

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	Menedžerski informacijski sistemi
Course title:	Management Information Systems

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Medkulturni menedžment, druga	Program nima smeri	prvi	prvi
Intercultural Management, second	The programme has no fields	First	first

Vrsta predmeta / Course type Obvezni / Obligatory

Univerzitetna koda predmeta / University course code: MIS-2015-10-01

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje work	Druge oblike študija	Samost. delo Individ. work	ECTS
20	-	20	-		110	5

Nosilec predmeta / Lecturer: izr. prof. dr. Blaž Rodič/Assoc. prof. Blaž Rodič

Jeziki / Languages:

Predavanja / Lectures:	Slovenski, angleški / Slovene, English
Vaje / Tutorial:	Slovenski, angleški / Slovene, English

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

Pogoj za vključitev v delo je vpis v prvi letnik magistrskega študija.
Študent/študentka mora pred pristopom k izpitu pripraviti in zagovarjati empirično seminarsko nalogo.

Prerequisites:

The prerequisite is enrolment into the first year of the study.
Prior to the exam, the student has to prepare and present seminar work.

Vsebina:

- Uvod v predmet: kaj je MIS? Zakaj MIS? Razvoj MIS. Prihodnost MIS.
- Informatika, informacije in podatki.
- Informacijski sistem. Razvoj informatike.
- Evolucija MIS.

Content (Syllabus outline):

- Introduction to the course: What are MIS? Why MIS? Development of MIS. The future of MIS.
- Information technology, information and data.
- Information system. Development of informatics.

- Upravljaljska piramida. Ravni informacijskih sistemov. Podpora IS poslovnemu sistemu. Razmerje IS in procesov: temeljni, informacijski, in upravljaljski proces.
- Informacijski sistemi na različnih ravneh: Poslovni IS, Integrirani IS, KMS, MIS, SPO, EIS. Čemu lahko rečemo MIS? Razlogi za vpeljavo MIS. Poslovna vrednost MIS.
- Zahteve za gradnjo MIS. Tipi informacij v MIS.
- Podpora odločanju z MIS. Zahtevnost odločanja. Odločanje na različnih ravneh.
- Proces odločanja. Pristopi k odločanju. Področja podpore odločanju: OR, SPO, Komponente SPO, Skupinsko odločanje. Podpora sodelovanju.
- Večkriterijsko modeliranje. Kvantitativni in kvalitativni modeli. ABACON, AHP, DEX.
- Ekspertni sistemi. Vodila za načrtovanje SPO. Sestava MIS. Podatkovno skladišče.
- Večdimenzionalnost podatkov. OLAP orodja. Vrtilne tabele. Rudarjenje v podatkih.
- Uporabniški vmesnik MIS. Vizualizacija podatkov.
- Sistemi za upravljanje poslovne uspešnosti. Geografski informacijski sistemi. Metode umetne inteligence v SPO.

- The evolution of MIS. Management Pyramid. Levels of information systems. IS support for the business systems. Relationship between the IS and processes: basic, information, and management process.
- Information systems at different levels: business IS, integrated IS, KMS, MIS, DSS, EIS. What can we refer to as MIS? The reasons for the introduction of MIS. Business value of MIS.
- Requirements for construction of the MIS. Types of information in the MIS.
- Decision support with MIS. Complexity of decision-making. Decision-making at various levels.
- Decision-making process. Approaches to decision making. Areas of decision support: OR, DSS, DSS components, Group decision making. Support for cooperation.
- Multicriteria modeling. Quantitative and qualitative models. ABACON, AHP, DEX.
- Expert systems. Guidelines for DSS design. Composition of MIS. Data warehouse.
- Multidimensional data. OLAP tools. Pivot table. Data mining.
- The user interface of MIS. Visualization of data.
- Business performance management systems. Geographic Information Systems. Artificial intelligence in the DSS.

Temeljni literatura in viri / Readings:

Borschchev A. (2013): *The Big Book of Simulation Modeling. Multimethod Modeling with AnyLogic 6*, AnyLogic North America.

Turban, E.; Aronson, J.E.; Liang T.P. in Sharda R.(2007): *Decision Support and Business Intelligence Systems* (8th Edition). London: Prentice-Hall.

Turban, E.; Sharda, R.; Aronson, J.E. in King, D.(2008): *Business Intelligence: A Managerial Approach*. Upper Saddle River, NJ: Prentice-Hall.

Laudon J.P. in Laudon K.C. (2007): *Management Information Systems & Multimedia Student CD Package* (10th Edition), Prentice Hall.

Howson C. (2008): *Successful Business Intelligence: Secrets to Making BI a Killer App*.

Bohanec, M.: *Odločanje in modeli*, DMFA Založništvo, Ljubljana.

