UČNI NAČRT PREDMETA / COURSE SYLLABUS	
Predmet:	OSNOVE MATEMATIČNIH METOD 2
Course title:	FUNDAMENTALS OF MATHEMATICAL METHODS 2

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
GOSPODARSKA IN TEHNIŠKA LOGISTIKA 1.stopnja PROFESSIONAL HIGHER EDUCATION STUDY PROGRAMME ECONOMIC AND TECHNICAL LOGISTICS 1. degree		2.	3.

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):

Diferencialni račun: odvod funkcije, geometrični pomen odvoda, pravila za odvajanje, odvodi elementarnih funkcij, diferencial, višji odvodi, Taylorjeva formula, uporaba odvoda (ekstremi, prevoji).
Nedoločeni integral: definicija, pravila za integriranje, vpeljava nove spremenljivke, delno integriranje, integriranje racionalnih funkcij, primeri.
Določeni integral: definicija določenega integrala, geometrijski pomen in lastnosti, računanje, uporaba in primeri, diferencialne enačbe.
Verjetnostni račun.

Differential calculus: the derivative of a function, geometrical importance of a derivative, derivation rules, derivates of elementary functions, a differential, higher order derivatives, Taylor's formula, application of a derivative (extremes, inflection points).
Indefinite integral: definition, integration rules, introduction of a new variable, partial integration, integration of rational functions, application and examples.
Definite integral: definition, geometrical importance and characteristics, calculating, application and examples, differential equations.
Probability calculus.

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. Vidav, I.: Višja matematika II, Ljubljana: Društvo matematikov, fizikov in astronomov Slovenije, 1994, COBISS.SI-ID: 146945. Usenik, J.: Matematične metode v prometu, UL FPP, 1998, ISBN 961-6044-31-1 COBISS.SI-ID: 75814400.

Cilji in kompetence:

Študenti spoznajo in osvojijo osnovne pojme matematične analize in osnove verjetnostnega računa, se naučijo natančnosti izražanja, pisanja in razmišljanja in se usposobijo uporabljati teoretično znanje v konkretnih primerih

Objectives and competences:

Students are familiarised with and grasp the concepts of mathematical analysis and probability calculus, they learn to think, write and express themselves accurately and they gain the ability to apply their theoretical knowledge in practice.

Predvideni študijski rezultati:

Sposobnost obvladanja standardnih metod in postopkov matematične analize
Sposobnost uporabe pridobljenega teoretičnega znanja v praksi,
Avtonomnost v svojem strokovnem delu

Intended learning outcomes:

The ability to master standard methods and procedures of mathematical analysis
The ability to use the acquired theoretical knowledge in practice,
Independence in professional work.

Metode poučevanja in učenja:

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-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).

Learning and teaching methods:

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 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).

	Delež (v %) /	
Načini ocenjevanja:	Weight (in %)	Assessment:

▪ Pisni izpit ▪ Ustni izpit	▪ 80% ▪ 20%	Written examination 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]