

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	Logistika
Course title:	Logistics

Študijski program <i>Study programme and level</i>	Študijska smer <i>Study field</i>	Letnik <i>Academic year</i>	Semester <i>Semester</i>
Inženiring in vozila, prva stopnja		drugi	4
Engineering and vehicles, first level		second	4

Vrsta predmeta / Course type	izbirni	optional
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Univerzitetna koda predmeta / University course code	VS_11029
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Predavanja <i>Lectures</i>	Seminar <i>Seminar</i>	Sem. vaje <i>Tutorial</i>	Lab. vaje <i>Laboratory work</i>	Teren. vaje <i>Field work</i>	Samost. delo <i>Individ. work</i>	ECTS
45	-	45	-	-	90	6

Nosilec predmeta / Lecturer:	doc. dr. Sašo Murtič
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Jeziki / Languages:

Predavanja / Lectures:	Vaje / Tutorial:
Slovenski	Slovenski
Slovenian	Slovenian

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

Prerequisites:

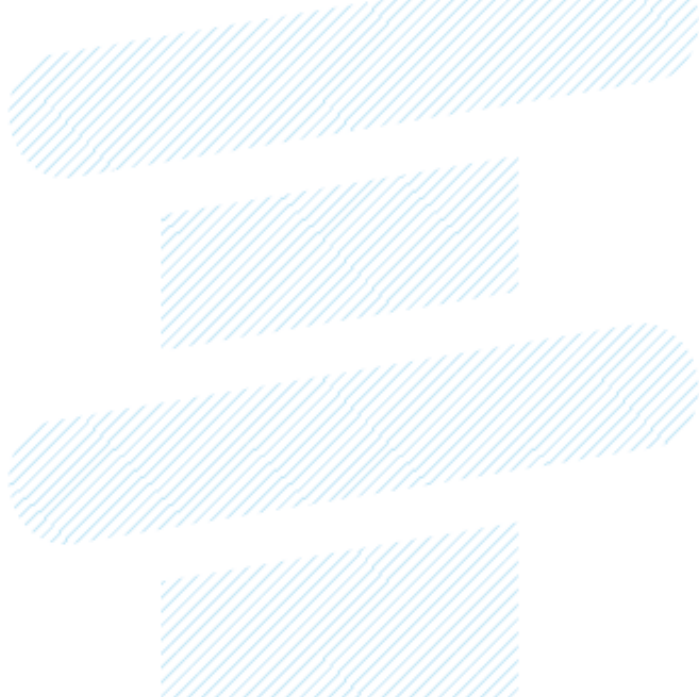
- vpis v 2. letnik študija	- requirement to work is an entry in the second year of study
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Vsebina:

Content (Syllabus outline):

