

EDUCATIONAL INSTITUTION: KLAIPĖDA STATE UNIVERSITY OF APPLIED SCIENCES
FACULTY OF TECHNOLOGIES
STUDY PROGRAMME: TRANSPORT LOGISTICS TECHNOLOGIES
NAME OF THE SUBJECT: LOGISTICS

| Group of the subject* | Type of the subject** | Form of studies | Structure*** | | | | Total number of hours | Number of credits |
|-----------------------|-----------------------|------------------------|--------------|----|----|----|-----------------------|-------------------|
| | | | T | P | C | I | | |
| SF | P | Full-time studies (FT) | 60 | 30 | 10 | 60 | 160 | 6 |
| | | Part-time studies (PT) | 20 | 16 | 64 | 60 | | |

*Group of the subject: GS — general study subjects; SF — subjects of the study field.

**Type of the subject: C — compulsory subject; A — optional subject (alternative), FE — freely elective subject.

***Structure: T — theory; P — seminars, workshops, laboratory works; C — consultations; I — individual work.

Annotation

The subject analyses modern concept of logistics, development stages of logistics, factors and levels of logistics development, concepts of logistic systems, tasks of logistics, functions and some management aspects, as well as trends of logistic management; examines primary operational areas of logistics: customer service, management of orders, arrangement of transport, flow management of inventories and materials, as well as connections of such areas; analyses concept of a product in logistics and its integral relations by assessing various characteristics; analyses a concept of the supply chain of logistics and its structural elements; elaborates distribution of logistics and primary principles used in creation of distribution channels, methods used to control logistic operations; analyses efficient logistics; improves knowledge about the logistics of supply, production and distribution, as well as their primary differences; examines information systems of logistics and their importance to the logistic system; analyses strategic opportunities of logistic cooperation; simulates transportation process by integrating various modes of transport and vehicles.

The connection of results of the study programme with results of the study subject and study methods, as well as evaluation methods of the learning achievements

| Results of the study programme | Results of the study subject | Study methods | Evaluation methods of the learning achievements |
|--|---|---|--|
| 4. A student will be able to make technological decisions, regarding freight logistics by taking into account the freight flows, selecting the rational transport route and vehicle combination. | 4.1. A student will be able to describe the importance of logistics in company's activities, to solve logistic tasks, to assess factors having impact on the costs and price of transportation. | An involving lecture, demonstration, discussion, solving of the tasks, analysis of information sources and individual work. | A test, semi-open questions, presentation and defence of individual works, presentation of workshops in writing and their defence, examination in writing, semi-open questions and practical task. |
| | 4.2. A student will be able to explain the importance of customer service and acceptance of orders by planning freight and passenger transport. | An involving lecture, demonstration, discussion, solving of the tasks, analysis of information sources and individual work. | A test, semi-open questions, presentation and defence of individual works, presentation of workshops in writing and their defence, examination in writing, semi-open questions and practical task. |
| | 4.3. A student will be able to justify the application of combined intermodal or multimodal transport for freight forwarding. | An involving lecture, demonstration, discussion, solving of the tasks, analysis of information sources, individual work, independent work and situation analysis. | A test, semi-open questions, presentation and defence of individual works, presentation of workshops in writing and their defence, examination in writing, semi-open questions and practical task. |
| | 4.4. A student will be able to conclude financially beneficial systems of | An involving lecture, analysis of information sources, | A test, semi-open questions, presentation and defence of individual works, presentation of |

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| | extraction-production and distribution of raw materials and to justify their efficiency. | individual work, independent work, situation analysis and solving of the tasks. | workshops in writing and their defence, examination in writing, semi-open questions and practical task. |
| 7. A student will be able to manage technological process of shipment optimally by assessing conditions of freight transport, processes in the logistics system, efficiency of mechanisms performing loading works and technical condition of vehicles. | 7.1. A student will be able to conclude technological process of transportation by assessing connections to logistics and marketing. | An involving lecture, demonstration, discussion, solving of the tasks, analysis of information sources, individual work, independent work and situation analysis. | A test, semi-open questions, presentation and defence of individual works, presentation of workshops in writing and their defence, examination in writing, semi-open questions and practical task. |
| | 7.2. A student will be able to identify factors having an impact on the costs of logistics and to analyse them. | An involving lecture, analysis of information sources, individual work, independent work, situation analysis and solving of the tasks. | A test, semi-open questions, presentation and defence of individual works, presentation of workshops in writing and their defence, examination in writing, semi-open questions and practical task. |
| | 7.3. A student will be able to assess results of logistic operations in the company's activities. | An involving lecture, demonstration, discussion, solving of the tasks, analysis of information sources, individual work, independent work and situation analysis. | A test, semi-open questions, presentation and defence of individual works, presentation of workshops in writing and their defence, examination in writing, semi-open questions and practical task. |
| 9. A student will be able to work in a multidisciplinary group in a creative and responsible manner, to organise the assigned activities and to deepen its knowledge in the professional activities individually | 9.1. A student will be able to apply the obtained theoretical and practical knowledge, to select proper logistic models that are adapted for a specific situation. | Analysis of information sources, individual work, independent work and situation analysis. | Presentation and defence of individual works, presentation of workshops in writing and their defence, |

