

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Ime predmeta:	LOGISTIČNI SISTEMI IN OSKRBOVALNE VERIGE PRIHODNOSTI
Course title:	LOGISTICS SYSTEMS AND SUPPLY CHAINS OF THE FUTURE

Študijski program in stopnja Study programme and cycle	Študijska smer Study option	Letnik Year of study	Semester Semester
LOGISTIKA SISTEMOV 3. stopnja		1.	1. in 2.
SYSTEM LOGISTICS 3 rd degree		1.	1. in 2.

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

Univerzitetna koda predmeta / University course code:	DR
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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
20		AV	LV	RV			160	6

Nosilec predmeta / Course coordinator:	MATEVŽ OBRECHT
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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):
Znanstveno raziskovalno delo na področju oskrbovalnih verig, logističnih sistemov in logističnih verig ter družbenoekonomskih in tehnoloških trendov v logistiki. Filozofija upravljanja, vodenja in nadzora celovitih in trajnostnih oskrbovalnih verig. Determiniranje nalog in izzivi učinkovitega upravljanja z oskrbovalnimi verigami. Preučevanje notranjih procesov in odnosov oskrbovalnih verig. Modeliranje in optimiranje stanj celovitih in trajnostnih oskrbovalnih verig. Predmet se navezuje na vsebine predmetov dodiplomskega in magistrskega študija.	Academic research in the field of supply chains, logistics systems and logistics chains and socio-economic and technological logistics trends. Philosophy of managing, operating and controlling integrated and sustainable supply chains. Determining tasks and challenges of effective supply chain management. Studying internal processes and relationships of supply chains. Modelling and optimising integrated and sustainable supply chain situations. The module refers to undergraduate and postgraduate masters courses.

Temeljni literatura in viri / Reading materials:

Handfield, R., B.: Introduction to supply chain management, Prentice. Hall, London, 1999, ISBN: 0-13-621616-1, COBISS.SI-ID: 101335.

Zuckerman, A.: Supply chain management, Oxford (UK), Capstone, 2002, ISBN: 1-84112-244-0, COBISS.SI-ID: 528599.

Ballou, R.: Business Logistics/Supply Chain Management. Academic Internet Publishers, Inc., UK (2006), ISBN-13: 978-1428807754.

Knolmayer, G.: Supply chain management based on SAP systems : order management in manufacturing companies : with 81 figures and 19 tables, Berlin, Heidelberg, New York, 2002, ISBN: 3-540-66952-3, COBISS.SI-ID: 22302469.

Günther, H. O., Mattfeld, D. C., Suhl, L. Supply Chain Management und Logistik: Optimierung, Simulation, Decision Support. Physica-Verlag Heidelberg. Germany (2005), ISBN-13: 978-3790815764.

Vollmann, T.E., Berry, W. L., Whybark, D.C., Jacobs, F. R., Vollmann, T., Berry, W. MANUFACTURING Planning And Control Systems For Supply Chain Management : The Definitive Guide for Professionals. McGraw-Hill, (2004), ISBN-13: 978-0071440332.

OBRECHT, Matevž. *Life cycle management in supply chains : integrating environmental life cycle thinking into supply chain management*, Celje: Faculty of Logistics, 2020. 80 str., ilustr. <http://estudij.um.si/>.

ROSI, Bojan. Innovation in systems thinking: the application of dialectical network thinking in resolving complex problems, (Business issues, competition and entrepreneurship). New York: Nova Publishers, cop. 2015. VIII, 98 str., ilustr. ISBN 978-1-63463-320.

KOVAČIČ, Andrej. Logistični sistemi in logistične verige. Študijsko gradivo Fakulteta za logistiko Univerze v Mariboru, Celje 2007.

ROSI, Bojan. IRD za potrebe doktorskega študija. Študijsko gradivo Fakulteta za logistiko Univerze v Mariboru, Celje 2016.

