

**UČNI NAČRT PREDMETA/COURSE SYLLABUS**

Predmet:	MANAGEMENT TRAJNOSTNIH OSKRBOVALNIH VERIG
Course title:	MANAGEMENT SUSTAINABLE SUPPLY CHAIN

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
LOGISTIKA SISTEMOV 1. stopnja		1.	1.
SYSTEM LOGISTICS 1 <sup>st</sup> degree		1.	1.

Vrsta predmeta / Course type: REDNI

Univerzitetna koda predmeta / University course code: UN

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje Laboratory work	Druge oblike študija Fieldwork	Samost. delo Individ. work	ECTS
21 e-P 24 a-P		21 e-V 24 a-V			90	6

Nosilec predmeta / Lecturer: MATJAŽ KNEZ

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

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti: Ni pogojev. Prerequisites: None.

- Vsebina:**
- Trajnostno naravnano okolje 21. stoletja
  - Management trajnostnih oskrbovalnih verig
  - Vloga in pomen managementa trajnostnih oskrbovalnih verig v delovanju organizacij
  - Planiranje in kontrola managementa oskrbovalnih verig
  - Vodenje managementa trajnostnih oskrbovalnih verig
  - Trajnostna oskrbovalna veriga in management logistike
  - Trajnostna logistika v podsistemih logistike
  - »Zelene« strategije v trajnostnih oskrbovalnih verigah
  - Varstvo okolja in okoljski stroški v trajnostnih oskrbovalnih verigah
  - Primeri dobre prakse managementa trajnostnih oskrbovalnih verig v praksi

- Content (Syllabus outline):**
- Sustainable environment of 21 century
  - Management of sustainable supply chain
  - Role and importance of management of sustainable supply chain in working of organizations
  - Planning and controlling of management in sustainable supply chain
  - Leading of management in sustainable supply chain
  - Sustainable supply chain and logistics management
  - Sustainable logistics in logistics subsystems
  - "Green" strategies in sustainable supply chain
  - Environmental protection and environmental costs in sustainable supply chains
  - Good Cases of management in sustainable supply chain from practice

**Temeljna literatura in viri / Readings:**

E-gradivo predmeta.  
 Knez M., (2013) Zelena logistika in trajnostna oskrbovalna veriga. E-gradivo. Univerza v Mariboru, Fakulteta za logistiko.  
 Muneer, Tariq, Kolhe, Mohan, Doyle Aisling. Electric Vehicles: Prospects and Challenges, 1st Edition, 2017. ISBN: 9780128030400.  
 McKinnon A., Browne M., Whiteing A. (2012) Green Logistics, Improving the Environmental Sustainability of Logistics.

Makower J., 2009. Strategies for the Green Economy. McGrawHill, New York.  
 MacKinnon D., Shaw J., Docherty I. ( 2008) Diverging Mobilities? Devolution, Transport and policy Innovation. Elsevier.  
 Esty D.C., Winston A.S. (2009) Green to Gold. How smart companies use environmental strategy to innovate, create value, and build competitive advantage. John Wiley&Sons, Inc. Hoboken New Jersey.  
 Cetinkaya B., Cuthbertson R., Ewer G., Klass-Wissing T., Piotrowicz W., Tyssen C. (2011) Sustainable Supply Chain Management. Springer-Verlag Berlin Heidelberg.  
 Wang.H.F., Gupta S.M. (2011) Green Supply chain management. Product Life Cycle Approach. Mc Graw Hill, New York.  
 Dodatna literatura: Izbrani članki ter nova izdana literatura s področja predmeta.

Cilji in kompetence:

Študenti pri tem predmetu:

- spoznajo pojme: zelena logistika, zelena oskrbovalna veriga, management zelenih oskrbovalnih verig, okoljski stroški, ogljični odtis,
- utrdijo teoretično znanje na področju trajnostnih oskrbovalnih verig in trajnostnega managementa oskrbovalnih verig,
- se usposobijo uporabljati teoretično znanje o trajnostnem managementu oskrbovalnih verig na področju poslovanja organizacij,
- osvojijo različne pristope k preučevanju managementa trajnostnih oskrbovalnih verig,
- razumevanje in pomen varstva okolja ter okoljskih zahtev, ki jih postavlja moderna in trajnostna družba.

