UČNI NAČRT PREDMETA / COURSE SYLLABUS

Ime predmeta:	OSNOVE RAČUNALNIŠTVA V LOGISTIKI
Course title:	FUNDEMENTALS OF COMPUTER SCIENCE IN LOGISTICS

Študijski program in stopnja Study programme and cycle	Študijska smer Study option	Letnik Year of study	Semester Semester
GOSPODARSKA IN TEHNIŠKA LOGISTIKA 1. stopnja		1.	1.
PROFESSIONAL HIGHER EDUCATION STUDY PROGRAMME ECONOMIC AND TECHNICAL LOGISTICS 1st degree		1.	1.

Vrsta predmeta (obvezni ali izbirni) /
Course type (compulsory or elective)

OBVEZNI
COMPULSORY

Univerzitetna koda predmeta / University course code:

VS

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje Clinical training	Druge oblike študija Other forms of study	Samost. delo Individual work	ECTS
18 e-P 24 a-P		18 e-V 30 a-V			90	6

Nosilec predmeta / Course coordinator:	**ROMAN GUMZEJ**

Jeziki /Languages:	**Predavanja / Lectures:**	SLOVENSKI/SLOVENE
	Vaje / Tutorial:	SLOVENSKI/SLOVENE

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:	**Prerequisites for enrolling in the course or for performing study obligations:**
Ni pogojev.	None.

Vsebina (kratek pregled učnega načrta):	**Content (syllabus outline):**
1. Informacijska tehnologija in logistika: organizacijski vidik podjetja, nivoji odločanja v podjetju, struktura logističnih informacijskih sistemov (LIS), IT kot platforma LIS. 2. Avtomatizirana obdelava podatkov: oblike podatkov (števila, črke, slike, zvok, črtne kode, RFID), Shannonova teorija informacij, Amdahlov zakon, Mooreov zakon, algoritmi,... 3. Informacijska tehnologija (IT): računalniška strojna oprema, komunikacijska omrežja, računalniška programska oprema, računalniške platforme.	1. Information technology and logistics: organizational view of an enterprise, levels of decision making in an enterprise, logistics information systems (LIS) structure, IT as LIS platform. 2. Automated data processing: data formats (numbers, letters, pictures, sound, bar code, RFID), Shannon's theory of information, Amdahl's law, Moore's law, algorithms, ... 3. Information technology (IT): computer hardware, netware, computer software, computing platforms.

4. Računalniška podpora odločanju (DSS): binarni, kvalitativni, kvantitativni kazalniki, analitika, več parametrsko odločanje.	4. Computer aided decision making (DSS): binary, qualitative, quantitative indicators, analytics, multi-criteria decision making.

Temeljni literatura in viri / Reading materials:

Gumzej, R. (2013). Računalništvo in informatika v logistiki, Celje: Fakulteta za logistiko. ISBN 978-961-6562-87-4, 978-961-6562-86-7.

Gumzej, R. (2012). Črtna koda še v prednosti pred RFID : ko bodo razvijalci tehnologije RFID povečali njeno zanesljivost in znižali ceno, se bo lahko postavila ob bok sistemu črtne kode. Finance, 30. avg. 2012, št. 166, str. 30-31, ilustr., fotogr. ISSN 1318-1548.

Rainer, R. K. & Turban, E. (2008). Introduction to Information Systems: Supporting and Transforming Business. John Wiley and Sons, 2nd edition.

Franco, L.A.; Montibeller, G. (2010). Problem structuring for multicriteria decision analysis interventions. Wiley Encyclopedia of Operations Research and Management Science. doi:10.1002/9780470400531.eorms0683. ISBN 9780470400531.

White, R. (2006). How Computers Work. QuE.

Cilji in kompetence:

Objectives and competences:

Cilji predmeta so: • uporaba IT za avtomatizirano obdelavo podatkov v logistiki. Kompetence, ki jih študenti osvojijo: • poznavanje konceptov logističnih informacijskih sistemov s pridruženimi nivoji odločanja v podjetju, • razumevanje osnovnih konceptov IT, • uporaba IT pri podpori odločanju.	Course objectives are: • use of IT for automated data processing in logistics. Competences acquired by students: • knowing the logistics information systems concepts with associated levels of enterprise decision making, • understanding of basic IT concepts, • use of IT in decision making.

