



Subject card

Subject name and code	PRODUCT QUALITY, PG_00044767						
Field of study	Engineering Management						
Date of commencement of studies	October 2020	Academic year of realisation of subject			2021/2022		
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	Faculty of Management and Economics						
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. inż. Maria Szpakowska					
	Teachers	prof. dr hab. inż. Maria Szpakowska mgr Anna Wendt dr inż. Ewa Marjańska					
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_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		
	[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_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		
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 harmonization; 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 and bread-stuffs; Quality assessment and classification of paper goods;</p>						

Prerequisites and co-requisites	Knowledge from the course: Applied Chemistry		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Practical exercise	60.0%	60.0%
	Written exam	60.0%	40.0%
Recommended reading	Basic literature	<p>1) M. Szpakowska, E. Marjańska, E. Brodnicka, W. Szpakowski, Badania jakości wybranych produktów, Wydawnictwo PG, Gdańsk 2020;</p> <p>2) P. Grudowski, M. Szpakowska, E. Brodnicka, E. Marjańska, Z. Celmerowski, Wybrane aspekty zarządzania jakością i towaroznawstwa żywności, Wydawnictwo Difin, Warszawa, 2016;</p> <p>3) M. Wiśniewska, E. Malinowska, Zarządzanie jakością żywności. Systemy, Koncepcje, Instrumenty, Wydawnictwo Difin, Warszawa, 2011;</p>	
	Supplementary literature	<p>1) W. Kubiński, M. Niekurzak, E. Kubińska-Jabcoń, Badanie towarów spożywczych, Wydawnictwo PWN, Warszawa, 2018</p> <p>2) R. Cierpiszewski, Opakowania aktywne i inteligentne, Wydawnictwo UEP, Poznań, 2016.</p> <p>3) M. Małecka, B. Pacholek, Ocena jakości wybranych produktów spożywczych i wody, AE Poznań, 2001.</p>	
	eResources addresses		
Example issues/ example questions/ tasks being completed	<p>1. Physicochemical properties of selected metals, alloys, gemstones</p> <p>2. pH and acidity of soil</p> <p>3. Water content in selected fatty products</p> <p>4. Quality of selected fermentation industry products</p> <p>5. Paper packages, quality and classification of paper products</p>		
Work placement	Not applicable		