

**UČNI NAČRT PREDMETA / COURSE SYLLABUS**

<b>Ime predmeta:</b>	MERJENJE UČINKOVITOSTI IN USPEŠNOSTI OSKRBOVALNE VERIGE
<b>Course title:</b>	MEASURING THE EFFICIENCY AND PERFORMANCE OF THE SUPPLY CHAIN

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

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

OBVEZNI
COMPULSORY

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

MAG
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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
15 e-P 30 a-P		10 e-V 30 a-V			125	7

**Nosilec predmeta / Course  
coordinator:**

MARJAN STERNAD
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**Jeziki /Languages:**

**Predavanja / Lectures:** SLOVENSKI/SLOVENE

**Vaje / Tutorial:** SLOVENSKI/SLOVENE

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

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

None.
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**Vsebina (kratek pregled učnega načrta):**

<ol style="list-style-type: none"> <li>Integracija logističnih procesov (opredelitev integracije, vrste integracij, vplivi integracije na oskrbovalne verige - OV).</li> <li>Metrika logističnih procesov (definiranje metrike, kategorizacija metrike).</li> <li>Uspešnost in učinkovitost logističnih procesov (definiranje uspešnosti in učinkovitosti OV, kazalniki uspešnosti, kazalniki učinkovitosti, merjenje učinkovitosti in uspešnosti).</li> <li>Zrelostni model integracije procesov OV (predstavitve modela, stopnje zrelosti OV, integracija procesov, primerjava delovanja OV).</li> </ol>
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**Content (syllabus outline):**

<ol style="list-style-type: none"> <li>Integration of logistics processes (definition of integration, types of integrations, impacts of integration on supply chains-SC).</li> <li>Metrics of logistics processes (definition of metrics, categorization of metrics).</li> <li>Efficiency and effectiveness of logistics processes (defining the efficiency and effectiveness of SC, performance indicators, efficiency indicators, measuring efficiency and effectiveness).</li> <li>Maturity model of SC process integration (model presentation, SC maturity levels, process integration, comparison of SC operation).</li> </ol>
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### Temeljni literatura in viri / Reading materials:

Sternad, M. Merjenje učinkovitosti in uspešnosti oskrbovalne verige e-gradivo (v pripravi).  
Sternad, M. 2020. Integracija oskrbovalnih verig – e gradivo. Celje: FL.  
APICS. 2017. Supply Chain Operations Reference Model SCOR.  
Gajšek, B. & Sternad, M. 2020. Information flow in the context of the green concept, industry 4.0, and supply chain integration. Cham: Springer.  
Jonsson, P. 2008. Logistics and Supply Chain Management. London: McGraw-Hill.  
Sternad, M. Rosi, B. 2011. Obvladovanje vrednostne verige v logistiki – e gradivo. Celje: FL.  
Christopher, M. 2005. Logistics and supply chain management. Edinburgh: Pearson.

### Cilji in kompetence:

Cilji predmeta so:

- opredeliti integracije procesov oskrbovalne verige;
- spoznati in določiti metrike oskrbovalne verige;
- razumeti in v praksi uporabiti kazalnike uspešnosti in učinkovitosti;
- presoјati učinkovitost in uspešnost oskrbovalne verige;
- razumeti zrelostne modele oskrbovalne verige.

Kompetence, ki jih pridobijo študenti:

- osvojijo teoretično znanje na področju integracije oskrbovalnih verig;
- poglobljeno razumejo logistične procese v oskrbovalni verigi;
- spoznajo in razumejo metriko oskrbovalnih verig;
- razumejo zrelostne modele oskrbovalnih verig;
- analizirajo in primerjajo oskrbovalne verige.

### Objectives and competences:

The objectives of the course are:

- define the integration of supply chain processes;
- get to know and determine supply chain metrics;
- understand and apply performance and efficiency indicators in practice;
- assess the efficiency and effectiveness of the supply chain;
- understand maturity models of the supply chain.

Competences that students acquire:

- acquire theoretical knowledge in the field of supply chain integration;
- have an in-depth understanding of logistics processes in the supply chain;
- learn and understand supply chain metrics;
- understand maturity models of supply chains;
- analyze and compare supply chains.

