

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet: Informacijski sistemi
Course title: Information Systems

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Socialni menedžment (UN), prva stopnja / Social management (BSc), first level	/	2.,3.	4.,6.

Vrsta predmeta / Course type

Izbirni/Optional

Univerzitetna koda predmeta / University course code:

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje work	Druge oblike študija	Samost. delo Individ. work	ECTS
20	0	40	0	0	120	6

Nosilec predmeta / Lecturer:

izr. prof. dr. Blaž Rodič / Associate Professor Blaž Rodič, Ph.D

**Jeziki /
Languages:**

**Predavanja /
Lectures:** Slovensko / Slovenian, Angleško / English
Vaje / Tutorial: Slovensko / Slovenian, Angleško / English

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

Ni posebnih pogojev.

Prerequisites:

No special prerequisites.

Vsebina:

1. UVOD:
 - namen in vsebina predmeta,
 - načini ocenjevanja,
 - študijska literatura.
2. OSNOVNI POJMI:
 - definicija informacijskega sistema (IS),
 - poslovni sistemi (procesi in podatki),
 - poslovne aplikacije.
3. INFORMACIJSKI SISTEM:

Content (Syllabus outline):

1. INTRODUCTION:
 - purpose and content of the course,
 - forms of assessment,
 - main readings.
2. BASIC CONCEPTS:
 - definition of information system (IS),
 - business systems (processes and data),
 - business applications.
3. INFORMATION SYSTEM:

<ul style="list-style-type: none"> • disciplinarni vidik, • namen in cilj IS, • klasifikacija IS, • razvoj IS, • metodologije pri razvoju IS. <p>4. STRUKTURA INFORMACIJSKEGA SISTEMA:</p> <ul style="list-style-type: none"> • vpliv informacijske tehnologije na evolucijo IS, • strojna oprema, • komunikacijska oprema, • programska oprema (sistemska, aplikativna). <p>5. INFORMACIJSKI SISTEMI V ORGANIZACIJAH:</p> <ul style="list-style-type: none"> • vloga IS v organizacijah, • organiziranje in upravljanje podatkov v organizacijah, • poslovne aplikacije. <p>6. TEMELJNA STRUKTURA INFORMACIJSKEGA SISTEMA V ORGANIZACIJI (TRANSAKCIJSKI NIVO):</p> <ul style="list-style-type: none"> • nabavni IS, • proizvodni IS, • prodajni IS, • računovodski IS, • kadrovski IS. <p>7. METODE IN TEHNIKE RAZVOJA INFORMACIJSKEGA SISTEMA:</p> <ul style="list-style-type: none"> • življenjski cikel informacijskega sistema (planiranje, analiza, oblikovanje, razvoj, uvajanje, vzdrževanje), • orodja za tehnološko podporo pri razvoju IS, • CASE orodja za razvoj in delovanje IS, • potrebna znanja za načrtovanje in razvijanje IS, • zagotavljanje kakovosti razvoja IS, • prilagajanje IS značilnostim in potrebam organizacije. <p>8. PRENOVA POSLOVANJA IN CELOVITE PROGRAMSKE REŠITVE:</p> <ul style="list-style-type: none"> • sistemi <i>Enterprise Resource Planning</i> (ERP). <p>9. IZMENJAVA PODATKOV IN KOMUNIKACIJE:</p>	<ul style="list-style-type: none"> • disciplinary aspect, • purpose and aim of IS, • IS classification, • IS development, • IS development methodology. <p>4. STRUCTURE OF INFORMATION SYSTEM:</p> <ul style="list-style-type: none"> • impact of information technology on IS evolution, • hardware, • communication tools, • software (system, applicative). <p>5. INFORMATION SYSTEMS IN ORGANIZATIONS:</p> <ul style="list-style-type: none"> • role of IS in organizations, • organization of data and data management in organizations, • business applications. <p>6. FUNDAMENTAL STRUCTURE OF INFORMATION SYSTEM IN ORGANIZATION (TRANSACTIONAL LEVEL):</p> <ul style="list-style-type: none"> • cost IS, • manufacturing IS, • sales IS, • accounting IS, • human resource IS. <p>7. METHODS AND TECHNIQUES FOR INFORMATION SYSTEM DEVELOPMENT:</p> <ul style="list-style-type: none"> • information system lifecycle (planning, analysing, shaping, developing, introducing, maintaining), • tools for technological support in developing IS, • CASE tools for IS development and function, • necessary skills for planning and developing IS, • quality assurance in developing IS, • adaptation of IS to organization's characteristics and needs. <p>8. BUSINESS RENOVATION AND COMPREHENSIVE SOFTWARE SOLUTIONS:</p> <ul style="list-style-type: none"> • <i>Enterprise Resource Planning</i> (ERP) systems. <p>9. DATA TRANSFER AND COMMUNICATIONS:</p>
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- integracija IS organizacije z IS okolja,
- komunikacijski kanali izmenjave podatkov (računalniške mreže, internet, ekstranet, mrežne storitve, aplikacije e-poslovanja).

