Leibniz. Euler, Lagrange and Laplace. Gauss and Legendre. Algebra, analysis and geometry in the nineteenth century. Set theory and foundations of mathematics. Modern mathematics and its applications.</p>
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Temeljni literatura in viri / Readings:

<p>B. Cipra: What's Happening in the Mathematical Sciences, AMS, Providence, 2002. R. Cooke: The History of Mathematics, A Brief Course, John Wiley and Sons, New York, 1997. V. J. Katz: A History of Mathematics, An Introduction, Addison Wesley, Boston, New York, 1998. W. S. Anglin: Mathematics : A Concise History and Philosophy, Springer, New York, 1996. F. Križanič: Križem po matematiki, Mladinska knjiga, Ljubljana 1960. D. J. Struik: Kratka zgodovina matematike, DMFA, Ljubljana, 1986. http://www-history.mcs.st-and.ac.uk/history/</p>

Cilji in kompetence:

<p>Slušatelji spoznajo razvoj matematičnih idej in metod kot so se oblikovale skozi zgodovino.</p>
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Objectives and competences:

<p>Students learn about the development of mathematical ideas as they evolved historically.</p>

Predvideni študijski rezultati:

<p>Poglobljeno poznavanje in razumevanje zgodovinskega razvoja matematike. Uporaba razumevanja razvoja matematike pri poučevanju.</p>

Intended learning outcomes:

<p>Knowledge and understanding of the historical development of mathematical ideas and its use in teaching.</p>

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Metode poučevanja in učenja:

predavanja, vaje, konzultacije

Learning and teaching methods:

lectures, exercise sessions, consultations

Načini ocenjevanja:

Način: domače naloge, projektno delo, pisni in ustni izpit.
ocene: 1-5 (negativno), 6-10 (pozitivno)

Delež (v %) /
Weight (in %)

50 %
50 %

Assessment:

Type: homeworks, project work, written and oral exam.
Grading: 6-10 pass, 1-5 fail

Reference nosilca / Lecturer's references:

Gregor Cigler:

- CIGLER, Gregor, DRNOVŠEK, Roman. From local to global similarity of matrix groups. Linear Algebra and its Applications. [Print ed.]. 2011, vol. 435, iss. 6, str. 1285-1295. ISSN 0024-3795. [COBISS.SI-ID 15929433] [COBISS.SI-ID 15929433]
- CIGLER, Gregor, DRNOVŠEK, Roman. On semigroups of matrices with nonnegative diagonals. Linear Algebra and its Applications. [Print ed.]. 2013, vol. 438, iss. 1, str. 626-633. ISSN 0024-3795. [COBISS.SI-ID 16528473] [COBISS.SI-ID 16528473]
- CIGLER, Gregor, JERMAN, Marjan. On separation of eigenvalues by certain matrix subgroups. Linear Algebra and its Applications. [Print ed.]. 2014, vol. 440, str. 213-217. ISSN 0024-3795. [COBISS.SI-ID 16862297] [COBISS.SI-ID 16862297]

Aleš Vavpetič:

- VAVPETIČ, Aleš. Commutators of cycles in permutation groups. Ars mathematica contemporanea. 2016, let. 10, št. 1, str. 67-77. [COBISS.SI-ID 17731929] [COBISS.SI-ID 17731929]
- VAVPETIČ, Aleš, ŽAGAR, Emil. A general framework for the optimal approximation of circular arcs by parametric polynomial curves. Journal of Computational and Applied Mathematics. 2019, let. 345, str. 146-158. [COBISS.SI-ID 18388057] [COBISS.SI-ID 18388057]

– KANDIĆ, Marko, VAVPETIČ, Aleš. Topological aspects of order in $C(X)$. *Positivity*. 2019, let. 23, št. 3, str. 617-635. [COBISS.SI-ID 18551897] [COBISS.SI-ID 18551897]