

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Ime predmeta: MANAGEMENT ŽIVLJENJSKEGA CIKLA OSKRBOVALNIH VERIG
Course title: LIFE CYCLE MANAGEMENT IN SUPPLY CHAINS

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

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

OBVEZNI
COMPULSORY

Univerzitetna koda predmeta / University course code:

MAG

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje Clinical training	Druge oblike študija Other forms of study	Samost. delo Individual work	ECTS
24 e-P 21 a-P		19 e-V 21 a-V			155	8

Nosilec predmeta / Course coordinator:

MATEVŽ OBRECHT

Jeziki /Languages:

Predavanja / Lectures: SLOVENSKI/SLOVENE

Vaje / Tutorial: SLOVENSKI/SLOVENE

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:

Ni pogojev za sodelovanje pri tem predmetu.

Prerequisites for enrolling in the course or for performing study obligations:

There are no prerequisites for this course.

Vsebina (kratek pregled učnega načrta):

Temeljna področja obravnave predmeta so naslednja:

- Management oskrbovalnih verig (OV) in življenjskega cikla (ŽC)
- Oblikovanje odzivnega managementa OV
- Management globalnih OV
- Vpeljava koncepta ŽC v OV
- Management odnosov v OV in ŽC
- Management okoljskih tveganj v OV
- Management OV med ponudbo in povpraševanjem
- Management OV in oblikovanje proizvoda
- Oblikovanje trajnostne OV
- Koncept življenjskega cikla izdelka
- Management življenjskega cikla
- Krožno gospodarstvo

Content (syllabus outline):

Basic areas of course are:

- Introduction of supply chain (SC) management and life cycle (LC) thinking
- Creating a responsive SC
- Managing the global SC
- Integrating LC approach into SC
- Managing SC and LC relationships
- Managing environmental risks in the SCM
- SC management between supply and demand
- Supply chain management and product design.
- Designing sustainable SC Life cycle thinking
- Life cycle management
- Circular economy
- Ecodesign
- Environmentally sound SC

<ul style="list-style-type: none"> • Ekodizajn • Okolju prijazne OV • Okoljski management in ISO serije 14000 • Vrednostne verige inoskrbovalne mreže – okoljske koristi • Primeri dobre prakse oblikovanja izdelkov s ciljem optimizacije delovanja OV 	<ul style="list-style-type: none"> • Environmental management and ISO 14000 series • Value chains and supply networks – environmental benefits • Case studies
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Temeljni literatura in viri / Reading materials:

Osnovna literature/Essentialsources:

- E-gradivo predmeta.
- Obrecht, M. (2020). Life cycle management in supply chains. E-gradivo. Univerza v Mariboru, Fakulteta za logistiko.
Izbrana poglavja iz/Some Chapters from.
- Chopra, S., Meindl, P. (2012). SupplyChainManagement. Prentice Hall, New York.
- Brezet, H. and Van Hemel, C. Ecodesign: A promising approach to sustainable production and consumption. UNEP, Paris, 1997.
- Lipušček, I. Metoda ocene življenjskega ciklusa izdelka. Les 58, 2006.

Dodatna literature / Additionalsources:

- Marinova, D. (ed.) The international Handbook on Environmental Technology Management. EE publishing, Cheltenham UK.
- Simchi-Levi, D., Kaminsky, P. (2007). DesigningandManagingtheSupplyChain. McGraw-Hill/Irwin, New York.
- Monczka, R., Handfield, R., Giunipero, L., Patterson, J. (2012). PurchasingandSupplyChain Management. CengageLearning, Mason (OH).
- EPA. Life Cycle Assessment (LCA) - A guide to approaches, experiences and information sources. Environmental issue report no. 6. 1998.
- Bouhaddou, I., Benabdelhafid, A., Ouzizi, L. and Benghabrit, Y.Product Lifecycle Management Model for Supply Chain Optimization, IFIP, 2012.
- Dolinsek, S. Management tehnologij: Učinkovito obvladovanj tehnoloških sprememb. UP, Koper, 2004.

Cilji in kompetence:

Osnovni namen predmeta je seznaniti študente z značilnostmi managementa življenjskega cikla in povezovanja le tega z oskrbovalnimi verigami v sodobnih pogojih delovanja.

Temeljni cilji predmeta so obravnava teorij življenjskega cikla in krožnega gospodarstva v povezavi z oskrbovalnimi mrežami, trendov delovanja OV v globalnem okolju, strukturiranja sodobnih sistemov OV in življenjskih ciklov posameznih proizvodov in procesov, procesov organiziranja ter managementa dinamičnih oskrbovalnih verig ter spoznavanje okoljskega oblikovanja proizvodov z namenom oblikovanja okolju prijaznega izdelka z optimirano OV.

Objectives and competences:

The course introduces the subject of supply chain and life cycle management integration and its application to business and others organizational systems in modern circumstances.

