

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Traditional and modern production systems		Code 1011105411011117644
Field of study Logistics - Part-time studies - Second-cycle	Profile of study (general academic, practical) general academic	Year /Semester 1 / 1
Elective path/specialty Corporate Logistics	Subject offered in: Polish	Course (compulsory, elective) elective
Cycle of study: Second-cycle studies	Form of study (full-time, part-time) part-time	
No. of hours Lecture: 16 Classes: - Laboratory: - Project/seminars: 16		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		ECTS distribution (number and %)
Responsible for subject / lecturer:		
dr hab. inż. Marek Fertsch, prof.nadzw. email: Marek.Fertsch@put.poznan.pl tel. 061 665 3416 Wydział Inżynierii Zarządzania ul. Strzelecka 11, 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Student has knowledge on production management
2	Skills	Student has skills connected with production management
3	Social competencies	Student has social skills connected with production management
Assumptions and objectives of the course:		
Providing students with knowledge, skills and social competences connected with designing contemporary production system		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. can characterize interdependencies specific for a given area and their connections with logistics - [K2A_W02] 2. knows basic relations between technics and economic issues, specific for a given area within range of logistics - [K2A_W04] 3. has deepened knowledge on production engineering and its connections with logistics - [K2A_W05] 4. knows basic terms specific for a given subject within the course of logistics - [K2A_W09] 5. knows IT systems applicable in logistics and areas connected, and their basic functionalities - [K2A_W12] 6. can explain in details methods, tools and techniques specific for a given subject in the course of logistics - [K2A_W13]		
Skills:		
1. can demonstrate with appropriate means issues within the logistics and its specific issues (inventory management, logistics, distribution, logistics, manufacturing and sourcing, logistics operation, ecologistics) and supply chain management - [K1A_U02] 2. can develop and present an oral presentation on the detailed issues within logistics in Polish or any foreign language - [K1A_U04] 3. can independently develop the for the problem within the field of studies - [K1A_U05] 4. can define and solve tasks with interdisciplinary integration of knowledge on disciplines applied for designing logistics systems - [K2A_U10] 5. can assess usability and ability to use new achievements (techniques and technologies) in the range of logistics and other areas functionally related - [K2A_U12] 6. can identify possible improvements in the logistics system analyzed - [K2A_U16]		

Social competencies:
1. is aware of responsibility for own work and ready to subordinate to principles ruling team work, ready to take responsibility for tasks realized by the team - [K2A_K03]
2. is able to see cause and effect elations in realization of predefined goals and prioritize alternative or competitive tasks - [K2A_K04]

Assessment methods of study outcomes
Forming rating a) project- based on discussions on solutions that a student developed in the project b) lecture- based on answers to questions related to the material discussed in the previous lecture Summary Rating in terms of the project a) on the basis of a public presentation of the project results and discussions about them, b) on the basis of the substantive quality of the project prepared in terms of a lecture on the basis of a public presentation on a given topic and answers to questions concerning the material discussed in the lecture

Course description
The lecture begins with a reminder of typical methods and techniques for the design of production systems used in conventional production systems, including balance model and model of assembly line balancing and classification of classical production units according to the American and European model. Then, the design of production systems method according to the concept JiT (0 inventory), lean production systems and agile manufacturing systems are discussed. In class, students design according to the guidelines of the teacher, selected production system.

Basic bibliography:
1. Fertsch M., Pawlak N., Stachowiak A., Współczesne systemy produkcyjne, Wydawnictwo Politechniki Poznańskiej, 2011
2. Golińska P., Tradycyjne i nowoczesne systemy produkcyjne, Wydawnictwo Politechniki Poznańskiej, 2011

Additional bibliography:

Result of average student's workload	
Activity	Time (working hours)
1. Lectures	30
2. Project	30
3. Consultation	15

Student's workload		
Source of workload	hours	ECTS
Total workload	75	5
Contact hours	60	2
Practical activities	30	3