Contents and scope of the subject

| Topic name and content description | Number of the contact hours, FT form | | | Number of the contact hours, PT form | | | I | Total number of hours |
|--|--------------------------------------|---|---|--------------------------------------|---|---|---|-----------------------|
| | T | P | C | T | P | C | | |
| 1. The significance of logistics, history of development and its environment: A concept of logistics. Development of logistics. Environment of logistics. Logistics in the company's activities. Operational network. Logistics in the production process. <i>An individual work No 1.:</i> Presentation of logistic company | 4 | - | 1 | 2 | - | 3 | 6 | 11 |
| 2. Product and its integral relations: Nature of the logistic product. Life cycle of a product. A curve of supply and demand. Impact on the product characteristics and logistic expenses. Product packaging. Determination of a product price. <i>Workshop No 1.</i> Conclusion of logistic product characteristics | 2 | 2 | - | 1 | 2 | 1 | 4 | 8 |
| 3. Production chains and its logistics. Ordinary production chain and its logistics. Integral production chains and their logistics. Management of production chains. Logistics of production chain management. The | 8 | 6 | - | 3 | 2 | 9 | 8 | 22 |

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| essence of international production chains. Connections of international production chains and their logistics. Transport in the international production chains. Planning of serviced territories by applying “ArcGIS” solutions. Selection of optimal routes for vehicle fleet by applying “ArcGIS” software. Workshop No 2. Conclusion of logistic chain by “ArcGis” software. Test No 1 | | | | | | | | |
| 4. Order management and provision of information. Cycle of order placement. Method of order placement. Information system of logistics. Application of the latest information technologies. Distribution of order points for many vehicles; Workshop No 3. Distribution of order points by “ArcGIS” software. Workshop No 4. Simulation of order fulfilment by “ArcGIS” software. | 2 | 6 | - | 1 | 2 | 5 | 6 | 14 |
| 5. Logistics of international production chains. The essence of international production chains. Perspectives of development of international production chains and process of their logistics. Connections of international production chains and their logistics. Transport in the international production chains. An individual work No 2.: conclusion of an international production chain Test No 2 | 6 | - | 1 | 2 | - | 5 | 6 | 13 |
| 6. Transport logistics. The essence and tasks of transport logistics. Characteristics of transport services. Combined transport. Significance of freight forwarder to transportation process. Selection of vehicles. Freight transport through the terminals. International labelling of cargoes. Arrangement of freight transport by domestic and international routes. Workshop No 5. Forecasting of flows. Workshop No 6. Planning of transportation and decision making by “ArcGIS” software | 2 | 8 | - | 2 | 3 | 5 | 5 | 15 |
| 7. Importance of warehouses to logistics system: The essence and importance of warehousing; types of warehouses; comparison of warehouses for general use and private warehouses; warehousing functions and arrangement of activities. | 4 | - | - | 1 | - | 3 | 2 | 6 |
| Workshop. Topics: types of warehouses, warehousing functions, inventories in the field of logistics, layout of warehouses. | - | 2 | | | 1 | 1 | 3 | 5 |
| 8. Strategic warehousing solutions: Number of warehouses; analysis of location; floor plan of a warehouse; arrangement of warehousing activities. | 2 | - | | 1 | - | 1 | 3 | 5 |
| 9. Logistics of product distribution. Components of product distribution logistics. Warehouses in the distribution process. Coordination of processes of product distribution and transportation. Distribution centres. Workshop No 7. Arrangement of warehousing points and planning of their service by “ArcGIS” software Test No 3. | 4 | 4 | - | 1 | 2 | 5 | 3 | 11 |
| 10. Inventories and their management. Purpose of inventories. Types of inventories. Inventory management purposes. Model of economical amount of order. Inventory management: problem symptoms and management improvement. Management of outdated inventories and | 4 | 4 | 1 | 2 | 2 | 5 | 8 | 17 |

