

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Organization and Equipment of Food Warehouses		Code 1010611251010610646
Field of study Transport	Profile of study (general academic, practical) (brak)	Year /Semester 3 / 5
Elective path/specialty Food Transport	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: First-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: 2 Classes: 1 Laboratory: - Project/seminars: -		No. of credits 3
Status of the course in the study program (Basic, major, other) (brak)		(university-wide, from another field) (brak)
Education areas and fields of science and art		ECTS distribution (number and %)
Responsible for subject / lecturer: dr inż. Łukasz Wojciechowski email: lukasz.wojciechowski@put.poznan.pl tel. 061-6652-376 MRIT ul. Piotrowo 3, 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	The knowledge concerning the basis of food industry engineering and properties of food sector products.
2	Skills	Student is able to identify basic functions of food warehouses.
3	Social competencies	Student has consciousness that proper storing of food products lets to protect them against spoiling.
Assumptions and objectives of the course: Students are acquainted with the basic rules of the food warehousing and the most important equipment of food warehouses.		
Study outcomes and reference to the educational results for a field of study		
Knowledge: 1. Has a structured, theoretically founded knowledge in the field of food warehousing (reloading, storing and picking). Knows different storing technologies and is able to their application to different food products. - [[K2A_W09]] 2. Has a structured, theoretically founded knowledge in the field of storing devices, especially in the field of racks and their structure and classification criterions. - [[K2A_W09]] 3. Has a structured, theoretically founded knowledge in the field of internal transportation means. Knows basic types of forklift trucks and stacker cranes applying in the food warehousing ? is able to recognize them and characterize their structure and principle of operation. - [[K2A_W09]]		
Skills: 1. Is able to calculate: dimensions of transport pathways and aisles in warehouses, forklift trucks and stacker cranes demand, dimensions of pallet racks etc. - [[K2A_U14]]		
Social competencies: 1. Is aware of and understands the specific rules concerning food warehousing and necessity of application the specific equipment to operate such kind of warehouses. - [[K2A_K02]]		
Assessment methods of study outcomes		
Examination.		
Course description		

<p>Basic information concerning logistics systems, supply chains, warehousing and storing. Types and classification of warehouses. The most important storing and picking technologies. Types, classification and structure of storing devices. Types, classification and structure of internal transportation means. Types, classification and equipment of reloading fronts. Calculation of dimensions of transport pathways and aisles in warehouses. Calculation of quantity of forklift trucks and stacker cranes in warehouses. Calculation of quantity of reloading docks in warehouse. Calculation of dimensions of pallet and cantilever racks. Principles of warehouse designing.</p>		
<p>Basic bibliography:</p> <ol style="list-style-type: none"> 1. Korzeń Z.: Logistyczne systemy transportu bliskiego i magazynowania, Tom I: Infrastruktura, technika, informacja, Inst. Logistyki i Magazynowania, Poznań, 1998 2. Korzeń Z.: Logistyczne systemy transportu bliskiego i magazynowania, Tom II: Projektowanie, modelowanie, zarządzanie, Inst. Logistyki i Magazynowania, Poznań, 1998 3. Frazelle E.H.: World-class warehousing and material handling, Logistics Management Library, McGraw-Hill Companies, 2002 4. Fertsch M. [red.]: Podstawy logistyki, Inst. Logistyki i Magazynowania, Poznań, 2006 5. Tompkins J.A., Smith J.D. [red.]: The warehouse management handbook, Tompkins Press, Raleigh, 1998 		
<p>Additional bibliography:</p>		
<p>Result of average student's workload</p>		
<p>Activity</p>	<p>Time (working hours)</p>	
1. Udział w wykładzie	30	
2. Udział w ćwiczeniach	15	
3. Konsultacje	10	
4. Utrwalenie treści	5	
5. Przygotowanie do zaliczenia	18	
6. Udział w zaliczeniu	8	
<p>Student's workload</p>		
<p>Source of workload</p>	<p>hours</p>	<p>ECTS</p>
Total workload	83	3
Contact hours	63	3
Practical activities	0	0