

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	STATISTIKA
COURSE TITLE:	STATISTICS

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Varstvo okolja in ekotehnologije, 1. stopnja	/	2.	1.
Environmental Protection and Eco-technologies, 1 st level	/	2 st	1 st

Vrsta predmeta / Course type Obvezni predmet / Obligatory subject

Univerzitetna koda predmeta / University course code: STAT

Predavanja Lectures	Seminar Seminar	Sem. Vaje Tutorial	Lab. vaje Laboratory work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
30	/	15	/	/	80	5

Nosilec predmeta / Lecturer: prof. dr. Kristijan Breznik Kristijan / Kristijan Breznik, Ph.D, Full Prof.

Jeziki / Predavanja / Lectures: Slovenski / Slovenian
Languages: Vaje / Tutorial: Slovenski / Slovenian

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:

Študent mora (praviloma) imeti opravljen izpit iz Matematike.

Prerequisites:

The student must have passed the mathematics exam.

Vsebina:

1. Uvod v verjetnost.
2. Urejanje podatkov
3. Temelji opisne statistike
4. Srednje vrednosti
5. Mere variabilnosti.
6. Prikazovanje podatkov
7. Diskretne in zvezne porazdelitve.
8. Bivariatne metode
9. Časovne vrste.

Content (Syllabus outline):

1. Introduction to probability.
2. Data editing
3. Basics of descriptive statistics.
4. Measures of central tendency
5. Measures of variability
6. Data visualization
7. Discrete and continuous distributions.
8. Bivariate methods.
9. Time series.

Temeljni literatura in viri / Textbooks:

Turk, G. (2012). Verjetnostni račun in statistika. Ljubljana: Fakulteta za gradbeništvo in geodezijo.
 Diez, D. M., Barr, C. D., Cetinkaya-Rundel, M. (2015). OpenIntro Statistics. Dostopno na: <https://www.openintro.org/stat/4>.
 Field, A. (2013). Discovering Statistics Using IBM SPSS Statistics. SAGE Publications Ltd

Dodatna literatura in viri / Textbooks:

Košmelj, K. (2007). Uporabna statistika. Ljubljana: Biotehniška fakulteta.

Cilji in kompetence:

Študent bo pridobil znanje in spretnosti na naslednjih splošnih vsebinskih področjih:

Delo s podatki in informacijami;
Osnovne računalniške spretnosti;
Spretnosti kritičnega mišljenja;

Študent bo pridobil znanje in spretnosti na naslednjih specifičnih vsebinskih področjih:

Matematika in statistika na vsebinskem področju predmeta;
Splošna razgledanost na vsebinskem področju predmeta.

Objectives and competences:

Student will acquire knowledge and skills in the following general areas:

Work with data and information;
Basic computer skills;
Critical thinking;

Student will acquire knowledge and skills in the following specific areas:

Mathematics and statistics in the fields of the course;
General overview of the course content area.

Predvideni študijski rezultati:

1. zna izračunati srednje vrednosti statističnih spremenljivk
2. zna izračunati mere variabilnosti statističnih spremenljivk
3. zna pravilno grafično predstaviti statistične spremenljivke
4. uporaba statističnih programov

Intended learning outcomes:

1. (s)he is able to calculate measures of central tendency of statistical variables
2. (s)he is able to calculate measures of variability of statistical variables
3. (s)he is able to properly visualize statistical variables
4. the use of statistical software

Metode poučevanja in učenja:

Frontalna oblika poučevanja; Delo v manjših skupinah; Samostojno delo študenta;

Razlaga; Razgovor/diskusija/debata;

Learning and teaching methods:

Frontal teaching; Work in smaller groups or pairs; Independent student work;

Explanation; Conversation/discussion/debate;

Načini ocenjevanja:

Daljši pisni izdelek
Končni pisni izpit

Ocenjevalna lestvica:

- zadostno 6: 50-59%
- dobro 7: 60-69%
- prav dobro 8: 70-79%
- prav dobro 9: 80-89%
- odlično 10: 90-100%

Delež (v %) /

Weight (in %) /

Assessment:

Longer written casework
Final written examination

Grading system:

- Sufficient D (6): 50-59%
- Good C (7): 60-69%
- Very good B (8): 70-79%
- Very good B+ (9): 80-89%
- Excellent A (10): 90-100%

Materialni pogoji za izvedbo predmeta :

Za izvajanje predavanj je potrebna predavalnica z multimedijско opremo, za vaje računalniška učilnica.

Material conditions for subject realization:

A lecture room with the multimedia equipment is required for the lectures, for the exercises computer classroom.

Obveznosti študentov:**Student's commitments:**

Obvezna udeležba na vajah.
Oddane sprotne naloge in daljši pisni izdelek.

