University of Gdańsk

Subject card

Subject name and code	Commercialization of research outcomes, PG_00054405		
Field of study	Chemistry		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2024/2025
Education level	postgraduate studies	Subject group	Obligatory subject group in the field of study
Mode of study	full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish Polish
Semester of study	1	ECTS credits	1.0
Learning profile	academic	Assessment form	
Conducting unit	Faculty of Chemistry		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Karol Krzymiński	
	Teachers	dr hab. Karol Krzymiński	

Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	5.0	0.0	0.0	0.0	0.0	5
	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	5	1.0	19.0	25

Subject objectives	Familiarizing students with the issues listed in the course content, i.e.:- intellectual and industrial property issues;- requirements and criteria used when preparing patent applications;- methods of managing the organization implementing the project;- principles of building, cooperation and management of a research team;- sources of financing for scientific and research projects - public and private;- principles of the knowledge-based economy;- the method of preparing a research plan and stages of commercialization.- assessint the commercial potential of the project.

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[CHEMMU2_U03] Finds necessary information in specialist literature, databases and other sources, lists basic scientific journals in chemistry.	Distinguishes between the patentability of products and technologies; • Identifies and recognizes market needs; • Describes the commercialization plan; • Knows the mechanisms and models of commercialization; • Knows what conditions a patent application should meet; • Knows the principles of cooperation and effective communication in a group; • Knows the most important sources of financing for research projects.	[SU1] oral statement/conversation/ discussion [SU3] text preparation/written work
	[CHEMMU2_W15] Formulates general principles for creating and developing selected forms of individual entrepreneurship enabling the use of knowledge coming from science.	- Knows and understands the so-called Blue Ocean strategy - Knows the rules, types and requirements for granting patents for inventions - Prepares information for a meeting with a potential investor regarding the financing of an R&D project. - Knows public sources of financing for implementation projects and knows where and what kind of assistance can be obtained in their preparation. - Is aware of the risks associated with financing R&D projects. - Knows the basics of patent law	[SW4] test/exam - oral or written [SW5] implementation of a problem task
	[CHEMMU2_K03] Understands the need for systematic work on various projects of a long-term nature and knows how to set priorities for the implementation of undertaken tasks.	- Understands the need for group work; • Understands the need to systematically become familiar with the latest literature chemical (patent and articles from scientific journals and popular science); • Demonstrates active learning and understands the need for continuous learning training in the latest security technologies environment; • Understands the need to learn about the needs of the modern market and customers; • Understands the need to deepen interdisciplinary knowledge; • Understands the need for effective self-presentation; • Demonstrates responsibility for timely completion of tasks.	[SK3] text preparation/written work [SK5] implementation of a problem task
Subject contents	• Knowledge-based economy: cooperation between business and research units; • The concept of innovation definitions, classifications; blue ocean strategy and innovation-friendly education systems. • Financing and commercialization of scientific research - motivation and methods of commercialization; patterns and examples of commercialization. • Sources of financing for implementation research; types and obtaining scientific grants, private funds. • Patent law and patents: types of intellectual property; methods of protection and its limitations; problems related to the protection of i.i.; patenting scientific research results; industrial and utility designs, trademarks; intellectual property in European projects. • Managerial competences: building and leading a project team; team formation phases; conflicts in the group and their causes; factors affecting team effectiveness; principles of creating an effective team; Belbin's team role theory; principles of effective management of a project team; management styles.		
Prerequisites and co-requisites	1. Completed classes in Chemistry or Environmental protection at the Bachelor's level.2. Knowledge of English at the level sufficient for understanding branch literature.		

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Test jednokrotnego wyboru, sprawdzajacy znajomość treści nauczania przedmiotu	0.0%	50.0%
	Test ról grupowych Belbina	0.0%	10.0%
	Analiza problemowa treści; Rozmowa indywidualna	51.0%	40.0%
Recommended reading	Basic literature	R. Mauborgne, W. Chan Kim, "Blue Ocean Strategy", Ed. MT Business, 2018. K. Krzymiński, own materials, made available to students during classes.	
	Supplementary literature	Descriptions of patent applications and claims of selected technologies, available on the Internet.	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed	Test questions: List the ways of commercializing research results; Identify rising trends and falling trends in organizations in today's market; Indicate the appropriate answer regarding the Blue Ocean Strategy; List the factors that influence the effectiveness of research and development cooperation.Student's own work: How can the Faculty of Chemistry earn money?; What type of patent should be applied for in the case study presented and why?; Managerial competences: Propose and justify criteria regarding the methods of assigning regional representatives to directors in the event of changes in the organization.		
Work placement	Not applicable		

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