<ul style="list-style-type: none"> - Uvod v logistiko: razvojni pojmi in spremembe, temeljni pojmi o logistiki, bistvene delitve logistike, pomen logistične dejavnosti za industrijo, gospodarstvo in družbo, dejavniki okolja in logistika, organiziranost logistike, funkcije logistike v industriji - Logistični centri: MMLC - multimodalni logistični centri in njihova infrastrukturna povezava na industrijo in trg ter distribucija v okolju. Pomen logistike v MMLC. - Logistična platforma kot servis: pojem logistične platforme kot servisa, čemu služi, priprava, izgradnja in uvajanja strategije logističnega servisa, strategija in politika logističnega servisa, bistvene značilnosti nabavne, intra, distribucijske poprodajne in razbremenilne logistike znotraj logistične platforme. 	<ul style="list-style-type: none"> - Introduction to logistics: development concepts and changes, basic concepts of logistics, essential logistics division, the importance of logistics for industry, business and society, environmental factors and logistics, organization of logistics, logistics function in industry - Logistic Centers: MMLC - multimodal logistic centers and their infrastructure connection to industry and the market and distribution in the environment. Meaning of logistics in MMLC. - Logistic platform as a service: the concept of logistics platform as a service, for which it serves, preparation, construction and implementation of logistics strategy strategy, strategy and policy of logistic service, essential characteristics of purchasing, intra, distribution aftermarket and relieving logistics within the logistics platform.
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<ul style="list-style-type: none"> – Logistični sistemi: medorganizacijski, infrastrukturni, prometni, povezovalni, skladiščni, podsistem manipulacije z blagom, logistični informacijski podsistemi – Manipulacije z blagom: pojem blagovnih manipulacij, plan blagovnih tokov, pakiranje, embaliranje, paletizacija, kontejnerski pretok robe, integralne in multimodalne transportne tehnologije – Mehanizacija in manipulacijska sredstva v logistiki: stopnja mehaniziranosti, storilnost manipulacijskih in transportnih naprav. – Roboti/robotika v logistiki: pojem uvajanja robota v logistiko, lastnosti in zmogljivosti, pravni in ekonomski učinki, racionalizacija logističnih procesov. – Notranji transport: premeščanje surovin v državi in v EU, polizdelkov med tehnološkimi fazami dela in vmesnimi skladiščnimi mesti z napravami notranjega transporta. – Stroški v logistiki: značilnosti stroškov v logistiki po njenih elementih (stroški skladiščenja, transportni stroški, ...). – Označevanje v logistiki: GS1, palične kode, data matrix in RFID identifikacija blaga. – Oskrbna logistike: zunanja oskrba v logistiki (logistični outsourcing), prednosti in pomanjkljivosti zunanje oskrbe v logistiki, prepustitev logističnih aktivnosti zunanjemu oskrbovalcu, model izbire zunanjega izvajalca/oskrbovalca logističnih storitev, tveganja v logističnem outsourcingu, trendi v logističnem outsourcingu. – Transportni modeli: oblike transporta, cesta, železnica, letalstvo in pomorstvo. 	<ul style="list-style-type: none"> – Logistic systems: inter-organizational, infrastructure, transport, interconnection, storage, goods manipulation subsystem, logistic information subsystems – Manipulation of goods: the concept of commodity manipulations, the plan of trade flows, packaging, packaging, palletisation, container flow of goods, integral and multimodal transport technologies – Mechanization and manipulation means in logistics: degree of mechanization, productivity of manipulative and transport devices. – Robots / robotics in logistics: the concept of introducing robots into logistics, properties and capacities, legal and economic effects, rationalization of logistics processes. – Internal transport: the transfer of raw materials in the country and in the EU, semi-finished products during technological phases and intermediate storage sites with internal transport facilities. – Costs in logistics: the cost of logistics in terms of its elements (storage costs, transport costs, ...). – Logistics labelling: GS1, bar codes, data matrix and RFID goods identification. – Supply Logistics: logistics outsourcing (logistical outsourcing), advantages and disadvantages of outsourcing in logistics, the delivery of logistical activities to the external care provider, the model of outsourcing / logistical service provider, logistical outsourcing risks, trends in logistics outsourcing. – Transport models: forms of transport, road, rail, aviation and maritime.
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Temeljni literatura in viri / Readings:

- Kavčič, K. (2011). *Oskrbne verige, logistika in nabava*. ZVS: Univerza v Mariboru.
- Knez, M. (2007). *Logistika in poslovanje logističnih podjetij*. Fakulteta za logistiko: Celje.
- Jakomin, L., Zelenika, R., & Medeot, M. (2002). *Tehnologija prometa in transportni sistemi*. Fakulteta za pomorstvo in promet: Portorož.
- Murtič, S., Murgel, J., & Vidiček, M. (2009). *Osnove prava v logistiki*. Fakulteta za logistiko: Celje.
- Murtič, S. (2012). *Sodobna paradigma med-organizacijskega obvladovanja logističnih procesov*. Fakulteta za uporabne družbene študije: Nova Gorica.
- E-gradiva predmeta / E-Course material

Priporočljiva literatura:

