STUDY MODULE DESCRIPTION FORM

Name of the module/subject	Code
Logistics Strategies	**1010612321010610635**

Field of study	Profile of study (general academic, practical)	Year /Semester
Transport	**(brak)**	**1 / 2**
Elective path/specialty	Subject offered in:	Course (compulsory, elective)
Logistics of Transport	**Polish**	**obligatory**

Cycle of study:	Form of study (full-time,part-time)
Second-cycle studies	**full-time**

No. of hours	No. of credits
Lecture: **2** Classes: **1** Laboratory: **-** Project/seminars: **-**	**3**

Status of the course in the study program (Basic, major, other)	(university-wide, from another field)
(brak)	**(brak)**

Education areas and fields of science and art	ECTS distribution (number and %)
technical sciences	**3 100%**

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	The student has basic knowledge in the field of logistics (transport and warehousing) and management
2	**Skills**	The student is able to integrate the obtained information, make their interpretation, draw conclusions, formulate and justify the opinions of the ability to see, connect and interpret phenomena.
3	**Social competencies**	The student is aware of the importance and understands the non-technical aspects and effects of the use of individual logistics strategies.

Assumptions and objectives of the course:

To familiarize students with the basic logistics strategies utilized in companies.

Study outcomes and reference to the educational results for a field of study

Knowledge:

1. has advanced and in-depth knowledge in the field of transport engineering, theoretical foundations, tools and means used to solve simple engineering problems - [T2A_W01]
2. has advanced and detailed knowledge of the processes taking place in the life cycle of transport systems - [T2A_W05]
3. has advanced and detailed knowledge of selected issues in the field of transport engineering - [T2A_W03]

Skills:

1. can - when formulating and solving engineering tasks - integrate knowledge from various transport areas (and if necessary also knowledge from other scientific disciplines) and apply a systemic approach, also taking into account non-technical aspects - [T2A_U05]
2. can make a critical analysis of existing technical solutions and propose their improvements (improvements) - [T2A_U08]
3. can determine the directions of further learning and realize the process of self-education - [T2A_U16]

Social competencies:

1. is aware of the need to develop professional achievements and comply with the rules of professional ethics - [T2A_K04]
2. understands the importance of using the latest knowledge in the field of transport engineering in solving research and practical problems - [T2A_K02]

Assessment methods of study outcomes

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Lecture: Preparation as part of lectures, subject to assessment, presentation of an example of real application in a selected company / companies (preferably in Polish conditions), a given type of strategy and as part of the exercises to solve tasks asked on particular classes. And a written test (multiple choice) summarizing the subject.

Exercises: Average marks from written reports on classes

Course description

Introduction to the subject: Basic concepts and definitions - strategy classification, supply chain, push and pull systems, Third-party Logistics - 3PL, LLP / 4PL, dropshipping strategies, direct plant shipment, direct store delivery

Strategy of focusing on key competences: Outsourcing - essence, goals, scope, effects of application. Insourcing, Co-sourcing, make / do or buy analysis, application effects. Application example.

Lean Management / Production / Distribution - LM / LP / LD: Istota LM / LP, basic principles, goals, application effects., 5S. Application example.

Toyota Production System / Toyota Production System - TPS / Kaizen: Name and essence of TPS, basic elements, implementation, application possibilities. KAIZEN, HEIJUNKA, SMED, 5 WHY. 6-SIGMA - essence, sense of application, tools: Process analysis - process maps, cause-and-effect matrices, "what and how" analysis, cause and effect diagrams, waste elimination, spaghetti diagram, Pareto analysis. Application example.

6 SIGMA: Essence, goals, effects, application possibilities. Application example. COPQ - Cost of Poor Quality, DPO - Defects Per Opportunity, DPMO - Defect Per Million Oportunities.

Strategy of competing in time - shortening the cycle: Just-in-Time (JiT) - the essence, goals, effects, possibilities of application. Pull. Kanban - being, elements, Kanban in production, Kanban in distribution, WIP. Application example.

Time competition strategy - increasing asset productivity: Cross-Docking (x-docking) - the essence, goals, effects, application possibilities, advantages and disadvantages. Application example.

Setting strategic directions of changes, assessment of logistics: Benchmarking - the essence, objectives, premises, types, stages of implementation, effects of application, typical measures. Application example.

Advanced cycle shortening concept: Material Requirement Planning - MRP - essence, structure, MRP, MRP II, PUSH system, main production schedule - MPS, material list / register - BOM, inventory / stock register - IS. Application example.

Inventory management strategy: Distribution Requirement Planning - DRP, DRP comparison
and MRP, available stock, optimal delivery batch size, replenishment cycle, level of DRP safety margin.

Inventory management strategy in supply chains: Vendor Managed Inventory - VMI, SMI (supplier managed inventory), Supply Chain Management (SCM), EDI, RFID, barcodes.

Postponement / logistic postponement: Delaying strategy, postponement of activities in the logistics system, postponement of changes in the location of stocks.

Supply chain integration strategy: Efficient Consumer Response - ECR, basic elements, application effects, EDI, EDIFACT, GS1, EFT, ABC analysis, results control.

Review of other strategies: QR, TQM, Process modeling, CM, CPFR and others.

Basic bibliography:

1. Murphy P.R. jr, Wood D.F.: Nowoczesna Logistyka. HELION, Gliwice, 2011
2. Coyle J., Bardi E., Langley C.: Zarządzanie logistyczne. PWE, Warszawa, 2010

Additional bibliography:

Result of average student's workload

Activity	Time (working hours)

http://www.put.poznan.pl/

1. Participation in classes (according to plan) 2. Consolidation of knowledge / report 3. Preparation for exam	45 15 15

Student's workload		
Source of workload	**hours**	**ECTS**
Total workload	75	3
Contact hours	45	2
Practical activities	0	0

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