University of Gdańsk

Subject card

Subject name and code	Raw materials for chemical industries, PG_00080745						
Field of study	Chemical Business						
Date of commencement of studies	October 2024		Academic year of realisation of subject	2026/2027			
Education level	Bachelor's 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	3		Language of instruction	Polish			
Semester of study	6		ECTS credits	1.0			
Learning profile	academic		Assessment form	credit			
Conducting unit	Department of Environmental Technology -> Faculty of Chemistry -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. Adam Lesner				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	0.0	0.0	15
	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	15		2.0		8.0	25
Subject objectives	Familiarize students with all the issues listed in the curriculum content of the lecture						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[BCHINŻ_W01] Describes the relationship between the economy and the functioning of the chemical industry.	The student assesses the suitability of a specific chemical raw material in terms of the profitability of production. He can give examples of technologies and processes and evaluate the unit cost of obtaining raw materials,	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion
[BCHINŻ_U08] Uses the chemical nomenclature and engineering terminology properly.	The student skillfully describes the facts in the subject area using correct and appropriate chemical terminology	[SU1] oral statement/conversation/ discussion [SU4] test/exam - oral or written
[BCHINŻ_W07] Describes the construction and operating principles of basic scientific, technological and control-measuring apparatus.	The student is able to describe the basic technical equipment used to extract or obtain raw materials.	[SW4] test/exam - oral or written
[BCHINŻ_W06] Enumerates basic unit processes and describes issues in the field of technology and chemical engineering.	The student, using the correct terminology, lists the unit processes for obtaining and recovering raw materials from natural sources as well as secondary circulation.	[SW4] test/exam - oral or written
[BCHINŻ_U05] Evaluates the usefulness and functioning of existing engineering and technical solutions as well as research and measurement methods in the chemical industry.	The student has the skills to identify the types of chemical raw materials and their use in specific production processes, can categorize the types of raw materials due to water footprint carbon footprint and environmental impact.	[SU1] oral statement/conversation/ discussion [SU4] test/exam - oral or written
[BCHINŻ_W09] Describes the principles of creating and developing forms of individual entrepreneurship using knowledge of economics.	The student is able to creatively develop new methods involving the extraction of specific raw materials by innovative methods.	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion
[BCHINŻ_W05] Describes the life cycle of devices, facilities and technical systems as well as modern environment-friendly technical solutions.	The student identifies processes leading to resource recovery in the context of sustainable development goals.	[SW4] test/exam - oral or written

Subject contents

Classification of raw materialsClassification and characteristics of the most important fossil (non-renewable) raw materialsClassification and characteristics of the most important renewable raw materialsRaw materials for the petrochemical industry and energy raw materialsRaw materials for the fertilizer industryRaw materials for the plastics processing industryRaw materials for the paint and varnish industryRaw materials for the pharmaceutical industryRaw materials for the plant protection products industryRaw materials for the construction industryRaw materials for the ceramic products industryWood and wood-like materialsThe use of waste as raw materialsResources of the seas and oceans.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Written exam	51.0%	100.0%

Recommended reading

Basic literature	Selected scientific papers focused on lecture subject.
Supplementary literature	Selected popular science and newspaper articles on the subject of the subject matter
eResources addresses	

Example issues/ example questions/ tasks being completed

1. Biomass: benefits and risks2. raw materials of the seas and oceans3. concepts: upcycling raw material, carbon footprint.

Work placement

Not applicable

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