10. GLOBALNI, DRUŽBENI, ETIČNI IN PRAVNI VIDIKI INFORMACIJSKEGA SISTEMA.

- integration of organizational IS with IS of its environment,
- communication channels for data transfer (computer networks, Internet, Extranet, network services, e-commerce applications).

10. GLOBAL, SOCIAL, ETHIC AND LEGAL ASPECTS OF INFORMATION SYSTEM.

Temeljni literatura in viri / Readings:

- Rainer, R.K., Prince, B., Cegielski, C. G. (2013): *Introduction to Information Systems: Supporting and Transforming Business*. Wiley.
- Ralph stair, George Reynolds (2011): *Fundamentals of Information Systems*. Course Technology; 6th edition.
- Valacich, J., George, J. (2017): *Modern Systems Analysis and Design* (8th Edition). Pearson.
- Dodatna literatura s strani nosilca / additional literature proposed by lecturer.

Cilji in kompetence:

Splošne kompetence:

- razvoj kritične in samokritične presoje;
- sposobnost fleksibilne uporabe znanja v praksi;
- sposobnost divergentnega mišljenja, kritičnega presojanja, ustvarjalnosti in premagovanja problemov.

Predmetno specifične kompetence

- poznavanje in razumevanje utemeljitev in zgodovine razvoja temeljnih družboslovnih disciplin (stroke), in sicer s področja družboslovne informatike;
- sposobnost povezovanja koherentno obvladanega temeljnega znanja, pridobljenega pri obveznih predmetih, ter njegova uporaba v praksi;
- sposobnost uporabe informacijsko-komunikacijske tehnologije in sistemov na področju družbenih ved;
- sposobnost interdisciplinarnega pristopa, ki se kaže kot razumevanje splošne strukture družbenih ved ter povezanosti med njenimi posameznimi disciplinami in poddisciplinami;

Objectives and competences:

General competences:

- development of critical and self-critical judgement;
- The ability of the flexible use of knowledge in practice;
- the ability of divergent thinking, critical judgement, creativity and overcoming problems.

Course specific competences

- knowing and understanding the foundations and history of the development of the basic social science disciplines (professions), i.e. social science informatics;
- the ability to connect coherently collected knowledge attained from the mandatory courses and its application in practice;
- ability to use information and communications technologies and systems in the field of social sciences;
- the ability for an interdisciplinary approach demonstrated as understanding of the general structure of social sciences and their connections to its particular disciplines and sub-disciplines;

- razvoj veščin in spretnosti pri uporabi znanja na področju družbenih ved s pomočjo reševanja teoretičnih ali empiričnih problemov.

- the development of skills and abilities to apply knowledge in the field of social sciences by solving theoretical and empirical problems.

Predvideni študijski rezultati:

Znanje in razumevanje:

- poznavanje temeljnih definicij in pojmov na področju informacijskih sistemov,
- razumevanje povezanosti informacijskega in poslovnega sistema,
- poznavanje in razumevanje namenov in ciljev informacijskega sistema organizacije,
- zmožnost identifikacije prispevka informacijskega sistema k dodani vrednosti organizacije,
- poznavanje in razumevanje strukture informacijskega sistema organizacije,
- poznavanje in razumevanje življenjskega cikla poslovnega informacijskega sistema,
- poznavanje, razumevanje in uporaba različnih metod in tehnik za razvijanje poslovnega informacijskega sistema,
- zmožnost za sodelovanje pri razvoju informacijskega sistema organizacije.

Intended learning outcomes:

Knowledge and understanding:

- knowledge of fundamental definitions and concepts in the field of information systems,
- understanding the connection between information and business systems,
- knowledge and understanding of purposes and aims of information system in organization,
- ability to identify the contribution of information system to added value of organization,
- knowledge and understanding of information system structure in organization,
- knowledge and understanding of business information system lifecycle,
- knowledge, understanding and application of different methods and techniques for business information system development,
- ability to collaborate in development of information system in organization.

Metode poučevanja in učenja:

- Predavanja z aktivno udeležbo študentov (razlaga, diskusija, vprašanja, primeri, reševanje problemov);
- Vaje (delo na osebni računalniku, prenos teorije v prakso);
- Uporaba spletne učilnice oziroma drugih sodobnih IKT orodij;
- Konzultacije (diskusija, dodatna razlaga, obravnava specifičnih vprašanj).

Learning and teaching methods:

- Lectures with active participation of students (explanation, discussion, questions, examples, problem solving);
- Tutorial (work on personal computers, transferring the theory to practice);
- Use of online classroom or other contemporary ICT tools;
- Consultation (discussion, additional explanation, dealing with specific issues).