### Predvideni študijski rezultati:

Znanje in razumevanje:

Študent bo ob zaključku predmeta zmožen:

- opredeliti in razumeti integracijo procesov znotraj oskrbovalne verige;
- določiti in uporabiti metriko oskrbovalne verige;
- izbrati in uporabiti kazalnike uspešnosti in učinkovitosti;
- analizirati in ovrednostiti uspešnost in učinkovitost oskrbovalne verige;
- evalvirati delovanje oskrbovalne verige;
- analizirati in vrednotiti zrelost oskrbovalne verige.

### Intended learning outcomes:

Knowledge and understanding:

At the end of the course, the student is able to:

- define and understand the integration of processes within the supply chain;
- define and apply supply chain metrics;
- select and use performance and efficiency indicators;
- analyze and evaluate the efficiency and effectiveness of the supply chain;
- evaluate the operation of the supply chain;
- analyze and evaluate the maturity of the supply chain.

**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 učnem okolju).

Vaje: pri vajah študent utrdi teoretično znanje in spozna aplikativne možnosti. Praktične strokovne ekskurzije v podjetja. 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).

**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. Practical professional excursions to companies. 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).

<b>Načini ocenjevanja:</b>	<b>Delež (v %) / Share (in %)</b>	<b>Assessment methods:</b>
Opravljenosti obveznosti e-predavanj in e-vaj so pogoj za pristop k izpitu.		Successful completion of e-lectures and e-tutorials is a prerequisite for entering the exam.
Pisni izpit.	60%	Written exam.
Raziskovalna naloga.	30 %	Research.
Naloge pri e-predavanjih in e-vajah.	10 %	Tasks in e-lectures and e-tutorials.

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

GAJŠEK, Brigita, STERNAD, Marjan. Information flow in the context of the green concept, industry 4.0, and supply chain integration. 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. 297-323, ilustr. <https://doi.org/10.1007/978-3-030-24355-5>.

STERNAD, Marjan, JAGRIČ, Timotej, ROSI, Bojan. Railway usage charges based on marginal maintenance costs. *Proceedings of the Institution of Civil Engineers - Transport*, ISSN 1751-7710. [Online ed.], Feb. 2018, no. 1, vol. 171, str. 3-10. <http://dx.doi.org/10.1680/jtran.15.00058>, doi: [10.1680/jtran.15.00058](https://doi.org/10.1680/jtran.15.00058).

STERNAD, Marjan, SKRÚCANÝ, Tomáš, JEREB, Borut. International logistics performance based to the DEA analysis. *Komunikácie : vedecké listy Žilinskej univerzity*, ISSN 1335-4205, 2018, vol. 20, no. 4, str. 10-15, ilustr. [http://www3.uniza.sk/komunikacie/archiv/2018/4/4\\_2018en.pdf](http://www3.uniza.sk/komunikacie/archiv/2018/4/4_2018en.pdf).

STERNAD, Marjan. Metrics of logistics costs in Slovenian companies. V: DUJAK, Davor (ur.). *Proceedings of the 18th International Scientific Conference Business logistics in modern management, October 11-12, 2018, Osijek, Croatia*, (Business logistics in modern management, ISSN 1849-6148). Osijek: Josip Juraj Strossmayer University, Faculty of Economics. 2018, str. 125-134. [http://blmm-conference.com/wp-content/uploads/BLMM-book\\_2018\\_online.pdf](http://blmm-conference.com/wp-content/uploads/BLMM-book_2018_online.pdf).

STERNAD, Marjan, CVAHTE OJSTERŠEK, Tina, TOPOLŠEK, Darja, JUSTINEK, Gorazd. The influence of logistics barriers on lead times and service levels in Slovenia. *International journal of logistics systems and management*, ISSN 1742-7975. [Online ed.], 2016, vol. 23, no 4, str. 519-533. <http://dx.doi.org/10.1504/IJLSM.2016.075213>, doi: [10.1504/IJLSM.2016.075213](https://doi.org/10.1504/IJLSM.2016.075213).

STERNAD, Marjan, JUSTINEK, Gorazd, CVAHTE OJSTERŠEK, Tina. International comparison of import and export efficiency of transport services. *International journal of diplomacy and economy*, ISSN 2049-0887, 2016, vol. 3, no. 1, str. 75-84, ilustr. <http://www.inderscience.com/info/inarticle.php?artid=79167>, doi: [10.1504/IJDIPE.2016.079167](https://doi.org/10.1504/IJDIPE.2016.079167).