ORBANIĆ, Josip, ROSI, Bojan, CVAHTE OJSTERŠEK, Tina (urednik), IPAVEC, Vesna Mia (urednik), GROBIN, Klemen (urednik), GROFELNIK, Igor (urednik). *Razvoj transporta, logistike in mobilnosti v Sloveniji*. 1. izd. Celje: Fakulteta za logistiko, 2016. 320 str., ilustr. ISBN 978-961-6562-79-9.

Znanstveno publiciranje, vir: <https://www.ukm.um.si/znanstveno-publiciranje>, najdeno 15. 11. 2016.

Cilji in kompetence:

Študenti:

- se usposobijo za znanstveno raziskovalno delo iz področja raziskovanja oskrbovalnih verig,
- se usposobijo za predstavitev svojega raziskovalnega dela (članki, referati) in predstavitev praktičnih prednosti rezultatov svojega raziskovalnega dela,
- spoznajo raziskovalno področje logistični sistemi in oskrbovalne verige in ga prepoznajo kot morebitno polje bodočega znanstvenega dela,
- se naučijo rezultate svojega znanstvenega dela na področju oskrbovalnih verig uporabiti v praksi.

Objectives and competences:

Students will:

- be able to undertake an academic research from the field of supply chains,
- be able to present their research work (articles, papers) and hold presentations on practical advantages of their research results,
- be familiarised with the research area of logistics systems and supply chains and gain the ability to recognise this area as a potential future academic research activity,
- learn to use the results of their academic research in the field of supply chains in real life situations.

Predvideni študijski rezultati:

Znanje in razumevanje:

- Študenti se naučijo in razumejo filozofijo upravljanja, vodenja in nadzora celovitih in trajnostnih oskrbovalnih verig.
- Se naučijo pristopa k znanstvenemu proučevanju notranjih procesov in odnosov oskrbovalnih verig.

Intended learning outcomes:

Knowledge and Understanding:

- Students will learn and understand the philosophy of managing, operating and controlling integrated and sustainable supply chains.

- Razumejo in znajo razvijati modele notranjih procesov in optimiranja stanj celovitih oskrbovalnih verig.

Prenesljive/ključne spretnosti in drugi atributi:

- Študenti se naučijo pristopa razvijanja različnih modelov realnosti.
- Študenti se naučijo determiniranje nalog upravljanja različnih sistemov.

- Students will know how to approach the scientific study of internal processes and relations of supply chains.
- Students will understand and learn to develop models of internal processes and optimising integrated supply chains.

Transferable/Key Skills and other attributes:

- Students will know how to approach the development of various reality models.
- Students will learn to determine tasks of managing various systems.

Metode poučevanja in učenja:

Individualno raziskovalno delo, razgovor, študij gradiva.

Learning and teaching methods:

Individual research work, dialogues, study of materials.

Načini ocenjevanja:	Delež (v %) / Share (in %)	Assessment methods:
Raziskovalna naloga in ustni izpit.	50%	Research course work
	50%	Examination

Reference nosilca / Course coordinator's references:

OBRECHT, Matevž, KAZANCOGLU, Yigit, DENAC, Matjaž. Integrating social dimensions into future sustainable energy supply networks. *International journal of environmental research and public health*, ISSN 1660-4601, 2020, vol. 17, str. 1-18, ilustr. <https://doi.org/10.3390/ijerph17176230>, doi: [10.3390/ijerph17176230](https://doi.org/10.3390/ijerph17176230). [COBISS.SI-ID [27031299](https://doi.org/10.3390/ijerph17176230)], [JCR, SNIP, WoS kategorija: 1A1: SSCI, SCI, Scopus]

NEZ, Matjaž, KOŽELJ ZEVNIK, Gašper, OBRECHT, Matevž. A review of available chargers for electric vehicles. *Renewable & sustainable energy reviews : an international journal*, ISSN 1364-0321. [Print ed.], Jul. 2019, vol. 109, str. 284-293, ilustr. <https://doi.org/10.1016/j.rser.2019.04.013>, doi: [10.1016/j.rser.2019.04.013](https://doi.org/10.1016/j.rser.2019.04.013). [COBISS.SI-ID [512988989](https://doi.org/10.1016/j.rser.2019.04.013)], [JCR, SNIP, WoS kategorija: 1A1: SCI, Scopus,