Objectives and competences:

In this course students:

- understanding of concepts: green logistics, green supply chain, green sustainable management of supply chains, environmental costs, carbon footprint,
- enhance their theoretical knowledge in the field of management of sustainable supply chains and are able to apply it,
- gain the ability to apply their theoretical knowledge in practice in the field of management of sustainable supply chains,
- acquire different approaches for consideration of management of sustainable supply chains ,
- understanding and importance of environmental protection and environmental requirements imposed by modern and sustainable society.

Predvideni študijski rezultati:

Znanje in razumevanje:

- razumevanje poslovanja logističnih in nelogističnih podjetij v moderni in trajnostno naravnani družbi,
- poznavanje pojmov s področja zelene logistike in managementa zelenih oskrbovalnih verig,
- obvladajo specifično znanje s področja managementa trajnostnih oskrbovalnih verig,
- pridobijo znanja na področju trajnostnih oskrbovalnih verig.

Prenesljive/ključne spretnosti in drugi atributi:

Študenti:

- se usposobijo za uporabo teoretičnega znanja v praktičnih primerih,
- se naučijo prepoznavati zelene oskrbovalnih verige in njihove povezave na področju poslovanja,
- razvijejo sposobnost interpretacije dobljene rešitve,
- se naučijo analizirati in sintetizirati različne poglede na management oskrbnih verig,
- so zmožni generiranja novih idej,
- so zmožni prilagajanja novim razmeram in zahtevam,
- se usposobijo za nadaljnje proučevanje na področju,
- se usposobijo za spremljanje in nadziranje managementa zelenih oskrbovalnih verig v različnih organizacijah,

Intended learning outcomes:

Knowledge and understanding:

- understanding operations of logistics and "nonlogistics companies in modern and sustainable society,
- understanding key concepts of green logistics and management of sustainable green supply chains,
- acquire specific knowledge in the field of Supply chain,
- have a knowledge of theories in the field of sustainable supply chain.

Transferable/Key skills and other attributes:

Students:

- have the ability to apply theoretical knowledge to professional practice,
- learn to recognize supply chain and their interconnections in the field of business,
- develop the skills to interpret the gained results in the field sustainable supply chain,
- learn how to analyze and synthesize different approaches in the field of sustainable supply chain,
- have the ability to generate new ideas,
- have the ability to adapt to the new situations and requirements,
- are able to pursue further analysis regarding sustainable supply chain,
- are qualified to control and supervise sustainable supply chains in different organizations,

- se zavedajo širših etičnih družbenih in okoljskih vprašanj na področju managementa zelenih oskrbovalnih verig v različnih organizacijah.

- can demonstrate awareness of wider social and environmental ethical issues in areas of sustainable supply chain in different organizations.

#### Metode poučevanja in učenja:

Predavanja: pri predavanjih študent spozna teoretične vsebine predmeta. Del predavanj se izvaja na klasični način v predavalnici, del pa v obliki e-predavanj (e-predavanja se lahko izvajajo na videokonferenčni način ali s pomočjo posebej v ta namen didaktično pripravljenih e-gradiv v virtualnem elektronskem okolju).

Vaje: pri vajah študent utrdi teoretično znanje in spozna aplikativne možnosti. Del vaj se izvaja na klasični način v predavalnici, del pa v obliki e-predavanj vaj (e-vaje se lahko izvajajo na videokonferenčni način ali s pomočjo posebej v ta namen didaktično pripravljenih e-gradiv v virtualnem elektronskem učnem okolju).

#### Learning and teaching methods:

Lectures: Students understand the theoretical frameworks of the course. Part of the lecture course is in a classroom while the rest is in the form of e-learning (e-lectures may be given via video-conferencing or with the help of specially designed e-material in a virtual electronic learning environment).

Tutorials: Students enhance their theoretical knowledge and are able to apply it. Part of the seminar is in a classroom while the rest is in the form of e-learning (e-tutorials may be given via video-conferencing or with the help of specially designed e-material in a virtual electronic learning environment).