It provides an application of Life cycle thinking and circular economy in supply chain management, principles, trends and structure of globalized SC, product and process life cycle approach and managing dynamic SC as well as designing environmentally sound products with optimal SC. Life cycle management in supply chains enables students to upgrade their logistics and SC knowledge with detailed study of SC management, behavior of all subjects of stakeholders of supply chain systems and life cycle management.

Z vidika predmetnika je predmet Management življenjskega cikla oskrbovalnih verig mogoče opredeliti kot nadgradnjo predmetov logistike in managementa delovanja OV ter osnovo za nadaljnji samostojni študij študentov na področju integracije koncepta življenjskega cikla v management oskrbovalnih verig.

The purpose of the course is to enable students to understand how different life cycle and supply chain elements interrelate within the whole logistics and supply chain systems.

Predvideni študijski rezultati:

Znanje in razumevanje:

Raven znanja

Ob zaključku predmeta bodo udeleženci:

- pridobili splošno znanje o temeljnih konceptih managementa oskrbovalnih verig,
- pridobili specifično znanje o uporabi konceptov managementa oskrbovalnih verig v različnih organizacijskih sistemih,
- pridobili specifično znanje o uporabi konceptov managementa življenjskega cikla v različnih organizacijskih sistemih,
- razvili sposobnost za integracijo koncepta življenjskega cikla v management oskrbovalnih verig v različnih organizacijskih sistemih,
- razvili sposobnost razumevanja organizacije z vidika managementa oskrbovalnih verig,
- razvili sposobnost za uporabo splošnega in specifičnega znanja o managementu oskrbovalnih verig v praksi,
- razvili sposobnost za obravnavo praktičnih problemov povezanih z ŽC v sodobnih organizacijskih sistemih.

Kognitivne/Intelektualne veščine

Raven analize

Zna kritično analizirati kompleksna, necelovita (nepopolna) in nasprotujoča si področja znanja ter zna razumljivo pojasniti rezultate kritične analize.

Raven sinteze

Zna kritično sintetizirati informacije, na način, ki je lahko inovativen in vidi uporabno vrednost znanja ali procesov z vidika(predmeta/discipline) in prakse.

Raven vrednotenja

Obvlada znanje (specifičnega področja, ki ga navedemo), kar mu omogoča kritično presojo raziskav, znanj in metodoloških pristopov in utemeljevanje različnih (alternativnih) pristopov.

Raven uporabe

Izkazuje samostojnost in izvirnost v reševanju problemov. Je samostojen pri načrtovanju in izvajanju nalog na strokovni ravni ter zna sprejemati

Intended learning outcomes:

Development of knowledge and understanding

Knowledge issues

By the end of the course participants should:

- gain the general knowledge of basic supply chain management concepts,
- gain the specific knowledge for implementation of SCM in different organizational systems,
- gain the specific knowledge for implementation of life cycle management in different organizational systems,
- develop the ability to integrate life cycle approach into SC management in different organizational systems,
- develop the ability to understand SC management viewpoint of organization,
- developed the capacity to apply general and specific knowledge about SCM in practice,
- developed the ability to discuss practical problems surrounding the LC in contemporary SC systems.

Cognitive/Intellectual skills

Analysis

With critical awareness can undertake analysis of complex, incomplete or contradictory areas of knowledge communicating the outcome effectively.

Synthesis

With critical awareness, can synthesize information in a manner that may be innovative, utilizing knowledge or processes from the forefront of the discipline/practice.

Evaluation

Has a level of conceptual understanding that will allow her/him critically to evaluate research, advanced scholarship and methodologies and argue alternative approaches.

Application

Can demonstrate initiative and originality in problem solving. Can act autonomously in planning and implementing tasks at a professional or equivalent

odločitve v kompleksnih in nepredvidljivih situacijah.

Ključne/prenosljive veščine in spretnosti

Raven dela v skupini

Obvlada delo s skupino kot vodja ali kot član. Zna pojasniti naloga in ustrezno uporabiti zmožnosti članov skupine. Obvlada pogajanje in konflikte z ustrezno mero samozavesti.

Raven uporabe učnih pripomočkov

Obvlada uporabo celotne palete učnih pripomočkov.

Raven samovrednotenja

Zna ovrednotiti svoje delovanje in delovanje drugih s ciljem izboljšanja delovanja.

Raven managementa informacij

Obvlada izvajanje nalog na področju raziskovanja ob minimalnem usmerjanju.

Raven avtonomnosti

Znanje osvaja samostojno in samokritično. Zna usmerjati učni proces pri drugih, pri sebi zna razbrati področja, na katerih bi se moral še razvijati.

Komunikacija

Zna jasno, samostojno in kompetentno komunicirati ter se lahko vključuje v strokovne in tudi znanstvene debate.

Raven reševanja problemov

Obvlada samostojno učenje, potrebno za nadaljevanje strokovnega razvoja. Zna uporabiti strokovno znanje drugih, kjer je to smiselno in potrebno.

