UČNI NAČRT PREDMETA / SUBJECT SPECIFICATION	
Predmet:	INFORMACIJSKI SISTEMI V LOGISTIČNIH PROCESIH
Subject Title:	INFORMATION SYSTEMS IN LOGISTIC PROCESSESS

Študijski program Study programme	Študijska smer Study field	Letnik Year	Semester Semester
LOGISTIKA SISTEMOV		2	3.
LOGISTICS OF SYSTEMS			

Vrsta predmeta / Course type	Izbirni
Univerzitetna koda predmeta / University course code:	DR

Predavanja Lectures	Seminar Seminar	Sem. vaje Tutorial	Lab. vaje Lab work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
25					425	15

Nosilec predmeta / Lecturer:	ROMAN GUMZEJ

Jeziki / Languages:	Predavanja/ Lecture:	SLOVENSKI / SLOVENE
	Vaje / Tutorial:	SLOVENSKI / SLOVENE

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:	Prerequisits:
Opravljen obvezni predmet Upravljanje logističnih sistemov na doktorskem študiju Logistika sistemov.	Completed obligatory subject Management of Logistic Systems (the Logistic Systems Ph.D. Programme).

Vsebina:

Vsebina predmeta je usmerjena v integracijo sistemskih znanj z najnovejšimi raziskavami na področju logistike sistemov:

- Izbrane teme najnovejših trendov na področju informacijskih sistemov v logistiki, podanih v znanstveni literaturi z omenjenega področja (npr. sistemi, utemeljeni na tehnologijah RFID in RuBee).
- Študij sistemske (poslovne) dinamike kot ene od sistemskih teorij, ki so prilagojene za poslovna okolja in v okviru katerih je zaobsežen tako človeški dejavnik kot tudi tehnika in (informacijska) tehnologija.
- Integracija izbranih tem in poslovne dinamike s poudarkom na raziskovalnem pristopu.

Content (Syllabus outline):

The content of the subject is aimed at integration of systems knowledge and the newest research in the area of IT in logistic processess:

- The latest trends in the area of information systems in logistic processes (for example, systems based on RFID technologies or RuBee technologies).
- Study of system (business) dynamics as one of generally accepted system theories, which has been developed for use in business environments.
- Systemic integration of the latest research in IT by use of business dynamics.

Temeljni literatura in viri / Textbooks:

- Sterman J.D., Business Dynamics, McGraw Hill, Boston 2000.
- Naval Research Logistics (NRL) Journal, John Wiley Interscience.
- Springer LINK scientific journals database.
- ScienceDirect scientific journals database (Elsevier).

Cilji:	Objectives:
Cilj je usposobiti študenta, da je sposoben • samostojnega znanstveno raziskovalnega dela • in integracije novih znanj na sistemskem nivoju oz. ob uporabi sistemskih pristopov (teorij).	The core objectives are to make students • capable for individual research work and • capable for integration of new knowledge on system level by use of a system approach (theory).

Predvideni študijski rezultati:	Intended learning outcomes:
Znanje in razumevanje: Izdelava znanstvenega (ali vsaj visoko kakovostnega strokovnega) članka za objavo v mednarodnem okolju. Prenesljive/ključne spretnosti in drugi atributi: Sposobnost analitičnega razmišljanja in aplikacija najnovejših znanj na področju informacijskih tehnologij v logističnih sistemih.	Knowledge and Understanding: One scientific (or at least high quality professional) article ready for publication in an international journal or conference proceedings. Transferable/Key Skills and other attributes: Development of analyitical thinking skills that enable application of the latest knowledge in the area of information technology into logistic systems.

Metode poučevanja in učenja:	Learning and teaching methods:
• Konzultacije – tutorstvo. • Individualno raziskovalno delo kandidata.	• Consulting – tutoring. • Individual research work.

Načini ocenjevanja:	Delež (v %) / Weight (in %)	Assessment:
Ocena izdelanega samostojnega članka s poudarkom na raziskovalnem vložku.	100%	Assessment of produced research paper with emphasis on scientific input.

Reference nosilca / Lecturer's references:

1. GUMZEJ, Roman, LU, Shourong. Modeling distributed real-time applications with specification PEARL. *Real-time syst.*, April 2007, vol. 35, no 3, str. 181-208. http://dx.doi.org/10.1007/s11241-006-9007-9.
2. GUMZEJ, Roman, COLNARIČ, Matjaž, HALANG, Wolfgang A. Safety shell for specification-PEARL oriented UML real-time projects. *Comput. syst. struct.*, Oct. 2009, vol. 35, iss. 3, str. 277-292, doi: 10.1016/j.cl.2008.05.001.
3. GUMZEJ, Roman, COLNARIČ, Matjaž, HALANG, Wolfgang A. A reconfiguration pattern for distributed embedded systems. *Softw. syst. model. (Print)*. [Print ed.], Feb. 2009, vol. 8, no. 1, str. 145-161. http://dx.doi.org/10.1007/s10270-007-0075-7, doi: 10.1007/s10270-007-0075-7.
4. GUMZEJ, Roman, LIPIČNIK, Martin. Information and communication technology in logistics as a comparative advantage. V: LUO, Zongwei (ur.). *Service science and logistics informatics : innovative perspectives*. Hershey, PA: Information Science Reference, cop. 2010, str. 144-156, doi: 10.4018/978-1-61520-603-2.ch008.
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. New York; London: 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.
6. GUMZEJ, Roman, GAJŠEK, Brigita. Introducing Quality of service criteria into supply chain management for excellence. *International journal of applied logistics*, 2011, vol. 2, no. 1, str. 1-16. [COBISS.SI-ID 512322365]
7. GUMZEJ, Roman, HALANG, Wolfgang A. QoS-oriented design of embedded systems with specification PEARL. *Innovations in systems and software engineering*. [Print ed.], Dec. 2007, vol. 3, no 4, str. 269-279. http://dx.doi.org/10.1007/s11334-007-0033-0. [COBISS.SI-ID 11977238]
8. GUMZEJ, Roman, VERBER, Domen, COLNARIČ, Matjaž, BABAU, Jean-Philippe, SKUBICH, Jacques J. An experiment in design and analysis of real-time applications. *CIT. J. Comput. Inf. Technol.*, Sep. 2000, vol. 8, no. 3, str. 181-195. [COBISS.SI-ID 5830934]
9. HALANG, Wolfgang A., GUMZEJ, Roman, COLNARIČ, Matjaž, DRUŽOVEC, Marjan. Measuring the performance of real-time systems. *Real-time syst.*, January 2000, vol. 18, no. 1, str. 59-68. [COBISS.SI-ID 5291798]
10. COLNARIČ, Matjaž, VERBER, Domen, GUMZEJ, Roman, HALANG, Wolfgang A. Implementation of hard real-time embedded control systems. *Real-time syst.*, May 1998, 14, št. 3, str. 293-310. [COBISS.SI-ID 3622422]

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