Načini ocenjevanja:	Delež (v %) / Weight (in %)	Assessment:
<ul style="list-style-type: none"> <li>• Opravljene obveznosti e-predavanj in e-vaj so pogoj za pristop k izpitu.</li> </ul>		<ul style="list-style-type: none"> <li>• Successful completion of e-lectures and e-tutorials is a prerequisite for entering the exam.</li> </ul>
<ul style="list-style-type: none"> <li>• Opravljena seminarska naloga in domače naloge.</li> </ul>	30%	<ul style="list-style-type: none"> <li>• Coursework and home work.</li> </ul>
<ul style="list-style-type: none"> <li>• Pisni izpit.</li> </ul>	70%	<ul style="list-style-type: none"> <li>• Written examination.</li> </ul>

#### Reference nosilca / Lecturer's references:

KNEZ, Matjaž, ROSI, Bojan, MULEJ, Matjaž, LIPIČNIK, Martin. Competitiveness by requisitely holistic and innovative logistic management. *Promet*, ISSN 0353-5320, 2010, vol. 22, no. 3, str. 229-237. [COBISS.SI-ID 10305052]

KNEZ, Matjaž, PREDIN, Andrej, ROSI, Bojan. 'Forklift to grid' - how to synergise the electricity and logistics sectors = 'Viličar na omrežje' - kako sinergijsko povezati električno omrežje z logističnim sektorjem. *Journal of energy technology*, May 2012, vol. 5, iss. 2, str. 13-27. [http://www.fe.uni-mb.si/images/stories/jet/e-jet/jet\\_5-2.pdf](http://www.fe.uni-mb.si/images/stories/jet/e-jet/jet_5-2.pdf). [COBISS.SI-ID 1024091228]

KNEZ, Matjaž, PREDIN, Andrej, ROSI, Bojan. Poslovni model OVE/F2G V.1 za učinkovitejši energetski menedžment logističnih podjetij. *Proj. mreža Slov.*, apr. 2012, letn. 15, št. 1, str. 10-17, 43, ilustr. [COBISS.SI-ID 1024084572]

STERNAD, Marjan, KNEZ, Matjaž, ROSI, Bojan. Improving city transport with the objective to reduce CO<sub>2</sub> emissions. *Transport problems*, 2010, vol. 5, iss. 4, str. 95-103. [http://transportproblems.polsl.pl/pl/Archiwum/2010/zeszyt4/2010t5z4\\_12.pdf](http://transportproblems.polsl.pl/pl/Archiwum/2010/zeszyt4/2010t5z4_12.pdf). [COBISS.SI-ID 512283197]

STERNAD, Marjan, TOPOLŠEK, Darja, KNEZ, Matjaž. The case of Slovenian international comparative advantage in logistics services. *Strategic management*, ISSN 1821-3448, 2012, vol. 17, no. 2, str. 22-30, ilustr., tabela. [COBISS.SI-ID 512434237]

KNEZ, Matjaž, MUNEER, Tariq, JEREB, Borut, CULLINANE, Kevin. The estimation of a driving cycle for Celje and a comparison to other European cities. *Sustainable cities and society*, ISSN 2210-6715. [Spletna izd.], Feb. 2014, vol. 11, str. 56-60, doi: 10.1016/j.scs.2013.11.010. [COBISS.SI-ID 512556349]

KNEZ, Matjaž, JEREB, Borut, OBRECHT, Matevž. Factors influencing the purchasing decisions of low emission cars : a study of Slovenia. *Transportation research. Part D, Transport and environment*, ISSN 1361-9209. [Print ed.], July 2014, vol. 30, str. 53-61. <http://www.sciencedirect.com/science/article/pii/S1361920914000339>, doi: 10.1016/j.trd.2014.05.007. [COBISS.SI-ID 512566077]