- Čižman, A. (2002). *Logistični management v organizaciji*. Fakulteta za organizacijske vede: Maribor.
- Kaltneker Z. (1993). *Logistika v proizvodnem podjetju*. Moderna organizacija: Kranj.
- Bojana, Z. (2009). *Uporaba matematičnih metod v logistiki 2, Priročnik*. UM, Fakulteta za logistiko: Celje.
- Oblak, H. (1997). *Mednarodna poslovna logistika*. EPF: Maribor.
- Oblak, H., Mulej, M. (1998). *Organiziranje poslovanja prometnih podjetij*. UM, Društvo za poslovno logistiko: Maribor.
- Ogorelec, A. (1996). *Logistika – Organiziranje in upravljanje logističnih procesov*. Ekonomsko poslovna fakulteta: Maribor.
- Zekič, Z. (2000). *Logistički menedžment*. Glosa: Rijeka.
- Zelenika, R. (2005) *Logistički sustavi*, Ekonomski fakultet Rijeka, Sveučilište Rijeka, Hrvatska, ISBN 953-6148-43-9
- Zelenika, R., Pavlič, H., S. (2007) *Upravljanje logističkim mrežama*, Ekonomski fakultet v Rijeki, Sveučilište Rijeka, Hrvatska, ISBN 978-953-6148-59-2
- Zelenika, R. (2008), *Menedžment logističkih sustava*, Ekonomski fakultet v Rijeki, Sveučilište v Rijeki, Hrvatska, ISBN 978-953-6148-66-0
- Zelenika, R. (2010), *Ekonomika prometne industrije*, Ekonomski fakultet v Rijeki, Sveučilište Rijeka, Hrvatska, ISBN 978-953-6148-69-1
- Murtič Sašo, Franko Uhernik Ingrid, Lekše Igor, Savšek Tomaž, *Roboti v funkciji izvajanja logističnih procesov v industriji*, 3. znanstvena konferenca, FINI 2018.
- Franko Uhernik Ingrid, Murtič, Sašo, *Tehnološko izboljšanje logističnih procesov v industriji*, 4. znanstvena konferenca FINI 2019.
- Murtič Sašo, Ingrid Franko Uhernik, *Trajnostni razvoj logističnih procesov*, 4. znanstvena konferenca FINI 2019.

Cilji in kompetence:

Objectives and competences:

<p>Osnovni namen predmeta logistika je:</p> <ul style="list-style-type: none">– seznaniti študente s pomenom logistike v industrijskem, družbenem in gospodarskem sistemu, še posebej pa v oskrbi proizvodnih procesov,– spoznati osnove zakonitosti logistike z njenimi podsistemi, kar jim bo v pomoč pri prepoznavanju učinkovitih logističnih rešitev za konkurenčnost gospodarskih družb. <p>Kompetence:</p> <ul style="list-style-type: none">– prepoznavanje logistike, logističnih procesov in podlage za funkcioniranje;– ločevanje logističnih centrov od logistične platforme ter prepoznavanje velikih sistemov multimodalnih logističnih centrov;	<p>The basic purpose of the course Logistics is:</p> <ul style="list-style-type: none">– to let the students acquainted with the meaning of logistics in industrial, social and economic system, especially in the manufacturing processes.– to learn the basic principles of logistics and its subsystems and will learn about the importance of effective logistics solutions as a function of competitiveness of a company. <p>Competences:</p> <ul style="list-style-type: none">– identification of logistics, logistics processes and basis for functioning;– separation of logistics centers of logistics platforms and identification of large systems of multimodal logistic centers;
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<ul style="list-style-type: none"> - vključevanje novih dimenzij, ki povezujejo logistiko in logistične procese, kot so cesta, železnica, letališča in pomorstvo; - prepoznavanje potrebe po enotnem delovanju Slovenije kot enotne logistične platforme; - uporaba pridobljenega znanja za uspešno strokovno komuniciranje v domači industriji kot v mednarodnem okolju; - sposobnost prepoznavanja težav in njihova analiza ter predvidevanja operativnih rešitev v procesih organizacije; - sposobnost prepoznavanja novih