

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Logistics of the production process		Code 1011102331011115171
Field of study Engineering Management - Full-time studies -	Profile of study (general academic, practical) general academic	Year /Semester 2 / 3
Elective path/specialty Production and Operations Management	Subject offered in: Polish	Course (compulsory, elective) elective
Cycle of study: Second-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: 15 Classes: - Laboratory: 15 Project/seminars: 15		No. of credits 4
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 %) 4 100% 4 100%
Responsible for subject / lecturer: Dr hab. inż. Łukasz Hadaś email: lukasz.hadas@put.poznan.pl tel. (61) 665 34 01 Faculty of Engineering Management ul. Strzelecka 11 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	The student knows the basic terms related to the production management
2	Skills	The student has the ability to use the knowledge acquired in other subjects (in the area of logistics and production management)
3	Social competencies	The student is aware of the importance of logistics in manufacturing operations
Assumptions and objectives of the course: -Presentation the ideas and principles of production logistics. Ability of the Students in the range of basic skills in production logistics.		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. He has knowledge of the subject in the area of material requirements planning and logistics of production - [K2A_W01] 2. He has knowledge of the relationships and expanded knowledge of organizational relationships existing between organizational units of the company - [K2A_W05] 3. He knows the methods and tools for modeling decision-making processes, algorithms in the production logistics area - [K2A_W09] 4. He has expanded knowledge about the mechanisms of creation business-organizing at the level of creation of production units - [K2A_W12]		
Skills:		
1. He is able to use theoretical knowledge to describe and analyze the causes and course of the processes and phenomena of production logistics and can formulate their own opinions and choose the critical data and analysis - [K2A_U02] 2. He has the ability to use the knowledge gained in the field of production planning and logistics, enhanced by a critical analysis of the effectiveness and suitability of applied knowledge - [K2A_U03] 3. He is able to modeling complex phenomena involving processes in area of logistics using advanced methods and tools in the field of economics and management science discipline - [K2A_U04] 4. He Has the ability to use acquired knowledge in the field of production logistics with a critical assessment of its application - [K2A_U06] 5. He has the ability to independently propose solutions to a specific management problem in the area of production logistics - [K2A_U07]		

Social competencies:
1. He has a sense of responsibility for their own work and the willingness to comply with the rules of work in a team and to take responsibility for collaborative tasks - [K2A_K02]
2. He is able to perceive causal relationships in achieving goals and specify prioritize alternative or competitive tasks - [K2A_K03, K2A_K07]
3. He is aware of the interdisciplinary nature of knowledge of production management and have the skills required to solve complex problems of organization - [K2A_K06]

Assessment methods of study outcomes
-Formative assessment: 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 Recapitulative assessment: 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

Course description
-Lecture: Presentation of the historical development of logistics and its relation to the management of production. Presented is the essence and objectives of production logistics. Discussed are factors affecting the logistics system in production. Presented in detail is an essential tool of production logistics - a method of material requirements planning (MRP). Presented are relationship between production logistics and supply logistics. Discussed will be relationship between production planning and production logistics. The presented method Manufacturing Resource Planning and different possibilities of its use in the production logistics. Presented is the primary link between the planning and control of production and logistics of production - the main schedule. Presented is the Toyota Production System (TPS) and Just - in - Time in the production area. Project: Students create according to the guidelines of teacher, system of production logistics for fixed organizations conditions Laboratory: Students learn the basics of computer aided manufacturing logistics and supplies. This laboratory operates based on the ERP system Didactic methods: Lecture: information and problem lecture, Project: design method. Laboratory: Exercise method

Basic bibliography:
1. Fertsch M., Cyplik P., Hadaś Ł., (Red.), Logistyka produkcji - Teoria i praktyka. Biblioteka Logistyka, Poznań 2010
2. Fertsch M., Podstawy zarządzania przepływem materiałów w przykładach, Biblioteka Logistyka, Poznań 2003
3. Rother M., Hans R., Tworzenie ciągłego przepływu. Przewodnik dla menadżerów, inżynierów i pracowników produkcji, Wrocław Center for Technology Transfer, Wrocław 2004.
4. Skowronek Cz., Sarjusz-Wolski Z.: Logistyka w przedsiębiorstwie. Warszawa: PWE, 2008

Additional bibliography:
1. Bendkowski J., Radziejowska G.: Logistyka zaopatrzenia w przedsiębiorstwie. Wydawnictwo Politechniki Śląskiej, Gliwice 2011
2. Rother M., Shook J., Naucz się widzieć. Eliminacja marnotrawstwa poprzez mapowanie strumienia wartości, Wrocław Center for Technology Transfer, Wrocław 2003

Result of average student's workload	
Activity	Time (working hours)
1. Lecture	15
2. Laboratory	15
3. Classes	15
4. Own study/work	45
5. Consultations	10
Student's workload	

Source of workload	hours	ECTS
Total workload	100	4
Contact hours	55	2
Practical activities	30	1