

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Tool management		Code 1011101371011115718
Field of study Logistics - Full-time studies - First-cycle studies	Profile of study (general academic, practical) general academic	Year /Semester 4 / 7
Elective path/specialty -	Subject offered in: Polish	Course (compulsory, elective) elective
Cycle of study: First-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: 15 Classes: - Laboratory: - Project/seminars: 15		No. of credits 3
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 %) 3 100% 3 100%
Responsible for subject / lecturer: dr hab. Inż. Marek Fertsch, prof.nadzw email: marek.fertsch@put.poznan.pl tel. 616659476 Wydział Inżynierii Zarządzania ul. Strzelecka 11, 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Students knows basic terms within the logistics area
2	Skills	Student has capability of noticing, associating, interpreting phenomenas within logistics area
3	Social competencies	Student is aware of influence of of logistics on competitive edge of companies
Assumptions and objectives of the course: Providing students with knowledge, skills and social competences connected with tools management in machining industry		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. has a basic knowledge on: engineering graphics, construction, technology and exploitation pf materials (T1A_W02) - [K1A_W05]		
2. has a basic knowledge on: mechanics and machines construction and durability of materials - [K1A_W07]		
3. can explain basic concepts for logistics and its specific issues (inventory management, logistics, distribution, logistics, manufacturing and sourcing, logistics operation, ecologistics) and supply chain management - [K1A_W15]		
4. is able to recognize the basic phenomena characteristic for logistics and its specific issues (inventory management, logistics, distribution, logistics, manufacturing and sourcing, logistics operation, ecologistics) and supply chain management - [K1A_W16]		
5. can explain in detail the specific concepts for logistics and its specific issues and supply chain management - [K1A_W17]		
6. can define basic interdependencies in logistics and its specific issues (inventory management, logistics, distribution, logistics, manufacturing and sourcing, logistics operation, ecologistics) and supply chain management - [K1A_W18]		
7. can identify contemporary trends in logistics and its specific issues (inventory management, logistics, distribution, logistics, manufacturing and sourcing, logistics operation, ecologistics) and supply chain management - [K1A_W19]		
8. can characterize best practices in logistics and its specific issues (inventory management, logistics, distribution, logistics, manufacturing and sourcing, logistics operation, ecologistics) and supply chain management - [K1A_W20]		
9. knows basic methods, techniques, tools and materials applied when solving simple engineering tasks connected with designing systems and logistics processes - [K1A_W23]		
Skills:		

<p>1. can independently develop the for the problem within the field of studies - [K1A_U05]</p> <p>2. can formulate project task using analytical methods, simulation or experiments falling within the field of studies and solve the task in the field of logistics and its specific issues (inventory management, logistics, distribution, logistics, manufacturing and sourcing, logistics operation, ecologistics) and supply chain management - [K1A_U09]</p> <p>3. can make a critical analysis of the problem within the logistics and its specific issues (inventory management, logistics, distribution, logistics, manufacturing and sourcing, logistics operation, ecologistics) and supply chain management - [K1A_U13]</p> <p>4. can design using appropriate methods and techniques a building, system or process that meets the requirements within the framework of logistics and its specific issues (inventory management, logistics, distribution, logistics, manufacturing and sourcing, logistics operation, ecologistics) and supply chain management - [K1A_U16]</p>
<p>Social competencies:</p> <p>1. The student is willing to cooperate and work in a project group - [K1A_K03]</p> <p>2. The student is aware of the responsibility for their own work and willingness to comply with the principles of teamwork and accountability in the project group - [K1A_K04]</p> <p>3. The student is aware of the potential conflict between the procurement and production departments - [K1A_K05]</p>

Assessment methods of study outcomes	
<p>Forming Rating:</p> <p>a) In terms of the project: on the basis of progress in the implementation phases of the project, and knowledge of the issues necessary for its implementation b) for laboratory: on the basis of discussions on the knowledge of the issues necessary for the proper performance of the laboratory exercises c) in terms of the lecture: on the basis of responses to questions about issues discussed in the previous lectures</p> <p>Summary Rating:</p> <p>a) In terms of the project: on the basis of (1) the quality of the merits of the project (2) The presentation of the project b) In terms of laboratories: based on reports prepared. c) in respect of the lecture: on the basis of test - written work on the issues discussed in the lecture. The student is allowed to take an take the exam after the assessments of the project and the laboratory. The exam is passed, after giving the correct answer to most of the substantive issues discussed</p>	
Course description	
<p>Lectures: Planning tool wear: statistical methods, the method of statistical factors, analytical method. Tool Management Organization. Production program tooling. Tooling equipment. Tooling staff. The organization of production tools. Actions of production tools providers. The single and multibrand systems. Services of tools suppliers. Stocks of tools.</p> <p>Exercises: Planning tool wear: statistical methods, the method of statistical factors, analytical method. Tool Management Organization. Production program tooling. Tooling equipment. Tooling staff. The organization of production tools. Actions of production tools providers. The single and multibrand systems. Services of tools suppliers. Stocks of tools.</p> <p>Teaching methods: conventional specialist lecture, team project</p>	
Basic bibliography:	
<p>1. Fertsch M., Werner-Lewandowska K., Logistyka gospodarki narzędziowej, [w:] Fertsch M. (red.), Elementy Inżynierii Logistycznej, Wydawnictwo Instytutu Logistyki i Magazynowania, Poznań, 2017</p> <p>2. Ciesielski K. (red), Organizacja pomocniczych procesów produkcyjnych (rozdz. II: Gospodarka pomocami warsztatowymi), Wydawnictwo Politechniki Poznańskiej, Poznań, 1977</p> <p>3. Ciesielski K., Humpich M., Kawczyński W., Organizacja pomocniczych procesów produkcyjnych. Skrypt do projektowania. (rozdz. II: Projektowanie organizacji gospodarki pomocami warsztatowymi), Wydawnictwo Politechniki Poznańskiej, Poznań, 1989</p> <p>4. Liwowski B., Kozłowski R., Podstawowe zagadnienia zarządzania produkcją, Oficyna Wolters Kluwer business, Kraków 2007</p>	
Additional bibliography:	
<p>1. Wasiak J., Gospodarka narzędziowa, WNT, Warszawa, 1972</p> <p>2. Górski E., Poradnik narzędziowca, WNT, Warszawa, 1980</p>	
Result of average student's workload	
Activity	Time (working hours)
1. lectures	15
2. project	15
3. consultation	15
4. own work	30
Student's workload	

Source of workload	hours	ECTS
Total workload	75	3
Contact hours	45	2
Practical activities	15	1