Predvideni študijski rezultati:

Intended learning outcomes:

Študent bo po zaključku predmeta zmožen: • aplicirati osnovno terminologijo računalništva v logistiki, • izbrati ustrezno računalniško opremo za logistične aplikacije, • napredne uporabe pisarniške programske opreme, • obdelati, analizirati in predstaviti logistične podatke z ustreznimi računalniškimi orodji.	Upon completion of the course a student will be capable of: • applying fundamental computer science terms in logistics, • choosing appropriate computing equipment for logistics applications, • advanced use of office automation systems, • processing, analysis, and presentation of logistic data with appropriate computing tools.

Metode poučevanja in učenja:

Learning and teaching methods:

Predavanja: pri predavanjih študenti spoznajo teoretične osnove predmeta. Predavanja potekajo v živo v predavalnici pa tudi v obliki e-predavanj na videokonferenčni način ter preko namenskih e-učilnic v e-učnem okolju. Vaje: pri vajah študenti utrdijo teoretično znanje in se ga naučijo uporabiti. Vaje potekajo v živo v	Lectures: during lectures students are familiarised with the theoretical fundamentals of the course. Lectures take place live in the classroom as well as in the form of e-lectures via videoconferencing and dedicated e-classrooms in the e-learning environment.

predavalnici pa tudi v obliki e-vaj na videokonferenčni način ter preko namenskih e-učilnic v e-učnem okolju.	Tutorials: during tutorials students consolidate their theoretical knowledge and learn to apply it. The tutorials are held live in the classroom as well as in the form of e-tutorials via videoconferencing and dedicated e-classrooms in the e-learning environment.

Načini ocenjevanja:	Delež (v %) / Share (in %)	Assessment methods:
Način (pisni izpit, ustno izpraševanje, naloge, projekt): • naloge • pisni izpit	 50% 50%	Method (written or oral exam, coursework, project): • coursework • written exam

Reference nosilca / Course coordinator's references:

1. KMETEC, Anja, MLAKER KAČ, Sonja, GUMZEJ, Roman. How to estimate strategic partnerships on the basis of quality criteria in logistics systems. International journal of applied logistics. [Online]. 2021, vol. 11, iss. 1, str. 52-65, tabele. ISSN 1947-9581. https://www.igi-global.com/article/how-to-estimate-strategic-partnerships-on-the-basis-of-quality-criteria-in-logistics-systems/269708, DOI: 10.4018/IJAL.2021010104.
2. GUMZEJ, Roman, ROSI, Bojan. Automated authentication and authorisation of consignors and their consignments within secure supply chains : Elektronski vir. Tehnički vjesnik. 2018, vol. 25, iss. 1, str. 203-209. ISSN 1848-6339. https://hrcak.srce.hr/index.php?show=clanak&id_clanak_jezik=285638.
3. GUMZEJ, Roman. Engineering safe and secure cyber-physical systems : the specification PEARL approach, (Studies in computational intelligence, vol. 632). [S. l.]: Springer, cop. 2016. XIII, 128 str., ilustr. ISBN 978-3-319-28903-8.
4. RASHAD, Waleed, GUMZEJ, Roman. The information technology in supply chain integration : case study of Reda Chemicals with Elemica. International journal of supply chain management. [Spletna izd.]. Mar. 2014, vol. 3, no. 1, str. 62-69. ISSN 2050-7399. http://ojs.excelingtech.co.uk/index.php/IJSCM/article/view/876/pdf.
5. GUMZEJ, Roman, HALANG, Wolfgang A. Real-time systems' quality of service : introducing quality of service considerations in the life-cycle of real-time systems. London [etc.]: Springer, 2010. XIX, 131 str., ilustr. ISBN 978-1-84882-847-6, ISBN 1-84882-847-0, ISBN 1-84882-848-9, ISBN 978-1-84882-848-3. DOI: 10.1007/978-1-84882-848-3.