

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>Production and supply logistics</b>		Code <b>1011101251011112980</b>
Field of study <b>Logistics - Full-time studies - First-cycle studies</b>	Profile of study (general academic, practical) <b>(brak)</b>	Year /Semester <b>3 / 5</b>
Elective path/specialty <b>-</b>	Subject offered in: <b>Polish</b>	Course (compulsory, elective) <b>obligatory</b>
Cycle of study: <b>First-cycle studies</b>	Form of study (full-time, part-time) <b>full-time</b>	
No. of hours Lecture: <b>15</b> Classes: <b>-</b> Laboratory: <b>15</b> Project/seminars: <b>30</b>		No. of credits <b>5</b>
Status of the course in the study program (Basic, major, other) <b>(brak)</b>		(university-wide, from another field) <b>(brak)</b>
Education areas and fields of science and art <b>technical sciences</b> <b>Technical sciences</b>		ECTS distribution (number and %) <b>5 100%</b> <b>5 100%</b>
<b>Responsible for subject / lecturer:</b>  dr inż. Łukasz Hadaś email: lukasz.hadas@put.poznan.pl tel. (61) 665 34 01 Wydział Inżynierii Zarządzania ul. Strzelecka 11 60-965 Poznań		
<b>Prerequisites in terms of knowledge, skills and social competencies:</b>		
1	<b>Knowledge</b>	The student knows the basic concepts of logistics
2	<b>Skills</b>	The student has the ability to perceive, connect and interpretation of facts occurring in the field of logistics
3	<b>Social competencies</b>	The student is aware of the impact of logistics on the competitiveness of enterprise
<b>Assumptions and objectives of the course:</b> 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 and flow control on the shop floor.		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b>		
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: B2B e-procurement platform, the trend of cooperation with suppliers - [K1A_W19]		
7. The student knows the algorithm for material requirements planning (MRP) - [InzA_W05]		
<b>Skills:</b>		

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

<b>Assessment methods of study outcomes</b>	
<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: from prepared reports. c) for the lecture: on the basis of colloquium - written work on the issues discussed during the lecture. The exam can be applied after obtaining the ratings of the project and the laboratory. The exam is passed, after giving the correct answers to most questions</p>	
<b>Course description</b>	
<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 buy or make.          The costs of supply. Evaluation of suppliers. Internet and e-commerce logistics supply. The use of purchasing platforms.          The role of the sales and operation planning in subsystem logistics. Selection of methods for determining the size of the lot. Conditions of use of methods - recommendations.          Decoupling point in material requirements planning system. Flow control and supply shop floor, a centralized system and a decentralized system. Location of buffers in the logistics enterprise          Project: Building a sales and production plans. Building integrated S&amp;OP plan.          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: 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 in the management of the supplies and material flows.</p>	
<p><b>Basic bibliography:</b></p> <ol style="list-style-type: none"> <li>1. Coyle J. J., Bardi E., Langlely C., Zarządzanie logistyczne, PWE, 2002</li> <li>2. Fertsch M., Podstawy zarządzania przepływem materiałów w przykładach, Biblioteka Logistyka, Poznań 2003</li> </ol>	
<p><b>Additional bibliography:</b></p> <ol style="list-style-type: none"> <li>1. Skowronek Cz., Sarjusz-Wolski Z., Logistyka w przedsiębiorstwie, PWE, Warszawa 1999</li> <li>2. Fertsch M., Podstawy zarządzania przepływem materiałów w przykładach, Biblioteka Logistyka, Poznań 2003.</li> </ol>	
<b>Result of average student's workload</b>	
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	
<b>Student's workload</b>		
<b>Source of workload</b>	<b>hours</b>	<b>ECTS</b>
Total workload	125	5
Contact hours	75	3
Practical activities	50	2