Mandatory attendance at exercises.
Written assessments and longer written casework.

Reference nosilca predmeta:

BREZNIK, Kristijan, ZUPAN KORŽE, Saša, RAGOZINI, Giancarlo, GORENAK, Mitja. Revealing mission statements in a hotel brand sector using social network analytic approach. *International journal of contemporary hospitality management*. 2023, vol. , iss. , str. [1-19], ilustr. ISSN 0959-6119. <https://www.emerald.com/insight/content/doi/10.1108/IJCHM-03-2022-0403/full/html>, DOI: 10.1108/IJCHM-03-2022-0403. [COBISS.SI-ID 141965059]

MILEKHINA, Antonina, BREZNIK, Kristijan, RESTAINO, Marialuisa. Gender comparison of in-match psychological traits of tennis players : dynamic network analysis : editorial. *Statistica applicata*. [Print ed.]. 2023, vol. 35, no. 2, str. 1-28, ilustr. ISSN 1125-1964. https://www.sai-ijas.org/ojs_files_online_first/35_011_203.pdf, DOI: 10.26398/IJAS.0035-011. [COBISS.SI-ID 141973507]

BREZNIK, Kristijan. A bibliometric analysis of GJEE documents. *Global journal of engineering education*. 2022, vol. 24, no. 3, str. 202-207, ilustr. ISSN 1328-3154. <http://wiete.com.au/journals/GJEE/Publish/vol24no3/05-Breznik-K.pdf>. [COBISS.SI-ID 128782083]

LAW, Kris, BREZNIK, Kristijan, IP, Andrew W.H. Using publicized information to determine the sustainable development of 3-PL companies. *Journal of global information management*. Jan./Mar. 2021, vol. 29, iss. 1, str. 199-216. ISSN 1062-7375. <https://www.igi-global.com/article/using-publicized-information-to-determine-the-sustainable-development-of-3-pl-companies/255844>, DOI: 10.4018/JGIM.20210101.0a1. [COBISS.SI-ID 46423299]

BREZNIK, Kristijan, LAW, Kris, ZEME, Jasmina. Mission in higher education in Slovenia : sustainability in engineering versus others sector. *Sustainability*. 2021, vol. 13, str. 1-12, ilustr. ISSN 2071-1050. <https://www.mdpi.com/2071-1050/13/14/7947>, DOI: 10.3390/su13147947. [COBISS.SI-ID 70645763]

BREZNIK, Kristijan, SKRBINJEK, Vesna. Citation network analysis of documents on engineering and technology education. *Global journal of engineering education*, ISSN 1328-3154, 2017, vol. 19, no. 3, str. 213-218, ilustr. <http://www.wiete.com.au/journals/GJEE/Publish/vol19no3/06-Breznik-K.pdf>. [COBISS.SI-ID 39336965]

LAW, Kris, BREZNIK, Kristijan. Impacts of innovativeness and attitude on entrepreneurial intention : among engineering and non-engineering students. *International journal of technology and design education*, ISSN 0957-7572, Dec. 2017, vol. 27, iss. 4, str. 683-700, ilustr. <http://link.springer.com/article/10.1007/s10798-016-9373-0>, doi: 10.1007/s10798-016-9373-0. [COBISS.SI-ID 38712325]

MAROV, Janko, BREZNIK, Kristijan. *Praktikum iz poslovno-finančne matematike*. Spremenjena in dopolnjena izd. Maribor: Fakulteta za naravoslovje in matematiko, 2014. 132 str., graf. prikazi, tabele. ISBN 978616570. [COBISS.SI-ID 79521025]

Lecturer's references:

BREZNIK, Kristijan, ZUPAN KORŽE, Saša, RAGOZINI, Giancarlo, GORENAK, Mitja. Revealing mission statements in a hotel brand sector using social network analytic approach. *International journal of contemporary hospitality management*. 2023, vol. , iss. , str. [1-19], ilustr. ISSN 0959-6119. <https://www.emerald.com/insight/content/doi/10.1108/IJCHM-03-2022-0403/full/html>, DOI: 10.1108/IJCHM-03-2022-0403. [COBISS.SI-ID 141965059]

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BREZNIK, Kristijan, RAGOZINI, Giancarlo. Exploring the Italian Erasmus agreements by a network analysis perspective. V: ASONAM 2015 : proceedings of the 2015 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining, Paris, France, August 258, 2015, 2015 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining, Paris, France, August 258, 2015. [S. l.: s. n.], cop. 2015, str. 83738, graf. prikazi. <http://dl.acm.org/citation.cfm?doid=2808797.2808864>, doi: 10.1145/2808797.2808864. [COBISS.SI-ID 13878945]

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