SISTEMI ZA PODPORO ODLOČANJU V UPRAVI

UČNI NAČRT PREDMETA/COURSE SYLLABUS

Predmet:	SISTEMI ZA PODPORO ODLOČANJU V UPRAVI
Course title:	DECISION SUPPORT SYSTEMS IN ADMINISTRATION
Članica nosilka/UL Member:	UL FU

Študijski programi in stopnja	Študijska smer	Letnik	Semestri	Izbirnost
Uprava - Upravljanje javnega sektorja, druga stopnja, magistrski	Uprava in javno upravljanje (smer)	2. letnik	1. semester, 2. semester	izbirni
Uprava - Upravljanje javnega sektorja, druga stopnja, magistrski	Upravljanje v evropskem prostoru (smer)	2. letnik	1. semester, 2. semester	izbirni

Univerzitetna koda predmeta/University course code:	0061370
Koda učne enote na članici/UL Member course code:	2031

Predavanja /Lectures	Seminar /Seminar	Vaje /Tutorials	Klinične vaje /Clinical tutorials	Druge oblike študija /Other forms of study	Samostojno delo /Individual student work	ECTS
24	10			56	90	6

Nosilec predmeta/Lecturer:	izr. prof. dr. Dalibor Stanimirović
Vrsta predmeta/Course type:	IZBIRNI/ELECTIVE

Jeziki/Languages:	Predavanja/Lectures:	Angleščina, Slovenščina
	Vaje/Tutorial:	

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:	Prerequisites:
Ni pogojev.	No prerequisites

Vsebina:	Content (Syllabus outline):
1. Uvod: odločitvena teorija, odločanje in proces odločanja 2. Podpora odločanja 3. Odločitveni modeli 4. Metode in tehnike modeliranja; poudarek na večparameterskih modelih 5. Programska oprema za modeliranje in podporo odločanju 6. Primeri odločitvenih modelov in njihove uporabe v upravi 7. Odločanje v pogojih negotovosti, tveganja in nepopolnih informacij 8. Večkriterijsko odločanje in metode večkriterijske analize v javni upravi	1. Introduction: decision theory, decision-making, and the decision-making process 2. Decision support 3. Decision models 4. Modeling methods and techniques, with an emphasis on multi-parameter models 5. Software for modeling and decision support 6. Examples of decision models and their applications in public administration 7. Decision-making under uncertainty, risk, and incomplete information 8. Multi-criteria decision-making and multi-criteria analysis methods in public administration 9. Data-driven decision-making and the use of data in public administration

9. Podatkovno podprto odločanje in uporaba podatkov v upravi 10. Umetna inteligenca in napredni sistemi za podporo odločanju 11. Vrednotenje, validacija in interpretacija odločitvenih modelov 12. Etični, pravni in organizacijski vidiki sistemov za podporo odločanju v upravi	10. Artificial intelligence and advanced decision support systems 11. Evaluation, validation, and interpretation of decision models 12. Ethical, legal, and organizational aspects of decision support systems in public administration

Temeljna literatura in viri/Readings:

1. Lotfi, F. H., Allahviranloo, T., Pedrycz, W., Shahriari, M., Sharafi, H., & Razipour-GhalehJough, S. (2023). Fuzzy Decision Analysis: Multi Attribute Decision Making Approach (Vol. 1121). Cham: Springer.
2. Thakkar, J. J. (2021). Multi-criteria decision making (Vol. 336, pp. 1-365). Singapore: Springer.
3. Sowell, T. (2022). Knowledge and decisions. Basic books.
4. Kochenderfer, M. J., Wheeler, T. A., & Wray, K. H. (2022). Algorithms for decision making. MIT press.

Cilji in kompetence:	**Objectives and competences:**
Cilji – študent zna: • analizirati procese odločanja v upravi in odkrivati njihove specifične značilnosti • uporabiti metode, tehnike in sisteme za podporo zahtevnih odločitvenih procesov in gradnjo ustreznih modelov • oceniti, preveriti, ovrednotiti in primerjati uporabnost in ustreznost metod, tehnik in sistemov za podporo odločanju v upravi • analizirati in primerjati rezultate uporabe odločitvenih modelov v podanem upravnem kontekstu Kompetence: • zmožnost identificiranja priložnosti za uporabo teorije odločanja in podpore odločanju na področju uprave • zmožnost analize realnih odločitvenih problemov v upravi in razvoja ustreznih odločitvenih modelov • zmožnost uporabe odločitvenih modelov za sprejemanje in analizo odločitev ter analizo različnih scenarijev	Objectives – student knows how to: • analyze decisions processes in public administration and discover their specific properties • use methods, techniques and systems for support of complex decision processes and building decision models • estimate, check, evaluate and compare the utility and suitability of methods, techniques and systems for decision support in public administration • analyze and compare the results of using decision models in a given/specific public administration context Competences: • the ability to identify opportunities for using decision theory and decision support in the public administration domain • the ability to analyze real-word decision problems in public administration and design of the appropriate decision models • the ability to use decision models for making and analysis of decisions as well as analysis of different scenarios