Cilji in kompetence:

- poznavanje in razumevanje kulturnih in družbenih procesov in sposobnost njihove kompleksne analize;
- uporaba metodoloških orodij, tj. izvajanje, koordiniranje in organiziranje raziskav, uporaba raznih raziskovalnih metod in tehnik;
- sposobnost timskega dela, tj. pripravljenost na sodelovanje, kooperativnost, upoštevanje mnenj drugih in izpolnjevanje dogovorjene vloge v okviru tima in skupine;
- sposobnost uporabe informacijsko-komunikacijskih tehnologij in sistemov na področju kulture;
- sposobnost razumevanja pomena menedžerskih informacijskih sistemov oz. sistemov za poslovno obveščanje znanje uporabe informacijskih sistemov kot podpore odločanju

Objectives and competences:

- Knowledge and understanding of cultural and social processes and the ability for their complex analysis;
- The application of methodological tools, i.e. implementation, coordination and organization of the research, the application of different research methods and techniques;
- The ability for teamwork, i.e. willingness for cooperation, collaboration, taking into account the opinions of others and fulfilment of the defined roles within the team and the group;
- The ability to apply information and communication technologies and systems in the field of culture;
- ability to understand the importance of management and information systems and systems for business intelligence the ability to use information systems as decision support tools proficiency in methods for design of multi-criteria decision models

Predvideni študijski rezultati:**Intended learning outcomes:**

- poznavanje strateškega pomena menedžerskih informacijskih sistemov oz. sistemov za poslovno obveščanje;
- poznavanje uporabnosti informacijskih sistemov za podporo menedžmentu
- uporaba informacijskih sistemov kot podporo odločanju;
- obvladovanje metod izdelave večkriterijskih odločitvenih modelov;
- poznavanje ekspertnih sistemov;
- poznavanje etičnih vidikov uporabe menedžerskih informacijskih sistemov.

- recognize the strategic importance of management information systems i.e. business intelligence systems;
- recognize the utility of information systems in management support;
- learn how to use information systems and decision support;
- master multi-criteria decision modelling, learn about expert systems;
- understand the ethical aspects of the use of management information systems.

Metode poučevanja in učenja:

- predavanja z aktivno udeležbo študentov (razlaga snovi, pogovori, vprašanja, primeri, reševanje problemov)
- seminarske vaje v povezavi s prakso (večkriterijsko odločanje, podpora odločanju)
- individualne in skupinske konzultacije (pogovori, dodatna razlaga, obravnava specifičnih vprašanj)
- spodbujanje samostojnega študija in raziskovanja (motiviranje, usmerjanje, samoopazovanje, samouravnavanje, refleksija, samoocenjevanje)

Learning and teaching methods:

- Lectures with the active participation of students (presentation, discussion, questions, problems, problem solving);
- Laboratory exercises (multi-criteria modelling, decision support);
- Individual and group consultation (discussion, additional explanation, specific issues).
- stimulation of independent study and research (motivation, guidance, self-observation, self-regulation, reflection, self-assessment)

Delež (v %) /

Weight (in %)

Načini ocenjevanja:

Assessment:

Način (pisni izpit, ustno izpraševanje, naloge, projekt):	Delež (v %) / Weight (in %)	Type (examination, oral, coursework, project):
pisni izpit	50%	written exam
empirična seminarska naloga s poročili seminarskega dela ter predstavitev naloge	50%	seminar paper

Reference nosilca / Lecturer's references:

Rodič, Blaž (2008): *Distribuirani sistemi za podporo odločanju in programski agenti*. (Distributed decision support systems and software agents), Nova Gorica: Fakulteta za uporabne družbene študije.

Kanduč, Tadej in Rodič, Blaž (2015): Optimisation of a complex manufacturing process using discrete event simulation and a novel heuristic algorithm. *International Journal Of Mathematical Models And Methods In Applied Sciences*.

Kanduč, Tadej in Rodič, Blaž (2015): Optimization of a furniture factory layout, *Croatian Operational Research Review*.

Rodič, Blaž in Baggia, Alenka: Dynamic airport ground crew scheduling using a heuristic scheduling algorithm. *International journal of applied mathematics and informatics*, vol. 7.

Rodič, Blaž; Vukovič, Goran; Završnik, Bruno in Miglič, Gozdana (2012): Issues in introducing training needs analysis in Slovenia's public administration. *Transylvanian review of administrative sciences*, 37 E, str. 155-171.

Rodič, Blaž (2012): Mobile agents for distributed decision support systems. *Int. Sci. J. Manag. Inf. Syst.*, 6(1), str. 20-27.

Vukovič, Goran; Završnik, Bruno; Rodič, Blaž in Miglič, Gozdana (2008): The training of civil servants in the Slovene state administration: issues introducing training evaluation. *Int. rev. adm. sci.*, 74(4), str. 653-676.

Rodič, Blaž in Kljajić, Miroljub (2005): Accessing distributed data sources with mobile agents and XML. V: JAŠKOVÁ, Mária (ur.). *ECON '05 : [selected research papers]*, (Research works proceedings, Vol. 12, 2005). Ostrava: Technical University of Ostrava, Faculty of Economics, str. 280-287.

Kljajić, Miroljub; Breskvar, Uroš in Rodič, Blaž (2004): Computer aided scheduling with use of genetic algorithms and a visual discrete event simulation model. *WSEAS Trans. Syst.*, 3(3), str. 1021-1026.