

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>(-)</b>		Code <b>1011102211011117644</b>
Field of study <b>Logistics - Full-time studies - Second-cycle</b>	Profile of study (general academic, practical) <b>(brak)</b>	Year /Semester <b>1 / 1</b>
Elective path/specialty <b>Corporate Logistics</b>	Subject offered in: <b>Polish</b>	Course (compulsory, elective) <b>elective</b>
Cycle of study: <b>Second-cycle studies</b>	Form of study (full-time, part-time) <b>full-time</b>	
No. of hours Lecture: <b>30</b> Classes: <b>-</b> Laboratory: <b>-</b> Project/seminars: <b>30</b>		No. of credits <b>3</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>3 100%</b> <b>3 100%</b>
<b>Responsible for subject / lecturer:</b>  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		
<b>Prerequisites in terms of knowledge, skills and social competencies:</b>		
1	<b>Knowledge</b>	The student has knowledge of the subject "production management"
2	<b>Skills</b>	The student has skills of the subject "production management"
3	<b>Social competencies</b>	The student has social competencies of the subject "production management"
<b>Assumptions and objectives of the course:</b> Opanowanie przez studenta wiedzy, umiejętności i kompetencji społecznych związanych z projektowaniem współczesnych systemów produkcyjnych		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b>		
1. Is able to describe the relationships that rule in the area and their relationships with logistics - [K2A_W02]		
2. Knows the basic relationship between the sphere of technical and economic characteristic of the object in the field of logistics - [K2A_W04]		
3. Has in-depth knowledge of manufacturing engineering and its relationship with the logistics - [K2A_W05]		
4. Knows the basic concepts specific to the subject being studied in the logistics - [K2A_W09]		
5. Knows the systems and their basic functions used in logistics and related areas - [K2A_W12]		
6. Can explain in detail the methods, tools and techniques specific to the subject being studied within the logistics - [K2A_W13]		
<b>Skills:</b>		

<p>1. Can communicate with appropriate means in a professional environment and other environments of subject being studied - [K2A_U02]</p> <p>2. Is able to prepare and present orally in Polish or foreign language overview of the problem falling within the subject being studied - [K2A_U04]</p> <p>3. Is able within of the subject being studied practice learning process - [K2A_U05]</p> <p>4. Can formulate and solve problems through multi-disciplinary integration of knowledge in the fields and disciplines used in the design of logistic systems - [K2A_U10]</p> <p>5. Is able to assess the usefulness and the usability of new developments (techniques and technologies) in logistics and related functional areas - [K2A_U12]</p> <p>6. Is able to identify possible improvements in the analyzed logistics system - [K2A_U16]</p>
<p><b>Social competencies:</b></p> <p>1. . Is willing to cooperate and work in teams to resolve problems contained within the subject being studied - [K2A_K03]</p> <p>2. Can see cause-and-effect relationships in the implementation of the set objectives and make gradations of significance alternative or competing tasks - [K2A_K04]</p>

<b>Assessment methods of study outcomes</b>		
<p>Forming assesment</p> <p>a) the project- discussion on solutions that wants to propose in the project b) a lecture on the basis of answers to questions concerning the material discussed in the previous lecture</p> <p>summary assessment</p> <p>- of the project a) based on a public presentation of the project results and discussion about them, b) on the basis of the substantive quality of their project</p> <p>- in a lecture at the public presentation on a given topic and answer questions concerning the material discussed in the lecture</p>		
<b>Course description</b>		
<p>The lecture begins by recalling the typical methods and techniques for the design of production systems used in conventional production systems - balance model of and model of assembly line balancing and classification of production units according to the classic model of American - European. Then discussed are design methods of production systems by the concept of JiT (0 inventories), lean production systems, and agile manufacturing systems.</p> <p>In class, students design project, according to the instructions of the lecturers, of a selected production system.</p>		
<p><b>Basic bibliography:</b></p> <p>1. Fertsch M., Pawlak N., Stachowiak A., Współczesne systemy produkcyjne, Wydawnictwo Politechniki Poznańskiej, 2011</p> <p>2. Golińska P., Tradycyjne i nowoczesne systemy produkcyjne, Wydawnictwo Politechniki Poznańskiej, 2011</p>		
<p><b>Additional bibliography:</b></p>		
<b>Result of average student's workload</b>		
Activity	Time (working hours)	
1. Lectures	30	
2. Project	30	
3. Consultations	10	
4. Self work	30	
<b>Student's workload</b>		
Source of workload	hours	ECTS
Total workload	75	3
Contact hours	40	2
Practical activities	30	1