trajnostnih metod, postopkov in logističnih procesov v tehnoloških v transportu in skladiščenju; - reševanje konkretnih delovnih problemov vezanih na uporabo standardnih metod in postopkov; - razvijanje moralnega in etičnega čuta za poštenost, natančnost in vestnost pri delu; - sposobnost povezovanja znanja z različnih področij pri uporabi in razvoju novih aplikacij; - sposobnost stalne uporabe informacijske in komunikacijske tehnologije na svojem konkretnem delovnem strokovnem področju; - reševanje problemov s pomočjo logističnih modelov in sistemskega razmišljanja; - opredelijo pomembnost poznavanja logističnih procesov v gospodarskih družbah in njihovo odvisnost od okolja in se zavedajo pomembnosti usklajenega delovanja z okoljem družb; - opredelijo pomen usklajenega delovanja vseh podsistemov v logističnem sistemu gospodarskih družb; - organizirajo poslovanje po konceptu pravočasnosti (just in time); - izvajajo logistične kalkulacije in poznajo blagovne tokove; - opredelijo storilnost manipulacijskih priprav in transportnih sredstev, poznajo konfekcioniranje in označevanje blaga; - opredelijo značilnosti stroškov v logistiki po njihovih elementih (stroški skladiščenja, transportni stroški, ...); - spoznajo zunanjo oskrbo v logistiki (logistični outsourcing), ključne sposobnosti in ključna vprašanja zunanje oskrbe ter so sposobni sprejemati odločitve za prepustitev logističnih aktivnosti zunanjemu oskrbovalcu. 	<ul style="list-style-type: none"> - integration of new dimensions, which connecting logistics and logistics processes, such as road, rail, airport and marine; - recognizing needs for a unified Slovenia's activity as a logistics platform; - use the acquired knowledge for successful professional communication in the domestic industry and in the international environment; - the ability to identify problems and its analysis and forecasting of operational solutions in the processes of the organization; - the ability to identify new and sustainable methods, procedures and logistics processes in technology in transport and storage; - solve real work problems related to the use of standard methods and procedures; - to develop moral and ethical sense of fairness, accuracy and conscientiousness at work; - ability to integrate the knowledge from different fields when using and develop new applications; - ability to continuously use of information and communication technology in his own concrete field of labour; - solving the problems using logistics models and system thinking; - they define the importance of knowledge of logistics processes in business companies and their dependence on the environment, and are aware of the importance of coordinated action with the milieu of the companies; - they define the meaning of coordinated action of all the subsystems in logistics system of business companies; - they organize the business through the concept of timeliness (just in time); - they carry out logistics calculations and are acquainted with trade flows; - they define the productiveness of manipulation instruments and means of transport, they are acquainted with ready-making and marking goods; - they define the characteristics of costs in logistics as to their components (the costs of storage, transport...); - they learn about the external supply in logistics (logistics outsourcing), key skills and main questions of external supply, and are able to make decisions about cession of logistics activities to an external supplier.
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Predvideni študijski rezultati:

