Univerza v Mariboru

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Fakulteta za naravoslovje in matematiko

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**
Izobraževalna matematika, dvopredmetni študij, 2. stopnja	Modul D2	**1. ali 2.**	**1. ali 3.**
Educational mathematics, double major 2nd degree	Module D2	**1. or 2.**	**1. or 3.**

Vrsta predmeta / Course type

Univerzitetna koda predmeta / University course code:

Predavanja **Lectures**	**Seminar** **Seminar**	**Sem. vaje** **Tutorial**	**Lab. vaje** **Laboratory work**	**Teren. vaje** **Field work**	**Samost. delo** **Individ. work**	**ECTS**
75					**135**	**7**

Nosilec predmeta / Lecturer: Daniel EREMITA

Jeziki / Languages:	
Predavanja / Lectures:	SLOVENSKO/SLOVENE
Vaje / Tutorial:	SLOVENSKO/SLOVENE

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:	**Prerequisits:**
Jih ni.	There are none.

Vsebina:	**Content (Syllabus outline):**
Metodologija zgodovine matematike, zgodovinski viri. Glavni centri in obdobja razvoja matematike: mezopotamska matematika, egipčanska matematika, starogrška in helenistična matematika, kitajska matematika, indijska matematika, japonska matematika, matematika	Methodology of the history of mathematics, historical sources. The main centers and periods of mathematical development: Mesopotamian mathematics, Egyptian mathematics, Ancient Greek and Hellenistic mathematics, Chinese mathematics, Hindu mathematics, Japanese mathematics,

indijanskih civilizacij, arabska matematika, matematika renesanse, matematika XV., XVI., XVII., XVIII., XIX. in XX. stoletja. Razvoj glavnih področij matematike: geometrije, aritmetike, algebre, teorije števil, analize, matematične logike, teorije množic, topologije, teorije grafov, teorije verjetnosti, statistike, računalništva, metodike matematike, zgodovine matematike idr. Razvoj osnovnih matematičnih pojmov. Pomembni matematiki in njihov prispevek k razvoju matematike. Slovenski matematiki. Zgodovina matematike kot del splošne zgodovine. Filozofski, sociološki, psihološki, lingvistični in podobni aspekti matematike. Matematika in druge znanosti.	mathematics of indigenous cultures of the Americas, Arabic mathematics, Renaissance mathematics, mathematics of XV., XVI., XVII., XVIII., XIX. and XX. centuries. The development of the major areas of mathematics: geometry, arithmetic, algebra, number theory, analysis, mathematical logic, set theory, topology, graph theory, probability theory, statistics, computer science, methodology of mathematics, history of mathematics, etc. The development of the fundamental mathematical notions. Important mathematicians and their contribution to mathematics. Slovenian mathematicians. A history of mathematics as a part of a general history. Philosophical, sociological, psychological, linguistic and similar aspects of mathematics. Mathematics and other sciences.

Temeljni literatura in viri / Readings:

- C. B. Boyer, U. C. Merzbach: *A History of Mathematics.* New York: J. Wiley & Sons, 1989.
- V. J. Katz: *A History of Mathematics, An Introduction.* Reading (Mass.) [etc.] : Addison-Wesley, 1998
- F. Cajori: *A History of Mathematicad Notation.* New York: Dover Publications, Inc., 1993.
- B. L. van der Waerden: *Geometry and Algebra in Ancient Civilizations.* Berlin: Springer Verlag, 1983.
- D. J. Struik: *Kratka zgodovina matematike.* Ljubljana: Državna založba Slovenije, 1978.

Cilji in kompetence:	**Objectives and competences:**
Spoznati zgodovinski razvoj matematike, razvoj njenih osnovnih področij in razvoj osnovnih matematičnih pojmov. Seznaniti se s pomembnimi matematiki in njihovimi prispevki k razvoju matematike.	To obtain knowledge of the historical development of mathematics, the development of its major areas, and the development of the fundamental mathematical notions. To get acquainted with the important mathematicians and their contribution to mathematics.

Predvideni študijski rezultati:	**Intended learning outcomes:**
Znanje in razumevanje: • zgodovinski razvoj matematike, razvoj njenih osnovnih področij in razvoj osnovnih matematičnih pojmov • pomembni matematiki in njihovi prispevki	Knowledge and Understanding: • historical development of mathematics, the development of its major areas, and the development of the fundamental mathematical notions

k razvoju matematike Prenesljive/ključne spretnosti in drugi atributi: • prenos znanja zgodovine matematike na vse matematične predmete in na nekatera druga področja (fizika, astronomija, mehanika, računalništvo, filozofija, zgodovina, …).	• important mathematicians and their contribution to mathematics Transferable/Key Skills and other attributes: • knowledge transfer of history of mathematics to all mathematical courses and also to other areas (physics, astronomy, mechanics, computer science, philosophy, history, …).
Metode poučevanja in učenja:	**Learning and teaching methods:**
• Predavanja • Individualno delo	• Lectures • Individual work
Načini ocenjevanja:	**Assessment:**

Način (pisni izpit, ustno izpraševanje, naloge, projekt)	Delež (v %) / Weight (in %)	Type (examination, oral, coursework, project):
• Seminarska naloga • Ustni izpit Vsaka izmed naštetih obveznosti mora biti opravljena s pozitivno oceno.	20% 80%	• Seminar assignment • Oral exam Each of the mentioned commitments must be assessed with a passing grade.
Reference nosilca / Lecturer's references:		

1. EREMITA, Daniel, ILIŠEVIĆ, Dijana. On (anti-)multiplicative generalized derivations. *Glas. mat.*, 2012, vol. 47, no. 1, str. 105-118. http://dx.doi.org/10.3336/gm.47.1.08. [COBISS.SI-ID 16341849]

2. BENKOVIČ, Dominik, EREMITA, Daniel. Multiplicative Lie n-derivations of triangular rings. *Linear algebra appl.*. [Print ed.], 2012, vol. 436, iss 11, str. 4223-4240. http://dx.doi.org/10.1016/j.laa.2012.01.022. [COBISS.SI-ID 16278361]

3. BENKOVIČ, Dominik, EREMITA, Daniel, VUKMAN, Joso. A characterization of the centroid of a prime ring. *Stud. sci. math. Hung. (Print)*, 2008, vol. 45, no. 3, str. 379-394. http://dx.doi.org/10.1556/SScMath.2008.1069, doi: 10.1556/SScMath.2008.1069. [COBISS.SI-ID 16236040]

4. EREMITA, Daniel, ILIŠEVIĆ, Dijana. On additivity of centralisers. *Bull. Aust. Math. Soc.*, 2006, 74, str. 177-184. [COBISS.SI-ID 14915336]

5. VUKMAN, Joso, KOSI-ULBL, Irena, EREMITA, Daniel. On certain equations in rings. *Bull. Aust. Math. Soc.*, 2005, vol. 71, str. 53-60. [COBISS.SI-ID 13721096]