OBRECHT, Matevž, KNEZ, Matjaž. Carbon and resource savings of different cargo container designs. *Journal of cleaner production*, ISSN 1879-1786. [Online ed.], 1 Jul. 2017, vol. 155, 151-156 str. <https://doi.org/10.1016/j.jclepro.2016.11.076>, doi: [10.1016/j.jclepro.2016.11.076](https://doi.org/10.1016/j.jclepro.2016.11.076). [COBISS.SI-ID [512811837](https://doi.org/10.1016/j.jclepro.2016.11.076)], [JCR, SNIP, WoS kategorija: 1A1: Scopus (d), SCI, Scopus

KUMPERŠČAK, Samo, MEDVED, Mihael, TERGLAV, Melanie, WRZALIK, Aleksandra, OBRECHT, Matevž. Traceability systems and technologies for better food supply chain management. *Quality production improvement - QPI*, ISSN 2657-8603. [Spletna izd.], 2019, vol. 1, iss. 1, str. 567-574. <https://doi.org/10.2478/cqpi-2019-0076>, doi: [10.2478/cqpi-2019-0076](https://doi.org/10.2478/cqpi-2019-0076). [COBISS.SI-ID [513044541](https://doi.org/10.2478/cqpi-2019-0076)]

OBRECHT, Matevž. Integrating life cycle thinking, ecolabels and ecodesign principles into supply chain management. V: KOLINSKI, Adam (ur.), DUJAK, Davor (ur.), GOLINSKA-DAWSON, Paulina (ur.). *Integration of information flow for greening supply chain management*, (Ecoproduction (Berlin. Internet), ISSN 2193-4622). Cham: Springer. cop. 2020, str. 219-249, ilustr. <https://doi.org/10.1007/978-3-030-24355-5>. [COBISS.SI-ID [513020733](https://doi.org/10.1007/978-3-030-24355-5)]

LISEC, Andrej, LISEC, Klemen, OBRECHT, Matevž. Cost and safety aspects of using electric and hybrid vehicles in local food supply chain. *Production Engineering Archives*, ISSN 2353-7779, 30. Dec. 2019, vol. 25, iss. 25, str. 35-38, ilustr. <https://doi.org/10.30657/pea.2019.25.06>, doi: [10.30657/pea.2019.25.06](https://doi.org/10.30657/pea.2019.25.06).

BRATINA, Tadej, ŠINKO, Simona, ŠLAJMER, Vanessa, OBRECHT, Matevž. Ecolabels and ecodesign potential for greening companies supply chains. V: LERHER, Tone (ur.). *Proceedings*. Celje: Faculty of Logistics. 2018, str. 31-37. [COBISS.SI-ID [512908093](https://doi.org/10.30657/pea.2019.25.06)]

BRGLEZ, Kristijan, KORENT, Žiga, OBRECHT, Matevž. Eco labels, cradle to cradle certificate and their connection to the supply chain. V: ONDRA, Pavel (ur.). *Drive your knowledge be a scientist : conference proceedings*. Zlin: Faculty of Management and Economics. cop. 2019, str. 129-137, ilustr. http://dokbat.utb.cz/wp-content/uploads/2020/01/DOKBAT_2019_Conference_Proceedings.pdf. [COBISS.SI-ID 513088829]

OBRECHT, Matevž. Kontinuiranost poslovanja je glavni izziv oskrbovalnih verig. *Embalaza, okolje, logistika : strokovna specializirana revija za embalažo, okolje in logistiko*, ISSN 1855-4849, mar. 2020, [Št.] 147, str. 56-57, ilustr. https://www.zelenaslovenija.si/media/uploads/revija/EOL_147/EOL_147.pdf. [COBISS.SI-ID 14631427]