

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Production and supply logistics		Code 1011101451011112980
Field of study Logistics - Full-time studies - First-cycle studies	Profile of study (general academic, practical) general academic	Year /Semester 3 / 5
Elective path/specialty -	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: First-cycle studies	Form of study (full-time,part-time) full-time	
No. of hours Lecture: 15 Classes: - Laboratory: 15 Project/seminars: 30		No. of credits 5
Status of the course in the study program (Basic, major, other) other		(university-wide, from another field) university-wide
Education areas and fields of science and art technical sciences Technical sciences		ECTS distribution (number and %) 5 100% 5 100%
Responsible for subject / lecturer: dr hab. inż. Łukasz Hadaś email: lukasz.hadas@put.poznan.pl tel. (61) 665 34 01 Wydział Inżynierii Zarządzania ul. Strzelecka 11 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	The student knows the basic concepts of logistics
2	Skills	The student has the ability to perceive, connect and interpretation of facts occurring in the field of logistics
3	Social competencies	The student is aware of the impact of logistics on the competitiveness of enterprise
Assumptions and objectives of the course: Presentation of organized knowledge of terminology and basic concepts related to logistics supply production. Presentation of basic managerial decisions during the construction of supply logistics system. Introduction to basic quantitative methods in the management of material needs. Presentation of algorithm, material requirements planning (MRP), and methods for determining the size of the batch. Ability to apply quantitative methods in managing the production of material resources, the ability to configure optimization. Selection methods at the level of finished products and component parts. The ability to build the management system in material flow streams in the planning level.		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. The student characterized basic issues of decision-making in supplies and production logistics and the conditions of their making - [K1A_W14]		
2. The student characterized basic concepts: Bill of material, quantitative specification, lead time, strategy of purchasing, inventory segmentation, dependent and independent demand - [K1A_W15]		
3. The student characterized a conflict of interests between the supply and production departments - [K1A_W16]		
4. The student characterized specific concepts such as: buy or make, single sourcing, double sourcing, multi-sourcing, and the method of determining the size of the batch - [K1A_W17]		
5. The student explains the role of the procurement process in the cost of functioning of the enterprise - [K1A_W18]		
6. The student describes the trends in supplies and production logistics include: Standardised operational purchasing processes, IT systems (B2B e-procurement platform), the trend of cooperation with suppliers (supplier relationships management (SRM)) - [K1A_W19] - [K1A_W19]		
7. The student knows the algorithm for material requirements planning (MRP) - [InzA_W05, K1A_W20]		
Skills:		

<ol style="list-style-type: none"> 1. Students can to search in the literature solutions of facultative tasks of logistics - [K1A_U1] 2. Students can prepare a presentation of developed logistics system of procurement and production - [K1A_U2] 3. Students can verbally discuss developed algorithm of material requirements planning (MRP) - [K1A_U4] 4. Students can develop yourself facultative task of the proposed supply system - [K1A_U5] 5. The student is able to apply quantitative methods to manage the material flows of supply and production - [K1A_U9] 6. Students can use the ABC analysis according to the criterion of value - [K1A_12] 7. The student is able to assess the level of inventory for the used methods for determining the size of batch - [K1A_13] 8. Students can design a logistics system for specific organizational conditions - [K1A_U16]
<p>Social competencies:</p> <ol style="list-style-type: none"> 1. Student is willing to cooperate and work in a project group - [K1A_K03] 2. The student is aware of their responsibility for their own work and the willingness to subordinate with the principles of teamwork and responsibility in the project group - [K1A_K04] 3. The student is aware of the potential conflict between procurement and production departments - [K1A_K05]

<p>Assessment methods of study outcomes</p>
<p>Formative assessment:</p> <p>a) For the project: on the basis of progress in the implementation stages of the project, and knowledge of the issues necessary to carry b) for the laboratory: on the basis of discussions on knowledge of the issues necessary for the proper performance of the laboratory exercises c) for the lecture: on the basis of answers to questions about the topics covered in previous lectures</p> <p>Recapitulative assessment:</p> <p>a) For the project: on the basis of (1) the quality of the project (2) answers to questions about the project b) For laboratory: based on the effects of work and their description. c) for the lecture: on the basis of colloquium - written work on the issues discussed during the lecture. The exam is passed, after giving the correct answers to most questions.</p>
<p>Course description</p>
<p>Lecture: The importance of supply logistics for the performance of the business. Basic functions of procurement processes. Material Requirements Planning (MRP). Purchasing strategies. Selection of the number of sources of supply (single source, double and multi-source). The rationale for the decision of make or buy. Standardised operational purchasing processes, SRM - supplier relationships management. Evaluation of suppliers. Internet and e-commerce logistics supply. The use of purchasing platforms. Conditions of use of order quantity methods - recommendations. Decoupling point in material requirements planning system. Internal logistics: a centralized system and a decentralized system. Location of buffers in the logistics enterprise Project: Building a sales and production plans. Material requirements planning system (MRP) in the condition of depended demand. Building a 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 (MS EXCEL) in the management of the supplies and material flows.</p> <p>Didactic methods: Lecture: Information lecture, problem lecture, Project: project. Laboratory: exercises.</p>
<p>Basic bibliography:</p> <ol style="list-style-type: none"> 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. Polskie Wydawnictwo Ekonomiczne, Warszawa 2004
<p>Additional bibliography:</p> <ol style="list-style-type: none"> 1. Skowronek Cz., Sarjusz-Wolski Z., Logistyka w przedsiębiorstwie, PWE, Warszawa 1999 2. Coyle J. J., Bardi E., Langley C., Zarządzanie logistyczne, PWE, 2002
<p>Result of average student's workload</p>

Activity		Time (working hours)
1. Lecture		15
2. Project		30
3. Laboratory		15
4. Consultations		15
5. Preparing to pass exam		15
6. Own study/work		35
Student's workload		
Source of workload	hours	ECTS
Total workload	125	5
Contact hours	60	3
Practical activities	45	2