Intended learning outcomes:

Velja od: 1. 10. 2019	Sprejel: Senat FINI Novo mesto
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<p>Študent/študentka po zaključku predmeta:</p> <ul style="list-style-type: none"> - poveže velike sisteme logistične platforme, multimodalnih logističnih centrov in lokalnih logističnih centrov v pridobivanje ustrezne in cenejše podpore, za delovanje gospodarskih družb v logističnem procesu; - poveže infrastrukturne dimenzije z logističnimi centri in jih koristno poveže v sistem izvajanja logističnih procesov v svoji sredini; - poveže vlogo in pomen logistike s poslovanjem družb in njen vpliv na konkurenčno sposobnost podjetja; - analizira dejavnike okolja, ki imajo vpliv na logistiko v gospodarstvu in gospodarskih družbah; - razume, kako pomen logistične funkcije v podjetjih vpliva na njeno organiziranost; - analizira pomen kadrov in kadrovanja v logistiki; - načrtuje in povezuje nastale spremembe z novo vlogo logistike pri uveljavljanju konkurenčnosti podjetij na trgih; - razčleni logistični servis na opravila pred -, med - in poprodajnih aktivnostih; - izvede procesa izbire, izgradnje in uvajanja strategije logističnega servisa; - razloži povezanost logistike z ostalimi dejavnostmi v trženjskem spletu; - analizira pomen ustvarjanja ugleda družbe z logistiko; - analizira pomen ugotavljanja prednosti in pomanjkljivosti zunanje oskrbe za potrebe poslovnega sistema; - ugotovi, kateri zunanji oskrbovalec je najprimernejši za izvajanje logističnih dejavnosti v posameznem poslovnem sistemu; - analizira pomen poznavanja tveganj v logistični zunanji oskrbi; - zmanjšuje tveganja logistične oskrbe - zna se prilagajati globalnim trendom v logističnem outsourcingu; - izračunava posamezne stroške - izračunava storilnost manipulacijskih naprav v notranjem in zunanjem transportu; - izračunava in določa potrebne elemente v logistični verigi; - analizira pomen stroškov logistike za poslovanje podjetij; - organizira distribucijo končnih izdelkov, nabavo surovin in aktivnosti notranje logistike in analizira pomen primerne izbire. 	<p>After the completion of the course the student will be able to:</p> <ul style="list-style-type: none"> - connects large systems of logistic platforms, multimodal logistics centers and local logistics centers in getting appropriate and cost-effective support for the operation of companies in the logistics process; - connects infrastructural dimensions of logistics centers for useful link in the system of logistics processes in their midst; - connects the role and the meaning of logistics with the company operations and its influence on the competitive ability of the company; - analyzes the agents of the environment which have ascendancy over the logistics in the economy and business companies; - understands how the importance of logistics function in the companies influence its organizing; - analyzes the meaning of workers and cadre policy in logistics; - plans and connects the resulting changes to the new role of logistics in promoting of competitive companies in the markets; - divides the logistics service to activities before, during and after- sales activities; - carries out the process of choice, structuring and introducing of the strategy of logistics service; - explains the connection between the logistics and other branches in the marketing net; - analyzes the meaning of creating reputation of a company with the logistics; - analyzes the meaning of identifying advantages and disadvantages of external supply for the needs of the business system; - finds out which external supplier is the most suitable for performing logistics activities in a particular business system; - analyzes the meaning of recognizing the risks in the logistics external supply; - reduces the risks of logistics supply; - knows how to confronts global trends in the logistics outsourcing; - calculates separate costs; - calculates the productiveness of manipulation instruments in national and international transport; - calculates and defines the necessary components in the logistics chain; - analyzes the meaning of costs of the logistics for business of a company; - organizes the distribution of the finished products, raw material purchase and activities within the logistics, and analyzes the meaning of a suitable choice.
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Metode poučevanja in učenja:

- aktivna predavanja z aktivno udeležbo študentov (razlaga, diskusija, problematika, razvijanje ustvarjalnosti);
- seminarske naloge in vaje, vezane na logistiko;
- uporabljanje in seznanjanje strokovno literaturo in praktično uporabo dosegljive strokovne literature iz knjig, revij, interneta, arhivov...
- spoznavanje dobre prakse na strokovnih ekskurzijah, strokovnih ogledih in prisostvovanju pri demonstracijah v konkretnih okoljih.

Predmet je oblikovan na kombinirani način študija, ki vključuje aktivnosti preko elektronskega (on-line) okolja: te aktivnosti so sestavljene iz samostojnih in skupinskih aktivnosti z uporabo učnega okolja Moodle in drugih elektronskih vsebin. Praviloma vključujejo diskusije v forumih, spletne strani, ogled posnetih predavanj in vaj, preverjanje znanja, odgovori na vprašanja, iskanje po spletu (bazah) itd.

Learning and teaching methods:

- active lectures with active participation of students (explanation, discussion, problems, developing of creativity);
- seminar papers and practice, related to the logistics;
- using and following professional literature and practical using of the available professional literature from books, magazines, internet, archives...;
- learning good practice, attending professional excursions, special visits and attending the demonstrations of concrete environments.

The course is designed as blended learning that includes online activities:

Online activities consist of independent and group activities using the LMS Moodle and other electronic or online content. Activities usually include discussions in forums, websites, viewing of recorded lectures and tutorials, assessments, answering questions, searching the web (databases), etc.

Načini ocenjevanja:**Delež/Weight (%)****Assessment:**

<p>Pogoj za opravljanje pisnega izpita je uspešno izdelana seminarska naloga.</p> <ul style="list-style-type: none"> – ustni izpit – seminarska naloga <p>Ocenjevalna lestvica je skladna z ECTS in Pravilnikom o preverjanju in ocenjevanju znanja FINI NM.</p>	<p>70 %</p> <p>30 %</p>	<p>A successfully passed seminar paper is obligatory for performing the written examination.</p> <ul style="list-style-type: none"> – oral examination – seminar paper <p>Evaluation scale in accordance with ECTS and the Rules on the Evaluation and Assessment of Knowledge FINI NM.</p>
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Reference nosilca / Lecturer's references:

