POZNAN UNIVERSITY OF TECHNOLOGY

EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

COURSE DESCRIPTION CARD - SYLLABUS

Course name
Logistics [N1Log2>LOG]

Course

Field of study
Logistics

Year/Semester
1/1

Area of study (specialization)
–

Profile of study
general academic

Level of study
first-cycle

Course offered in
Polish

Form of study
part-time

Requirements
compulsory

Number of hours

Lecture
18

Laboratory classes
0

Other
0

Tutorials
10

Projects/seminars
0

Number of credit points

4,00

Coordinators

dr hab. inż. Agnieszka Stachowiak prof. PP
agnieszka.stachowiak@put.poznan.pl

Lecturers

Prerequisites

Knowledge of basic economic conditions, the ability to analyze cause-effect relationships and the use of quantitative methods to solve simple decision problems.

Course objective

To provide students with basic knowledge in the field of logistics: logistics processes, logistics functions, methods and tools used in logistics as well as to develop skills in the selection and use of appropriate methods and tools to solve simple problems in the field of logistics. Creating the basis for developing logistic competence during studies.

Course-related learning outcomes

Knowledge:
1. The student knows the definitions of logistics, is able to list and characterize the processes and subsystems of the logistics system, explains the essence of the supply chain and the concept of supply chain management [P6S_WG_05]
2. The student knows the basic management issues specific to logistics and supply chain management, including issues of planning, organization and control of logistics processes [P6S_WG_08]

3. The student knows the basic relationships within the logistics of enterprises and supply chains, including transactional relationships between transport costs, inventory levels, and customer service levels [P6S_WK_04]
4. The student knows the basic phenomena and contemporary trends characteristic of enterprise logistics and supply chains, indicates the consequences of globalization, computerization, digitization and automation for the organization and management of logistics processes and systems [P6S_WK_05]

Skills:
1. The student is able to search based on the subject literature and other sources and present in an orderly manner information on logistics issues, including the characteristics of logistic subsystems and logistic processes, i.e. customer service, inventory management, transport and storage [P6S_UW_01]
2. The student is able to use appropriate techniques and methods to solve a logistics problem, using them to determine the inventory level, inventory costs, customer service level, and plans transport tasks [P6S_UW_03]
3. The student is able to quantitatively and economically analyze selected issues in the field of logistics, including the size of the delivery batch, the level of stocks (including safety stock) and the allocation of transport tasks [P6S_UW_06]
4. The student is able to present, using appropriately selected means, a problem within the scope of logistics and supply chain management, discussing and interpreting the results of solved logistics tasks [P6S_UK_01]
5. The student is able to identify changes in requirements, standards, regulations, technical progress and the reality of the labor market, understands that the requirements in relation to logistics change over time and require the adaptation of logistics processes to trends such as globalization, computerization, digitalization and automation [P6S_UU_01]

Social competences:
1. The student is aware of the importance of knowledge in the area of logistics and supply chain management in solving cognitive and practical problems, understands and appreciates the importance of expert knowledge [P6S_KK_02]
2. The student is aware of initiating activities related to the formulation and transfer of information and cooperation in society in the area of logistics, understands and appreciates the importance of interdisciplinary cooperation [P6S_KO_02]
3. The student is aware of responsible fulfillment, correct identification and resolution of dilemmas related to the profession of logistics [P6S_KR_01]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: Knowledge acquired as part of the lecture is verified by an exam conducted in an exam session. The exam has an oral form, students answer 3 questions drawn from the pool of 100 questions. The answers to the questions are assessed separately on a 2-5 scale, the final grade is the average of partial grades. The list of questions is available on the eKursy platform.
Exercises: Skills acquired as part of the tutorials are verified on the basis of two final tests, consisting of 3 tasks with different points depending on their level of difficulty. Passing threshold: 60% of points.

Programme content

Logistics - genesis and evolution, definitions and functions (functional and material scope of logistics), logistic system - characteristics and elements, logistic subsystems, logistics strategies, including strategies for the integration of material flows, supply chains and global logistics.

Course topics

Lecture: Logistics - genesis and evolution. Logistics - definitions and functions (functional and material scope of logistics). Logistic system - characteristics and elements. Logistic subsystems: Supply logistics. Logistic subsystems: Production logistics. Logistic subsystems: Distribution logistics. Order processing: the essence and parameters of the process. Logistic customer service: the essence and parameters of the process. Decoupling point. Transport: the essence and parameters of the process. Warehousing: the essence and parameters of the process. Inventory. Logistic management: solutions currently used in logistics, including IT tools. Logistics strategies, including strategies for the integration of material flows,

supply chains and global logistics.
Exercises: Demand forecasting. The level of customer service in probabilistic and quantitative terms.
Material requirements planning. Ordering system based on the information level; safety stock.
Economical order quantity with seasonality. Transport issues.

Teaching methods

Lecture: multimedia presentation.
Tutorial: a multimedia presentation, presentation illustrated with examples given on a blackboard and performing tasks given by the teacher - practical exercises.

Bibliography

Basic:
1. Kisperska-Moroń D., Krzyżaniak S. (red), Logistyka, Wydawnictwo Biblioteka Logistyka, Poznań, 2009.
2. Bozarth C., Handfield R.,Wprowadzenie do zarządzania operacjami i łańcuchem dostaw: kompletny podręcznik logistyki i zarządzania dostawami, Wydawnictwo Helion, Gliwice 2009.
3. Krzyżaniak S., Podstawy zarządzania zapasami w przykładach, Wydawnictwo Instytutu Logistyki i Magazynowania, Poznań, 2008.
4. Skowronek C., Sarjusz-Wolski Z., Logistyka w przedsiębiorstwie, PWE, Warszawa, 2012.

Additional:
1. Szymonik A., Nowak I., Współczesna logistyka, Wydawnictwo Difin, Warszawa, 2017.
2. Krzyżaniak S., Cyplik P., Zapasy i magazynowanie, Tom 1 - Zapasy, Wydawnictwo Instytutu Logistyki i Magazynowania, Poznań, 2008.
3. Niziński S., Ligier K., Żurek J., Logistyka dla inżynierów, Wydawnictwo Komunikacji i Łączności, Warszawa, 2012.
4. Hadaś Ł., Stachowiak A., Cyplik P., Production-logistic system in the aspect of strategies for production planning and control and for logistic customer service, Logforum 10 (3), 2014.
5. I. Pawłyszyn, A. Jurga, (2010), "Spreadsheet as tool supporting MRP analysis", [w:] "Innovative and intelligent manufacturing systems", M. Fertsch (red.), Wyd. Politechnika Poznańska, Poznań, s. 353-368.
6. I. Pawłyszyn, A. Pietrzak, A. Stachowiak, (2012), „Spreadsheets as a tool supporting decisions concerning lot sizing", [w:] "Logistics - selected concepts and best practices", K. Grzybowska (red.), Wyd. Politechnika Poznańska, Poznań, s. 307-330.

Breakdown of average student's workload

	Hours	ECTS
Total workload	100	4,00
Classes requiring direct contact with the teacher	30	1,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	70	2,50