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| **UČNI NAČRT PREDMETA / COURSE SYLLABUS** |
| **Ime predmeta:** | OSNOVE RAČUNALNIŠTVA V LOGISTIKI |
| **Course title:** | FUNDEMENTALS OF COMPUTER SCIENCE IN LOGISTICS |
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| **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. |
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| **Vrsta predmeta (obvezni ali izbirni) /** **Course type (compulsory or elective)** | OBVEZNI |
| COMPULSORY |
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| **Univerzitetna koda predmeta / University course code:** | VS |
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| **Predavanja****Lectures** | **Seminar****Seminar** | **Vaje****Tutorial** | **Klinične vaje****Clinical training** | **Druge oblike študija****Other forms of study** | **Samost. delo****Individual work** |  | **ECTS** |
| 18 e-P24 a-P |  | 18 e-V30 a-V |  |  | 90 |  | 6 |
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| **Nosilec predmeta / Course coordinator:** | **ROMAN GUMZEJ** |
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| **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.4. Računalniška podpora odločanju (DSS): binarni, kvalitativni, kvantitativni kazalniki, analitika, več parametrsko odločanje. |  | 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. Computer aided decision making (DSS): binary, qualitative, quantitative indicators, analytics, multi-criteria decision making. |
| **Temeljni literatura in viri / Reading materials:** |
| Gumzej, R. (2024).Računalništvo in informatika v logistiki, Celje: Fakulteta za logistiko.(<https://plus.cobiss.net/cobiss/si/sl/bib/179481091>)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.
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| **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.
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| **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 predavalnici pa tudi v obliki e-vaj na videokonferenčni način ter preko namenskih e-učilnic v e-učnem okolju. |  | 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.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
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| **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.
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