

**UČNI NAČRT PREDMETA / COURSE SYLLABUS**

**Ime predmeta:** UPRAVLJANJE Z EMBALAŽO V LOGISTIKI  
**Course title:** LOGISTICS PACKAGING MANAGEMENT

Študijski program in stopnja Study programme and cycle	Študijska smer Study option	Letnik Year of study	Semester Semester
GOSPODARSKA IN TEHNIŠKA LOGISTIKA 1. stopnja		3.	5.
PROFESSIONAL HIGHER EDUCATION STUDY PROGRAMME ECONOMIC AND TECHNICAL LOGISTICS 1 <sup>st</sup> degree		3.	5.

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

IZBIRNI  
ELECTIVE

**Univerzitetna koda predmeta / University course code:**

VS

Predavanja Lectures	Seminar Seminar	Vaje Tutorial			Klinične vaje Clinical training	Druge oblike študija Other forms of study	Samost. delo Individual work	ECTS
		a-V	e-V	LV				
24 e-P 21 a-P		15	24	6		90	6	

**Nosilec predmeta / Course  
coordinator:**

ANDREJ LISEC

**Jeziki /Languages:**

**Predavanja / Lectures:** SLOVENSKI/SLOVENE

**Vaje / Tutorial:** SLOVENSKI/SLOVENE

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

Ni pogojev.

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

None.

**Vsebina (kratak pregled učnega načrta):**

- Naloga embalaže in pakiranja
- Embalaža kot osnovni ovoj
- Pravilna izbira embalaže
- Načrtovanje pakirnih enot
- Sestavljanje pakirnih enot v transportne enote
- Odpadna embalaža in recikliranje ter vračljiva embalaža
- Povratni tok materiala kot razbremenilna logistika
- 3D tiskanje

**Content (syllabus outline):**

- Packaging and wrapping
- Packaging as a basic wrap
- Proper choice of packaging
- Planning of packaging units
- Consolidating packaging units into transport units
- Waste packaging and recycling and returnable packaging
- Reverse material flow as reverse logistics
- 3D printing

**Temeljni literatura in viri / Reading materials:**

E-gradivo predmeta.

Lisec, A.: Embaliranje, elektronsko gradivo, 2014.

Ambrož, G., et. al: Razvoj embalaže v krožnem gospodarstvu, Fit media, 2019.

Radonjič, G.: Embalaža in varstvo okolja, Založba Pivec, 2008, COBISS.SI-ID: 60031745.

Paine, F.,A.: Handbook of food packaging, London, Blackie Academic & Professional, 1992, ISBN: 0-216-93210-6, COBISS.SI-ID: 13417733.

Holman, J.: Food: processing, packaging & distribution : science in society project, COBISS.SI-ID: 226652.

Coles, R.: Food packaging technology, Oxford, Blackwell, Boca Raton, CRC Press, 2003, ISBN: 1-84127-221-3, COBISS.SI-ID : 2829432.

Denison, E.: Packaging prototypes, Crans-Pres-Céligny, RotoVision, 1999, ISBN: 2-88046-389-0, COBISS.SI-ID: 13682322.

Stričević, N.: Suvremena embalaža, 1982.

Pringer, O.,G.: Plastic Packaging Materials for Food, 2000.

Stehle, G.: Verpacken von Lebensmitteln, 1997.

Kattan, L.L.: Migration from Food Contact Materials, 1997.

Heiss, R.: Verpacken von Lebensmitteln, 1980.

#### **Cilji in kompetence:**

- osvojijo znanja s področja tehnike in tehnologije embaliranja,
- spoznajo tehnološke proces embaliranja,
- se usposobijo uporabljati teoretična znanja v praksi.

#### **Objectives and competences:**

- gain the knowledge of techniques and technologies of packaging,
- are familiarized with technological packaging processes,
- learn to apply theoretical knowledge to practical situations.

#### **Predvideni študijski rezultati:**

Znanje in razumevanje:

Seznani študente s procesi logistike posebej nabave in skladiščenja s poudarkom na embaliranju in embalaži. Študenti obvladajo procese in principe embaliranja, metodami upravljanja v dejavnosti embaliranja in funkcijami ter veliko vlogo embalaže in embaliranja v procesih logistike. Usposobiti študente za izvajanje embaliranja v praksi.

Prenosljive/ključne spretnosti in drugi atributi:

Posredovati znanja študentom o uveljavljeni mednarodni teoriji embalaže in embaliranja ter jih usposobiti za samostojno delo. Spoznajo probleme embaliranja in embalaže ter veljavno zakonodajo. Spoznajo obveznost uporabe vseh varovalnih sredstev in spoznajo konstrukcijske in tehnične rešitve ter vodijo skrb o pripravah na specifične delovne razmere.