Predvideni študijski rezultati:	**Intended learning outcomes:**
Študent: • pozna, razume in lahko uporablja metode za analizo odločitvenih problemov in procesov v upravi • pozna, razume in lahko uporablja ustrezne metod in tehnik za gradnjo večparameterskih odločitvenih modelov • pozna in lahko uporablja programsko opremo za formalizacijo in uporabo odločitvenih modelov • pozna, razume in lahko uporablja analize kaj-če, analize občutljivosti in selektivne razlage za analizo odločitev dobljenih z odločitvenim modelom	Student: • knows, understands and is able to use methods for analysis of decision problems and processes in public administration • knows, understands and is able to use appropriate methods and techniques for building multi-criteria decision models • knows and is able to use software for formalization and use of decision models • knows, understands and is able to use what-if analysis, sensitivity analysis and option evaluation for analysis of decisions obtained with a decision model

Metode poučevanja in učenja:	Learning and teaching methods:
1. priprava na predavanja	1. preparations for lectures
2. predavanje	2. lecture
3. priprava na seminar	3. preparations for seminars
4. seminar	4. seminars
5. konzultacije	5. study consultation
6. seminarska naloga	6. seminar paper

Načini ocenjevanja:	Delež/Weight	Assessment:
1. Pisni in/ali ustni izpit	60,00 %	1. Written and/or oral exam
2. Seminarska naloga	40,00 %	2. Seminar paper

Ocenjevalna lestvica:	Grading system:
5 - 10, pri čemer velja, da je pozitivna ocena od 6 - 10	5 - 10, a student passes the exam if he is graded from 6 to 10

Reference nosilca/Lecturer's references:

1. Stanimirović, D., & Vintar, M. A critical insight into the evaluation of e-government policies: reflections on the concept of public interest. International journal on advances in life sciences. 2013, vol 5, no. 1/2, str. 52-65. ISSN 1942-2660. http://www.iariajournals.org/life_sciences/lifsci_v5_n12_2013_paged.pdf. [COBISS.SI-ID 4151982]
2. Stanimirović, D., Murko, E., Battelino, T., Grošelj, U., & Žerjav-Tanšek, M. Towards a comprehensive strategy for the management of rare diseases in Slovenia: outlining an IT-enabled ecosystemic approach. International journal of environmental research and public health. [Online ed.]. 2021, vol. 18, iss. 23, str. 1-17. ISSN 1660-4601. https://www.mdpi.com/1660-4601/18/23/12395, Repozitorij Univerze v Ljubljani – RUL, DOI: 10.3390/ijerph182312395. [COBISS.SI-ID 86668291]
3. Stanimirović, D., & Tepej Jočić, L. The Slovenian Patient Summary: one digital record, multitude of applications. Studies in health technology and informatics. 2023, vol. 305, str. 295-298, ilustr. ISSN 1879-8365. https://ebooks.iospress.nl/volume/healthcare-transformation-with-informatics-and-artificial-intelligence, DOI: 10.3233/SHTI230487. [COBISS.SI-ID 157580803]
4. Stanimirović, D., & Pribaković Brinovec, R. Management of health care workforce: conceptualizing a structural model of human resource planning in health care in Slovenia. Management. 2023, vol. 27, št. 2, str. 29-42, ilustr. ISSN 1846-3363. https://hrcak.srce.hr/clanak/437108. [COBISS.SI-ID 154128131]
5. Stanimirović, D., Development of the digital mortality surveillance system: the Slovenian contribution to the global monitoring of mortality causes and patterns. Journal of global health. 2024, vol. 14, [article no.] 03005, str. 1-7, ilustr. ISSN 2047-2986. https://jogh.org/2024/jogh-14-03005, DOI: 10.7189/jogh.14.03005. [COBISS.SI-ID 192194563]