UČNI NAČRT PREDMETA / COURSE SYLLABUS	
Predmet:	OSNOVE MATEMATIČNIH METOD 1
Course title:	FUNDAMENTALS OF MATHEMATICAL METHODS 1

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
GOSPODARSKA IN TEHNIŠKA LOGISTIKA 1.stopnja		1.	2.
PROFESSIONAL HIGHER EDUCATION STUDY PROGRAMME ECONOMIC AND TECHNICAL LOGISTICS 1. degree			

Vrsta predmeta / Course type	OBVEZNI
Univerzitetna koda predmeta / University course code:	VS

Predavanja Lectures	Seminar Seminar	vaje Tutorial	Klinične vaje Laboratory work	Druge oblike študija Field work	Samost. delo Individ. work	ECTS
30 e-P, 30 a-P		21 e-V, 24 a-V			135	8

Nosilec predmeta / Lecturer:	MAJA FOŠNER

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

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:	Prerequisits:
Ni pogojev.	None.

Vsebina:	Content (Syllabus outline):
▪ Uvod: množice, številske množice, primeri ▪ Matrična algebra: matrike, računanje z matrikami, determinante, inverzna matrika, računanje inverzne matrike, matrične enačbe, sistemi linearnih enačb. ▪ Vektorska algebra: vektorji, seštevanje in odštevanje vektorjev, množenje vektorja s skalarjem, skalarni produkt, vektorski produkt, mešani produkt, primeri. ▪ Zaporedja in vrste: zaporedja, limita, stekališče, vrste, geometrijska vrsta. ▪ Funkcije ene spremenljivke: osnovni pojmi, zveznost funkcije, limita funkcije, lastnosti	▪ Introduction: sets, number sets, examples ▪ Matrix algebra: matrices, calculating with matrices, determinants, inverse matrix, calculating inverse matrices, matrix equations, systems of linear equations, examples ▪ Vector algebra: vectors, addition and subtraction of vectors, multiplication of a vector by a scalar, the scalar product, the vector product, the mixed product, examples ▪ Sequences and series: sequences, limit, accumulation point, series, geometric series ▪ Functions of one variable: basic terminology, continuity of a function, function limit,

zveznih funkcij, pregled elementarnih funkcij, načrtovanje funkcij, primeri.	characteristics of continuous functions, overview of elementary functions, function planning, examples

Temeljni literatura in viri / Readings:

Jamnik J.: Matematika, Ljubljana, Društvo matematikov, fizikov in astronomov, Ljubljana, 1990 ISBN 961-212-034-X, COBISS.SI-ID 43443968. Vidav, I.: Višja matematika I, Ljubljana: Društvo matematikov, fizikov in astronomov Slovenije, 1994 ISBN: 961-212-031-5 COBISS.SI-ID:40515072.
Usenik, J.: Matematične metode v prometu, UL FPP, 1998, ISBN 961-6044-31-1 COBISS.SI-ID:

Cilji in kompetence:	Objectives and competences:
Študenti spoznajo in osvojijo osnovne pojme linearne algebre ter matematične analize, se naučijo natančnosti izražanja, pisanja in razmišljanja in se usposobijo uporabljati teoretično znanje v konkretnih primerih.	Students are familiarised with and grasp the basic concepts of algebra and mathematical analysis. They learn to write, think and express themselves accurately and they gain the ability to apply their theoretical knowledge in practice.

Predvideni študijski rezultati:	Intended learning outcomes:
Znanje in razumevanje: ▪ Sposobnost obvladanja standardnih metod in postopkov matematične analize ▪ Sposobnost uporabe pridobljenega teoretičnega znanja v praksi ▪ Avtonomnost v svojem strokovnem delu	Knowledge and understanding: ▪ Ability to master standard methods and procedures of mathematical analysis ▪ Ability to use the acquired knowledge in practice ▪ Independence in professional wor

Metode poučevanja in učenja:	Learning and teaching methods:
Predavanja: pri predavanjih študent spozna teoretične vsebine predmeta. Del predavanj se izvaja na klasični način v predavalnici, del pa v obliki e-predavanj (e-predavanja se lahko izvajajo na videokonferenčni način ali s pomočjo posebej v ta namen didaktično pripravljenih e-gradiv v virtualnem elektronskem učnem okolju). Vaje: Število študentov pri vajah mora biti prilagojeno modernim učnim in izobraževalnim metodam. Del vaj se izvaja na klasični način v predavalnici, del pa v obliki e-	Lectures: students understand the theoretical frameworks of the course. Part of the lecture course is in a classroom while the rest is in the form of e-learning (e-lectures may be given via video-conferencing or with the help of specially designed e-material in a virtual electronic learning environment). Tutorials: Students enhance their theoretical knowledge and are able to apply it. Part of the seminar is in a

predavanj (e-vaje se lahko izvajajo na videokonferenčni način ali s pomočjo posebej v ta namen didaktično pripravljenih e-gradiv v virtualnem elektronskem učnem okolju).	classroom while the rest is in the form of e-learning (e-seminars may be given via video-conferencing or with the help of specially designed e-material in a virtual electronic learning environment).

Načini ocenjevanja:	Delež (v %) / Weight (in %)	Assessment:
Pisni izpit	80 %	Written examination
Ustni izpit	20 %	Oral examination

Reference nosilca / Lecturer's references:

1. FOŠNER, Maja, ILIŠEVIĆ, Dijana. On Jordan triple derivations and related mappings. *Mediterranean journal of mathematics*, 2008, vol. 5, no. 4, str. 415-427. [COBISS.SI-ID 15026009]

2. FOŠNER, Ajda, FOŠNER, Maja. 2-local superderivations on a superalgebra M[sub]n(C). *Monatsh. Math.*, 2009, vol. 156, no. 4, str. 307-311. http://dx.doi.org/10.1007/s00605-008-0070-2, doi: 10.1007/s00605-008-0070-2. [COBISS.SI-ID 14957657]

3. FOŠNER, Maja, VUKMAN, Joso. An equation related to two-sided centralizers in prime rings. *Houst. j. math.*, 2009, vol. 35, no. 2, str. 353-361. http://www.math.uh.edu/~hjm/restricted/pdf35(2)/02fosner.pdf. [COBISS.SI-ID 15196505]

4. FOŠNER, Maja, LIPIČNIK, Martin. Pedagogical process for teaching quantitative methods in management. *ACBSP annual edition*, 2010, vol. 1, str. 117-128. [COBISS.SI-ID 512214845]

5. FOŠNER, Ajda, FOŠNER, Maja. On [epsilon]-derivations and local [epsilon]-derivations. *Acta math. Sin., Engl. ser. (Print)*, 2010, vol. 26, no. 8, str. 1555-1566. http://dx.doi.org/10.1007/s10114-010-7650-5. [COBISS.SI-ID 15632473]