COURSE DESCRIPTION CARD - SYLLABUS

Course name
Procurement and Production Logistics [N1Log2>LZiP]

Course

Field of study
Logistics

Year/Semester
3/5

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
10

Laboratory classes
8

Other (e.g. online)
0

Tutorials
0

Projects/seminars
16

Number of credit points

5,00

Coordinators

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Lecturers

Prerequisites

The student knows the basic concepts of logistics. The student has the ability to perceive, connect and interpretation of facts occurring in the field of logistics. The student is responsible, is able to interact and actively work in a team.

Course objective

Transfer of structured knowledge in terminology and basic concepts related to supply logistics and production logistics. Presentation of the basic issues in the construction process of supply and production logistics system. Introduction to the basic quantitative methods in material resource management. Presentation of the material requirement planning (MRP) algorithm and methods for determining the lot size. Ability to apply quantitative methods in managing resources of materials for production, ability to configure. Selection of methods at the level of finished products and components. The ability to organize a material stream flow management system in the aspect of logistics planning.

Course-related learning outcomes

Knowledge:
1. Student knows the basic concepts of logistics supply and production, i.a.: bill of material,

specification, supply cycle, purchasing strategy, dependent and independent demand [P6S_WG_05]
2. Student knows the detailed issues, i.a.: material requirements planning system (MRP), supply of materials to the production hall controlled by demand or consumption [P6S_WG_08]
3. Student characterizes the basic decision-making issues in supply and production logistics and the premises for making them [P6S_WK_04]
4. Student knows trends and best practices in procurement, i.a. category management, IT systems (B2B purchasing platforms), tendencies in the field of cooperation with suppliers (relationship management) [P6S_WK_05; P6S_WK_06]

Skills:
1. Student is able to apply the MRP algorithm in the management of materials streams in supply and production [P6S_UW_03]
2. Student is able to assess the methods used to determine the lot size [P6S_UW_06]
3. Student is able to design the material logistics system for given organizational conditions [P6S_UW_07]

Social competences:
1. Student is willing to cooperate and work in a project group [P6S_KK_01]
2. Student is aware of potential conflicts between supply and production departments [P6S_KR_01]
3. Student is aware of the responsibility for their own work and readiness to comply with the rules of teamwork and taking responsibility in the project group [P6S_KR_02]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: Formative assessment: based on the partial test of the issues discussed. Summative assessment: written work or test on the issues discussed during the lecture; the exam is passed, after giving the correct answers to most questions, passing the threshold of 50% of the points.
Project: Formative assessment: on the basis of progress in the implementation stages of the project, and knowledge of the issues necessary to carry. Summative assessment: on the basis of the quality of the project and answers to questions about the project.
Laboratory: Formative assessment: on the basis of discussions on knowledge of the issues necessary for the proper performance of the laboratory exercises. Summative assessment: based on the effects of work and their description.

Programme content

Lecture: The importance of supply logistics for the performance of the business. Basic functions of procurement processes. Material Requirements Planning (MRP). The sourcing process, purchasing category management, procurement strategies, RFx, specifications, selection and evaluation of suppliers. Supplier relationship management (SRM), standardization of purchasing processes. The use of modern purchasing platforms in the procurement process (E-procurement). Conditions of use of order quantity methods - recommendations. Decoupling point in material requirements planning system. Production logistics: centralized system, consumption-based decentralized system, buffers location in the company's logistics system.
Project: Building a sales and production plans. Material requirements planning system (MRP) in the condition of depended demand. System of indexes for product items. Using the methods for determining the size of batch (order): Fixed Order Quantity, Economic Order Quantity, Lot-for-Lot, Fixed period requirements, Period order quantity, Reorder point, Least unit cost, Least total cost. Configuration management system for the planning of material flow streams. The organization and flow control on the shop floor (warehouses, buffers, workstations)
Laboratory:The use of IT tools (purchasing platform) in the procurement process.

Teaching methods

Lecture: Information lecture, problem lecture,
Project: project.
Laboratory: exercises.

Bibliography

Basic:
1. Fertsch M., Podstawy zarządzania przepływem materiałów w przykładach, Biblioteka Logistyka, Poznań 2003.
2. Hadaś Ł., Klimarczyk G., Ragin Skorecka K. (red.), Zarządzanie zakupami - poradnik, Open Nexus, Poznań 2014.
3. Bendkowski J., Radziejowska G., Logistyka zaopatrzenia w przedsiębiorstwie, Wydawnictwo Politechniki Śląskiej, Gliwice 2011.
4. Lysons K., Zakupy zaopatrzeniowe, PWE, Warszawa 2004.

Additional:
1. Kowalska K., Logistyka zaopatrzenia, Wydawnictwo Akademii Ekonomicznej w Katowicach, Katowice 2005.
2. Coyle J. J., Bardi E., Langley C., Zarządzanie logistyczne, PWE, Warszawa 2002.

Breakdown of average student's workload

	Hours	ECTS
Total workload	125	5,00
Classes requiring direct contact with the teacher	36	2,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	89	3,00