

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Science of Commodities		Code 1011104341011111292
Field of study Logistics - Part-time studies - First-cycle	Profile of study (general academic, practical) general academic	Year /Semester 2 / 4
Elective path/specialty -	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: First-cycle studies	Form of study (full-time, part-time) part-time	
No. of hours Lecture: 14 Classes: 14 Laboratory: - Project/seminars: -		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 inż. Jacek Lewandowicz email: jacek.lewandowicz@ue.poznan.pl tel. 618569022 Inżynierii Zarządzania ul. Al.Niepodległości 10, 61-875 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Basic knowledge of chemistry, physics and mathematics after high school basic course
2	Skills	Knowledge and understanding of the connection of natural phenomena
3	Social competencies	Readiness to deepen knowledge and to train your skills
Assumptions and objectives of the course: - Presenting the place of commodity science among natural, technical and economic sciences. - Understanding and understanding the importance of logistics in shaping the quality of goods.		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. Has knowledge that allows the classification of products and services and their quality criteria - [K1A_W11]		
2. He knows the basic issues of materials engineering affecting the quality of goods - [K1A_W07]		
Skills:		
1. He can present any product group based on information from producers obtained from databases - [K1A_U05]		
2. He knows how to use the methods and techniques of quality management to identify the basic areas for improvement in the logistics chain that improve the quality of products - [K1A_U09]		
Social competencies:		
1. Awareness of the need to constantly update knowledge in the field of natural, technical and economic sciences as well as the ability to pass knowledge in the field of subordinate commodity science - [K1A_K01]		
2. Willing to solve, in a problem group, projects related to the quality of goods - [K1A_K03]		
3. It uses quality management methods and techniques as well as laboratory tests to plan and manage logistics processes - [K1A_K06]		
Assessment methods of study outcomes		

<p>Applies to lectures and exercises: The summary grade is the weighted average of the ratings forming: - 60% preparation of a technical or scientific study in the field of a selected commodity industry in the aspect of commodity science, including the process of storage and distribution (project divided into two partial assessments), - 20% preparation for the subject (checking the knowledge of each student at least once in oral or written form during the semester) - 20% activity during classes (assessed during each class)</p>		
Course description		
<p>Goods and their classification, Quality of goods and conditions, Quality management of goods, Research and evaluation of goods quality, Logistics of goods, Functions of packaging, Logistic function of packaging. Marking of goods, Ecology in commodity science.</p> <p>DIDACTIC METHODS: Lecture: 50% informative lecture and 50% conversational lecture. Exercises: 30% exercise method and 70% project method.</p>		
<p>Basic bibliography:</p> <ol style="list-style-type: none"> 1. Towaroznawstwo dla logistyki, Tomasz Jałowiec, Difin, Warszawa 2011. 2. Towaroznawstwo - opakowania ? logistyka, Zenon Foltynowicz, Jan Jasiczak, Grzegorz Szyszka (red.), Wydawnictwo Akademii Ekonomicznej, Poznań 2008. 3. Current Trends In Commodity Science - New Trends in Food Quality, Packaging and Consumer Behavior, Krzysztof Juś, Joanna Jasnowska-Malecka, Olga Bińczak (red.), Wydział Towaroznawstwa Uniwersytetu Ekonomicznego w Poznaniu, Poznań 2015. 4. Towaroznawstwo żywności przetworzonej z elementami technologii, Franciszek Świdorski (red.), Wydawnictwo SGGW, Warszawa 2010. 5. Hanna Śmigielska, Jacek Lewandowicz, Quality determinants of tomato ketchups available on Polish market w: Alfred Błaszczyk (red.), Current trends in Commodity Science : Innovations and product quality, Faculty of Commodity Science, Poznań 2013, s. 53-63. 		
<p>Additional bibliography:</p> <ol style="list-style-type: none"> 1. Towaroznawstwo artykułów przemysłowych Cz. 1, Badanie jakości wyrobów , Andrzej Korzeniowski (red.), Wydawnictwo Akademii Ekonomicznej, Poznań 206. (część teoretyczna) 2. Mikrobiologia żywności i materiałów przemysłowych, Izabela Steinka, Wydawnictwo Akademii Morskiej, 2011. 3. Current Trends In Commodity Science ?Challenges In Food Development and Processing, Urszula Samotyja, Wojciech Zmudziński (red.), Wydział Towaroznawstwa Uniwersytetu Ekonomicznego w Poznaniu, Poznań 2017. 		
Result of average student's workload		
Activity		Time (working hours)
1. Lectures		14
2. Classes		14
3. Literature studying		25
4. Preparation for classes		14
5. Consultation		11
Student's workload		
Source of workload	hours	ECTS
Total workload	78	4
Contact hours	39	2
Practical activities	14	1