#### **Intended learning outcomes:**

Students will be familiarized with logistics processes from the field of purchase and warehousing, whereby emphasis is on packaging. Students will master technological processes of packaging, methods for managing packaging and other functions as well as the role packaging plays in logistics processes. Students are further trained to apply packaging theory to practical situations.

Transferable/Key skills and other attributes:

They learn about recognized international packaging theory and trained to work individually. They are familiarized with the problems of packaging wrapping and the valid legislation. They learn about the requirements for use of all safety means and learn about the construction and technical solution and manage preparations for specific working conditions.

#### **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

#### **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-

namen didaktično pripravljenih e-gradiv v virtualnem elektronskem učnem okolju).	material in a virtual electronic learning environment).
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).	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 %) / Share (in %)	Assessment methods:
<ul style="list-style-type: none"> <li>▪ Opravljene obveznosti e-predavanj in e-vaj so pogoj za pristop k izpitu.</li> <li>▪ Pisni izpit.</li> <li>▪ Seminarska naloga.</li> </ul>	<p>70%</p> <p>30%</p>	<ul style="list-style-type: none"> <li>▪ Successful completion of e-lectures and e-tutorials is a prerequisite for entering the exam.</li> <li>▪ Written examination.</li> <li>▪ Seminar paper.</li> </ul>

#### Reference nosilca / Course coordinator's references:

1. OBRECHT, Matevž, KNEZ, Matjaž, LISEC, Andrej, WRZALIK, Aleksandra, KOVAČIČ LUKMAN, Rebeka. Sustainable consumption and segmentation of potential low emission vehicle buyers. *System safety : human - technical facility - environment*, ISSN 2657-5450. [Spletna izd.], 2019, vol. 1, iss. 1, str. 425-430, ilustr. <https://doi.org/10.2478/czoto-2019-0055>, doi: [10.2478/czoto-2019-0055](https://doi.org/10.2478/czoto-2019-0055). [COBISS.SI-ID [512987197](#)].
2. PEJIĆ, Vaska, CEDILNIK, Marko, LISEC, Andrej. Impact on the environment of industrial packaging waste transport. *Environmental engineering and management journal*, ISSN 1843-3707. [Online ed.], 2017, vol. 16, no. 5, str. 1155-1160. <http://www.ecozone.ro/reviste.php?revista=21&volum=61&numar=191&RID=27311>. [COBISS.SI-ID [512892221](#)], [JCR, SNIP, WoS do 16. 2. 2018: št. citatov (TC): 0, čistih citatov (CI): 0].
3. ĐORĐEVIĆ, Lena, ANTIĆ, Slobodan, ČANGALOVIĆ, Mirjana, LISEC, Andrej. A metaheuristic approach to solving a multiproduct EOQ-based inventory problem with storage space constraints. *Optimization letters*, ISSN 1862-4480, Aug. 2017, vol. 11, iss. 6, str. 1137-1154, tabele. <https://link.springer.com/content/pdf/10.1007%2Fs11590-016-1009-5.pdf>, doi: [10.1007/s11590-016-1009-5](https://doi.org/10.1007/s11590-016-1009-5). [COBISS.SI-ID [512755517](#)], [JCR, SNIP, WoS do 14. 4. 2019: št. citatov (TC): 1, čistih citatov (CI): 1, Scopus do 29. 4. 2019: št. citatov (TC): 1, čistih citatov (CI): 1].
4. OBRECHT, Matevž, KNEZ, Matjaž, SZEGEDI, Zoltan, NICK, Gabor, LISEC, Andrej. Review of Industry 4.0 and forecasting its future within trends in logistics and development of legislation. *Tér gazdaság ember*, ISSN 2064-1176, 2017, vol. 5, no. 4, str. 59-70, ilustr. [http://kgk.sze.hu/images/dokumentumok/folyoirat/TGE\\_V\\_evf04\\_ok.pdf](http://kgk.sze.hu/images/dokumentumok/folyoirat/TGE_V_evf04_ok.pdf). [COBISS.SI-ID [512926781](#)].
5. LISEC, Andrej, ANTIĆ, Slobodan, CAMPUZANO BOLARÍN, Francisco, PEJIĆ, Vaska. An approach to packaging waste reverse logistics : case of Slovenia. *Transport*, ISSN 1648-3480. [Online ed.], 2017, str. [1-9]. <http://www.tandfonline.com/doi/abs/10.3846/16484142.2017.1326404>, doi: [10.3846/16484142.2017.1326404](https://doi.org/10.3846/16484142.2017.1326404). [COBISS.SI-ID [512892477](#)], [JCR, SNIP, WoS do 4. 1. 2019: št. citatov (TC): 0, čistih citatov (CI): 0, Scopus do 16. 2. 2018: št. citatov (TC): 0, čistih citatov (CI): 0].