Praktične veščine

Raven uporabe veščin

Obvlada delovanje v kompleksnih, nepredvidljivih in/ali posebnih okoliščinah v duhu izvajanja dobre prakse.

Raven samostojnosti v uporabi veščin

Izkazuje iniciativnost in osebno odgovornost pri izvajanju opravil.

Raven strokovnosti v uporabi specifičnih tehnik

Obvlada znanje stroke, deluje tekoče (uglajeno), natančno in učinkovito. Zna uporabiti veščine ali razviti nove veščine in/ali procedure za nove okoliščine.

level, making decisions in complex and unpredictable situations.

Key/Transferable skills

Group working

Can work effectively with a group as leader or member. Can clarify tasks and make appropriate use of the capacities of group members. Is able to negotiate and handle conflict with confidence.

Learning resources

Is able to use full range of learning resources.

Self evaluation

Is reflective on own and others' functioning in order to improve practice.

Management of information

Can competently undertake research tasks with minimum guidance.

Autonomy

Is an independent and self critical learner, guiding the learning of others and managing own requirements for continuing professional development.

Communications

Can engage confidently in academic and professional communication with others, reporting on action clearly, autonomously and competently.

Problem solving

Has independent learning ability required for continuing professional study, making professional use of others where appropriate.

Practical skills

Application of skills

Can operate in complex and unpredictable and/or specialised contexts, and has an overview of the issues governing good practice.

Autonomy in skill use

Is able to exercise initiative and personal responsibility in professional practice.

Technical expertise

Has technical expertise, performs smoothly with precision and effectiveness; can adapt skills and designor develop new skills and/or procedures for new situations.

Metode poučevanja in učenja:

Predmet vključuje različne metode poučevanja in učenja, kot so: predavanja, diskusijske skupine, predstavite del, video predstavitve in filmi, primeri iz prakse, predstavitve študentov in samostojni študij študentov.

Learning and teaching methods:

This course uses a range of teaching methods including lectures, discussion groups, videos and films, case studies, student presentation and independent study.

<p>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 učnem okolju).</p> <p>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-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).</p>	<p>Lectures: Students understand the theoretical frameworks of the course. Part of the lecture course is held in standard 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).</p> <p>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).</p>
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Načini ocenjevanja:	Delež (v %) / Share (in %)	Assessment methods:
<ul style="list-style-type: none"> • Opravljene obveznosti e-predavanj in e-vaj so pogoj za pristop k izpitu. • Aktivno delo študentov (e-vaje in e-predavanja). • Seminarska naloga. • Končni pisni izpit. 	<p></p> <p>20%</p> <p>20%</p> <p>60%</p>	<ul style="list-style-type: none"> • Successful completion of e-lectures and e-tutorials is a prerequisite for entering the exam. • Active work of students (e-tasks and quizzes). • Course papers. • Final written examination.

Reference nosilca / Course coordinator's references:

<ul style="list-style-type: none"> • OBRECHT, Matevž, KNEZ, Matjaž. Carbon and resource savings in different cargo container designs. <i>Journal of Cleaner Production</i>, 2016, ilustr. Doi: http://dx.doi.org/10.1016/j.jclepro.2016.11.076[JCR, SNIP, Scopus • OBRECHT, Matevž. Ocenjevanje okoljske primernosti "energetskega miksa" po metodi LCA. <i>Energetika.net</i>. Analiza in primerjava izbranih gradbenih materialov z vidika vplivov na okoljev njihovem življenjskem ciklu. <i>Energetika.net</i>. • DENAC, Matjaž, RADONJIČ, Gregor, OBRECHT, Matevž. Dissemination of ecodesign concept in SMEs : experiences in construction and related enterprises. V: KAVKLER, Alenka (ur.), LOGOŽAR, Klavdij (ur.). <i>Proceedings of the 6th Global Conference on Managing in Recovering Markets, GCMRM 2015, Maribor, May 18 - 19, 2015</i>, Global Conference on Managing in Recovering Markets, Maribor, May 18 - 19, 2015. Maribor: Faculty of Economics and Business, 2015, str. 181-196. http://www.epf.um.si/fileadmin/user_upload/Raziskovalna/GCMRM/GCMRM_Proceedings_2015.pdf. • OBRECHT, Matevž. Transition to more sustainable energy future in logistics - is it feasible?. V: CVAHTE, Tina (ur.), BAŠKOVIČ, Katja (ur.), ROSI, Bojan (ur.). <i>Proceedings</i>. Celje: Faculty of Logistics, 2014, str. 109. • OBRECHT, Matevž, KNEZ, Matjaž. What can we find out when using LCA and eco-design principles for cargo containers?. V: <i>Book of abstracts</i>. Zagreb: Faculty of Mechanical Engineering and Naval Architecture, [2015], str. 389. http://registration.sdewes.org/dub2015. <p>1. KNEZ, Matjaž, OBRECHT, Matevž. <i>Management trajnostnih oskrbovalnih verig : e-gradivo</i>. Celje: Fakulteta za logistiko, 2016. 273 str.</p>