Načini ocenjevanja:	Delež (v %) / Weight (in %)	Assessment:
<p>Načini:</p> <ul style="list-style-type: none"> • Pisni izpit • Empirična seminarska naloga s poročili seminarskega dela in vaj ter predstavitev naloge <p>Ocenjevalna lestvica – skladno s Pravilnikom o preverjanju in ocenjevanju znanja.</p>	<p>50%</p> <p>50%</p>	<p>Types:</p> <ul style="list-style-type: none"> • Written examination • Empirical seminar report with reports of seminar work and tutorials, and presentation of tasks <p>Grading is in accordance with the Faculty's evaluation Ordinance.</p>

Reference nosilca / Lecturer's references:

- BARTOL, Tomaž, DOLNIČAR, Danica, BOH PODGORNIK, Bojana, RODIČ, Blaž, ZORANOVIĆ, Tihomir. A comparative study of information literacy skill performance of students in agricultural sciences. *Journal of academic librarianship*, ISSN 0099-1333. [Print ed.], 2018, iss. 3, vol. 44, str. 374-382, doi: [10.1016/j.acalib.2018.03.004](https://doi.org/10.1016/j.acalib.2018.03.004). [COBISS.SI-ID [1397854](#)].
- RODIČ, Blaž. Industry 4.0 and the new simulation modelling paradigm. *Organizacija: revija za management, informatiko in kadre*, ISSN 1318-5454. [Tiskana izd.], aug. 2017, vol. 50, no. 3, str. 193-207, ilustr., doi: [10.1515/orga-2017-0017](https://doi.org/10.1515/orga-2017-0017). [COBISS.SI-ID [2048464659](#)].
- KANDUČ, Tadej, RODIČ, Blaž. Optimisation of machine layout using a force generated graph algorithm and simulated annealing. *International journal of simulation modelling*, ISSN 1726-4529, 2016, vol. 15, no. 2, str. 275-287. http://www.ijssimm.com/Full_Papers/Fulltext2016/text15-2_275-287.pdf.
- BOH PODGORNIK, Bojana, DOLNIČAR, Danica, ŠORGO, Andrej, BARTOL, Tomaž, GLAŽAR, Saša A. (sodelavec pri raziskavi), FERK SAVEC, Vesna (sodelavec pri raziskavi), JURIŠEVIČ, Mojca (sodelavec pri raziskavi), SAJOVIC, Irena (sodelavec pri raziskavi), VRTAČNIK, Margareta (sodelavec pri raziskavi), BAGGIA, Alenka (sodelavec pri raziskavi), KLJAJIĆ BORŠTNAR, Mirjana (sodelavec pri raziskavi), PUCIHAR, Andreja (sodelavec pri raziskavi), RODIČ, Blaž (sodelavec pri raziskavi). Evaluation of information literacy of Slovenian university students. V: KURBANOGLU, Serap (ur.). *Information literacy : moving toward sustainability: third European conference, ECIL 2015, Tallinn, Estonia, october 19-22, 2015 : revised selected papers*, (Communications in Computer and Information Science, ISSN 1865-0929, Vol. 552). Cham [etc.]: Springer. 2015, str. 499-508.
- RODIČ, Blaž, KANDUČ, Tadej. 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*, ISSN 1998-0140, 2015, vol. 9, str. 320-329. <http://www.naun.org/main/NAUN/ijmmas/2015/a762001-375.pdf>. [COBISS.SI-ID [20050482](#)].
- RODIČ, Blaž, BAGGIA, Alenka. Airport Ground Crew Scheduling Using Heuristics and Simulation. V: MUJICA MOTA, Miguel (ur.), FLORES DE LA MOTA, Idalia (ur.). *Applied simulation and*

optimization. 2 : new applications in logistics, industrial and aeronautical practice. Cham: Springer. cop. 2017, str. 131-160, ilustr. [COBISS.SI-ID [2048454163](#)].

RODIČ, Blaž. Issues of e-collaboration and knowledge management in media industries. V: LUGMAYR, Artur (ur.), et al. *Information systems and management in media and entertainment industries*, (International series on computer entertainment and media technology (Online), ISSN 2364-9488). Cham: Springer. cop. 2016, graf. prikazi, tabele, doi: [10.1007/978-3-319-49407-4_13](#). [COBISS.SI-ID [2048446995](#)].

RODIČ, Blaž. Issues of collaboration in a virtual environment. V: LEVNAJIĆ, Zoran (ur.). *Facing ICT challenges in the era of social media*. Frankfurt am Main: PL Academic Research. 2014, str. 11-22, graf. prikazi, tabele. [COBISS.SI-ID [2048317459](#)].