- MURTIČ, Sašo. Državne spodbude za razbremenilno logistiko. V: Trendi v slovenski in evropski logistiki ter vpliv njene razvitosti na konkurenčnost podjetij : strokovno gradivo 5. GV-konference Poslovna logistika 2006 [tudi] 29. posvetovanje Inštituta za transport in logistiko, (25. in 26. septembra 2006 v Novi Gorici). Ljubljana: Planet GV, 2006, str. 43-48. [COBISS.SI-ID 18905399]

- MURTIČ, Sašo. Zmes pohlepa, arogance in osebnih ambicij : zavarovalniške goljufije. Tajnica, ISSN 1318-315X, okt. 2006, letn. 13, št. 10, str. 41-43, ilustr. [COBISS.SI-ID 18904887]
- MURTIČ, Sašo. Ugotavljanje in preprečevanje zavarovalniških goljufij. V: 14. dnevi slovenskega zavarovalništva, Portorož, 31. maj in 1. junij 2007. Ljubljana: Slovensko zavarovalno združenje: = Slovenian Insurance Association, 2007, str. 273-283. [COBISS.SI-ID 18900023]
- MURGEL, Jasna, MURTIČ, Sašo, VIDIČEK, Meta. Osnove pravne teorije. Celje: Fakulteta za logistiko, 2008. http://164.8.132.54/Osnove_pravne_teorije/index.html. [COBISS.SI-ID 512098621]
- MURTIČ, Sašo. Effects of global economic crisis on logistic processes. V: FOŠNER, Maja (ur.), et al. Proceedings of the 6th International Conference on Logistics & Sustainable Transport 2009. Celje; Krško: Faculty of Logistics, 2009, str. [355-359], ilustr. [COBISS.SI-ID 512158525] 6. MURTIČ, Sašo, MURGEL, Jasna, VIDIČEK, Meta. Osnove prava v logistiki. Nova Gorica: Fakulteta za uporabne družbene študije, 2009. 286 str., ilustr. ISBN 978-961-6718-09-7. [COBISS.SI-ID 241162496]
- MURTIČ, Sašo. Sodobna paradigma medorganizacijskega obvladovanja logističnih procesov : doktorska disertacija. Ljubljana: [S. Murtič], 2012. 226 str., [5] str. pril., ilustr. [COBISS.SI-ID 1024484929]
- MURTIČ, Sašo, LISEC, Andrej. Mehki pristop medorganizacijskemu povezovanju. V: LISEC, Andrej (ur.). Proceedings. Celje: Faculty of Logistics, 2015, str. [1]-4. [COBISS.SI-ID 512724797]
- MURTIČ, Sašo, LISEC, Andrej. Models of inter-organizational logistics management in Slovenia. Promet, ISSN 0353-5320, 2015, vol. 27, no. 1, str. 97-104, ilustr. <http://www.fpz.unizg.hr/traffic/index.php/PROMTT/article/view/1320>, doi:10.7307/ptt.v27i1.1320. [COBISS.SI-ID 512660541]
- MURTIČ, Sašo, SMODEJ, Vera. Infrastruktorna logistika v razvoju = Infrastructure logistics in development. V: GORENC ZORAN, Annmarie (ur.). Tehnologija v dobi trajnostnega razvoja : zbornik povzetkov = Technology in the era of sustainable development : conference proceedings abstracts. Novo mesto: Fakulteta za industrijski inženiring, 2016, str. 23-24. http://rii.fini-unm.si/wp-content/uploads/2016/04/Zbornik-povzetkov-konference_FINAL-WEB.pdf. [COBISS.SI-ID 1179638]
- MURTIČ, Sašo, FRANKO, UHERNIK, Ingrid. Strokovna konferenca, Trajnostni razvoj logističnega menedžmenta, Arema, Rogaška Slatina, Trajnostni razvoj in projektno delo v logistiki, Rogaška Slatina, 16. 2. 2019.
- FRANKO, UHERNIK, Ingrid, MURTIČ, Sašo. Strokovna konferenca, Nova paradigma logističnega menedžmenta v industriji, Arema, Rogaška Slatina, Trajnostni razvoj in projektno delo v logistiki, Rogaška Slatina, 16. 2. 2019.