MUNEER, Tariq, MILLIGAN, Ross, SMITH, Ian, DOYLE, Aisling, POZUELO, Miguel, KNEZ, Matjaž. Energetic, environmental and economic performance of electric vehicles : experimental evaluation. *Transportation research. Part D, Transport and environment*, ISSN 1361-9209. [Print ed.], 2015, vol. 35, no. [1], str. 40-61. <http://www.sciencedirect.com/science/article/pii/S1361920914001783>, doi: 10.1016/j.trd.2014.11.015. [COBISS.SI-ID 512609853]

KNEZ, Matjaž, JEREB, Borut. Solar power plants - alternative sustainable approach to greener environment: a case of Slovenia. *Sustainable cities and society*, ISSN 2210-6715. [Spletna izd.], Feb. 2013, vol. 6, str. 27-32, doi: 10.1016/j.scs.2012.07.002. [COBISS.SI-ID 512441149]

KNEZ, Matjaž, STERNAD, Marjan. Solar energised transport solution and customer preferences and opinions about alternative fuel vehicles - the case of Slovenia. *Transport problems*, ISSN 1896-0596. [Printed ed.], 2015, vol. 10, iss. 3, str. 17-28, ilustr. [http://transportproblems.polsl.pl/pl/Archiwum/2015/zeszyt3/2015t10z3\\_02.pdf](http://transportproblems.polsl.pl/pl/Archiwum/2015/zeszyt3/2015t10z3_02.pdf). [COBISS.SI-ID 512711997]

KNEZ, Matjaž, CELIK, Ali Naci, MUNEER, Tariq. A sustainable transport solution for a Slovenia town. *International journal of low carbon technologies*, ISSN 1748-1325. [Online ed.], 2014, [Vol.] 0, str. 1-7, doi: 10.1093/ijlct/ctu007. [COBISS.SI-ID 512557629]

JEREB, Borut, KNEZ, Matjaž, PODBEVŠEK, Nives. High PM10 concentrations in countries of European Union. *Crnogorski časopis za ekologiju*, ISSN 2337-0149, dec. 2014, vol. 1, no. 2, str. 23-29. [COBISS.SI-ID 512614717].

OTOREPEC, Sabina, PODBEVŠEK, Nives, JEREB, Borut, KNEZ, Matjaž. Problems with PM10 concentrations in Slovenia and other countries of European Union. *Logistika*, 2014, vol. 2014, no. 4, str. 3619-3629. [http://czasopismologistika.pl/index.php?option=com\\_docman&task=cat\\_view&gid=305&Itemid=79&limitstart=15](http://czasopismologistika.pl/index.php?option=com_docman&task=cat_view&gid=305&Itemid=79&limitstart=15). [COBISS.SI-ID 512615229]

OBRECHT, Matevž, KNEZ, Matjaž. Opportunities for transition to sustainable energy strategy in Slovenia. *Strategic management*, ISSN 2334-6191, 2014, vol. 19, no. 3, str. 31-37. [http://www.ef.uns.ac.rs/sm/archive/SM2014\\_3.pdf](http://www.ef.uns.ac.rs/sm/archive/SM2014_3.pdf). [COBISS.SI-ID 512586557]

GAGO, E. J., MUNEER, Tariq, KNEZ, Matjaž, KÖSTER, Helmut. Natural light controls and guides in buildings : energy saving for electrical lighting, reduction of cooling load. *Renewable & sustainable energy reviews : an international journal*, ISSN 1364-0321. [Print ed.], 2015, vol. 41, str. 1-13. <http://www.sciencedirect.com/science/article/pii/S1364032114006777>, doi: 10.1016/j.rser.2014.08.002. [COBISS.SI-ID 512585021]

MUNEER, Tariq, MILLIGAN, Ross, SMITH, Ian, DOYLE, Aisling, POZUELO, Miguel, KNEZ, Matjaž. Energetic, environmental and economic performance of electric vehicles : experimental evaluation. *Transportation research. Part D, Transport and environment*, ISSN 1361-9209. [Print ed.], 2015, vol. 35, no. [1], str. 40-61. <http://www.sciencedirect.com/science/article/pii/S1361920914001783>, doi: 10.1016/j.trd.2014.11.015. [COBISS.SI-ID 512609853]

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. [COBISS.SI-ID 512811837].