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| waste. Workshop No 8. Determination of optimal amount of order An individual work No 3.: management of outdated inventories and waste in the companies | | | | | | | | |
| 11. Logistic cooperation: Logistic cooperation services. Selection of logistics service provider. Strategic opportunities for logistic cooperation. Development opportunities of logistic services. An individual work No 4.: types of transport networks and types of logistics service providers by applying “ArcGIS” software | 4 | - | 1 | 1 | - | 4 | 4 | 9 |
| 12. Information systems of logistics. Priorities and structure of information systems of logistics. The principles used for creation of information system. “ArcGIS” software Test No 4 | 2 | - | - | 1 | - | 1 | 4 | 6 |
| Preparation for the examination | - | - | 2 | - | - | 2 | 2 | 4 |
| Total number of hours | 48 | 36 | 6 | 20 | 16 | 54 | 70 | 160 |

Assessment system of results of the subject studies

Assessment criteria of results of the study subject

A student creates logistic technological process for a cargo by the lowest costs of time and finance.

A student creates a financially beneficial distribution system of extraction – production – distribution of raw material and justifies its cost efficiency.

A student determines and analyses factors having impact on the costs of logistics.

A student applies the obtained theoretical and practical knowledge, selects proper and adapted logistic models.

A student organises the available working hours independently and establishes priorities by creating a hierarchy of actions.

A student sorts, analyses and structures analytical data and provides the justified conclusions during the formation of logistic channel.

A student performs analysis of logistic processes and finds information necessary for the performance of research.

Procedure of evaluation

A ten-point criterial grading system and cumulated grading are applied.

$$IKV = \sum_{i=1}^n x_i \times k_i ,$$

Where:

n – number of interim assessments,

xi – evaluations for interim assessments and examination,

ki – weighted coefficients of interim assessments and examination.

$$IKV = X_1 \cdot 0.2 + X_2 \cdot 0.2 + X_3 \cdot 0.2 + X_4 \cdot 0.4 ,$$

Where:

X₁ – grading average (0.2) of 4 tests;

X₂ – grading average (0.2) of 9 practical works;

X₃ – grading average (0.2) of 4 individual works;

X₄ – work evaluation of examination (0.4).

Recommended literature and other information sources

| Primary literature and information sources | | | |
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| No | Literature and information sources | Number of copies | |
| | | At the library of the Faculty of Technologies | At other libraries of Klaipeda State University of Applied Sciences |

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|----|--|----|----|
| 1. | Bazaras D. (2005) Įvadas į logistiką. Vilnius „Technika“ | 1 | 1 |
| 2. | Paulauskas V. (2007) Logistika. Klaipėdos universiteto leidykla | 5 | 25 |
| 3. | Pierre D. (2013). <i>International Logistics</i> . Fourth Edition | 1 | - |
| 4. | Palšaitis R. (2011). <i>Tarptautinio verslo transportinis logistinis aptarnavimas</i> . Vilnius „Technika“ | 23 | 5 |
| 5. | Minalga R. (2009) Logistika versle. Vilnius “Homo liber” | 3 | 1 |
| 6. | Minalga R. (2008) Aprūpinimo logistika. Mykolo Romerio universitetas. | 12 | 4 |
| 7. | Urbonas J. A. (2005) Tarptautinė logistika. Kaunas „Technologija“ | 14 | 7 |

| Additional literature and information sources | |
|---|---|
| No | Literature and information sources |
| 1. | Bardi E.J., Coyle J.J., Novak R.A. (2004) Management of Transportation. Thomson. |
| 2. | Christopher M. (2007) Logistika ir tiekimo grandinės valdymas. Vilnius „Eugrimas“ |
| 3. | Palšaitis R. (2005) Logistikos pagrindai. Vilnius „Technika“ |
| 4. | Palšaitis R. (2010) Šiuolaikinė logistika. Vilnius „Technika“ |

Description of the subject was prepared by:

| | | |
|---------------------------------|----------------------|---|
| Lecturer _____ (Position) | _____ (Signature) | Jūratė Liebuvienė _____ (Academic degree, name and surname) |
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