



Subject card

Subject name and code	PRODUCT QUALITY, PG_00044767						
Field of study	Engineering Management						
Date of commencement of studies	October 2022	Academic year of realisation of subject			2023/2024		
Education level	first-cycle studies	Subject group			Obligatory subject group in the field of study Subject group related to scientific research in the field of study		
Mode of study	Full-time studies	Mode of delivery			at the university		
Year of study	2	Language of instruction			Polish		
Semester of study	4	ECTS credits			4.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Katedra Inżynierii Zarządzania i Jakości -> Faculty of Management and Economics						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Elwira Brodnicka					
	Teachers	dr inż. Elwira Brodnicka prof. dr hab. inż. Maria Szpakowska					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	30.0	0.0	0.0	60
E-learning hours included: 0.0							
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	60		6.0		34.0	100
Subject objectives	Introduction to methods of quality assessment of selected products. Quality self-assessment of selected products.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K6_U08] analyses engineering and managerial solutions in decision-making processes, taking into account pro-quality and pro-environmental aspects, as well as safety of work processes	Student estimates quality of selected goods			[SU4] Assessment of ability to use methods and tools		
	[K6_W11] has the basic knowledge of mathematics, physics and chemistry necessary to solve technical problems	Student combines the knowledge from chemistry, physics, commodity science and economy			[SW3] Assessment of knowledge contained in written work and projects		
	[K6_W07] knows the basic conditions concerning norms and standards covering particular areas of the organization's functioning, including in particular those concerning technical resources and processes	Student defines basic commodity science ideas and analyses different norms			[SW3] Assessment of knowledge contained in written work and projects		

Subject contents	<p>LECTURE: Kind of commodity science and its history; Commodity, product, goods; Classification and methodology of commodities; Principles of commodity coding; Polish code and code systems in other countries; Principle of consumer and forwarding units; Quality, quality features and types good control; Factors influencing quality; Quality measure; Qualitometry; Task and aims of consumer organizations; Organisation, aims and tasks of normalization; Polish, plant and european norms; Norm hrmonization; Quality assessment of goods and food products by organoleptic methods; Certification in UE and in Poland; Quality systems and HACCP; Packaging as integral part of goods; Rules of labeling; Transport of goods; Storage of goods; Properties of selected goods.</p> <p>LABOARTORY: Investigation of selected physicochemical properties of metals, alloys and precious stones; Investigation of acidity of selected products; Determination of water amount in selected lipid products; Quality assessment of selected fermentation products, dairy produce, consumer eggs and bread-stuffs;</p>														
Prerequisites and co-requisites	Knowledge from the course: Applied Chemistry														
Assessment methods and criteria	<table border="1" data-bbox="448 512 1487 651"> <thead> <tr> <th data-bbox="448 512 794 546">Subject passing criteria</th> <th data-bbox="794 512 1141 546">Passing threshold</th> <th data-bbox="1141 512 1487 546">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="448 546 794 580">test</td> <td data-bbox="794 546 1141 580">60.0%</td> <td data-bbox="1141 546 1487 580">35.0%</td> </tr> <tr> <td data-bbox="448 580 794 613">written test</td> <td data-bbox="794 580 1141 613">60.0%</td> <td data-bbox="1141 580 1487 613">35.0%</td> </tr> <tr> <td data-bbox="448 613 794 651">Report</td> <td data-bbox="794 613 1141 651">60.0%</td> <td data-bbox="1141 613 1487 651">30.0%</td> </tr> </tbody> </table>			Subject passing criteria	Passing threshold	Percentage of the final grade	test	60.0%	35.0%	written test	60.0%	35.0%	Report	60.0%	30.0%
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written test	60.0%	35.0%													
Report	60.0%	30.0%													
Recommended reading	Basic literature	<ol style="list-style-type: none"> 1. Praca zbiorowa pod redakcją Laboratorium z towaroznawstwa wybranych artykułów spożywczych i nieżywnościowych, wydanie drugie rozszerzone, Gdańsk 2007, 2. W. Nalepa , Towaroznawstwo artykuły przemysłowe, PWE Warszawa, 1986; 3. A. Korzeniowski, Towaroznawstwo artykułów przemysłowych, Badanie jakości wyrobów, część I, AE Poznań, 1999; 4. M. Małecka, B. Pacholek, Ocena jakości wybranych produktów spożywczych i wody, AE Poznań, 2001. 													
	Supplementary literature	H. Całus, Podstawy obliczeń chemicznych, Wydawnictwa Naukowo-Techniczne, Warszawa 1987													
	eResources addresses	Adresy na platformie eNauczenie: Jakość Produktu_ST - Moodle ID: 36609 https://enauczenie.pg.edu.pl/moodle/course/view.php?id=36609													
Example issues/ example questions/ tasks being completed	<ol style="list-style-type: none"> 1. Physicochemical properties of selected metals, alloys, gemstones 2. pH and acidity of soil 3. Water content in selected fatty products 4. Quality of selected fermentation industry products 5. Paper packages, quality and classification of paper products 														
Work placement	Not applicable														