University of Gdańsk

Subject card

Subject name and code	Ecotechnologies, PG_00103590						
Field of study	Environmental Protection						
Date of commencement of studies	October 2024		Academic year of realisation of subject	2026/2027			
Education level	Bachelor's studies		Subject group	Optional subject group			
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	2.0			
Learning profile	academic		Assessment form	credit			
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr Aleksandra Bielicka-Giełdoń				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	30.0	0.0	0.0	0.0	30
	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	30		5.0		15.0	50
Subject objectives	Familiarizing students with environmentally friendly methods of manufacturing and processing raw materials, semi-finished products and finished products.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[OŚL3_W10] Describes the principles of environmental protection based on legal regulations and instruments of applying law in environmental protection and from the point of view of economy and management of environmental resources; enumerates general aspects of the economic activity of entities.	Student: 1. describes the development of environmental protection strategies; 2. defines the principles of environmental protection legally applicable in Poland; 3. defines and explains the importance of legal and voluntary instruments used in environmental protection; 4. describes ecological marketing as a tool in the implementation of the principles of sustainable development;	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report [SW5] implementation of a problem task
	[OŚL3_W08] Explains the mechanisms of economic and consumer pressure on the environment and recognises the possibilities of reducing it using the latest knowledge and scientific achievements.	Student: 1. defines the environmental impact of industrial development; 2. describes the development of environmental protection strategies; 3. defines the principles of environmental protection legally applicable in Poland; 4. Defines and explains the importance of legal and voluntary instruments used in environmental protection; 5. describes ecological marketing as a tool in the implementation of the principles of sustainable development; 6. Describes technologies for the rational use of natural resources	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report [SW5] implementation of a problem task
	[OŚL3_U04] Uses specialist language in the discussion and properly uses the nomenclature in the field of environmental protection and individual disciplines related to it.	Student: 1. Links the use of environmental protection instruments to the reduction of human pressure; 2. Explains the importance of society's lifestyle in implementing the principles of sustainable development; 3. independently searches for information from various sources and gives a presentation about environmentally friendly technologies	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report [SU5] implementation of a problem task
	[OŚL3_W02] Characterises the relationships and relationships between various disciplines of natural sciences and science, uses knowledge of mathematics, physics, chemistry and biology in the description of basic concepts, concepts and principles in environmental protection.	Student: 1. defines the environmental impact of industrial development; 2. describes the development of environmental protection strategies; 3. defines the principles of environmental protection legally applicable in Poland; 4. defines and explains the importance of legal and voluntary instruments used in environmental protection; 5. describes ecological marketing as a tool in the implementation of the principles of sustainable development; 6. Describes technologies for the rational use of natural resources 7. recognizes conventional and unconventional energy sources; 8. Describes the resources, characteristics and use of renewable energy sources; 9. describes technologies that use renewable raw materials and provide biodegradable products	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report [SW5] implementation of a problem task

Course outcome	Subject outcome	Method of verification
[OŚL3_K01] Behaves in a professional manner at all times; bears full responsibility for the actions taken relating to the protection of the environment and respects the principles of professional ethics and principles of intellectual honesty.	Student: 1. Identifies the importance of developing technologies that are friendly to the environment and human health; 2. is able to work in a group and individually, showing independence in the preparation and presentation of a speech	[SK1] oral statement/conversation/ discussion [SK2] presentation/project/paper/ report [SK5] implementation of a problem task
[OŚL3_W09] Describes the basic methods, techniques and tools that allow the rational use, shaping and restoration of natural resources.	Student: 1. Describes technologies for the rational use of natural resources 2. recognizes conventional and unconventional energy sources; 3. Describes the resources, characteristics and use of renewable energy sources; 4. describes technologies that use renewable raw materials and provide biodegradable products	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report [SW5] implementation of a problem task
[OŚL3_W05] Explains the course of natural and anthropopressional physical, chemical and biological processes and phenomena occurring in nature at various levels of matter organisation.	Student: 1. defines the environmental impact of industrial development; 2. describes the development of environmental protection strategies; 3. describes technologies for the rational use of natural resources	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report [SW5] implementation of a problem task

Subject contents

Environmental protection strategies. Environmental protection in the company. Sustainable consumption. Municipal waste management. Ecological marketing. Eco-design. Alternative and conventional energy sources. Ecotechnologies in water treatment and wastewater treatment.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
points for group work, presentations of papers, test	51.0%	100.0%

Recommended reading

Basic literature	Materials developed by the teacher
Supplementary literature	1. Taubman J., Węgiel i alternatywne źródła energii, PWN, Warszawa 2011 2. Jastrzębska G., "Odnawialne źródła energii i pojazdy proekologiczne", WNT, Warszawa 2007 3. Jędrczak A., "Biologiczne przetwarzanie odpadów", PWN, Warszawa 2007 4. Johansson A., "Czysta technologia", WNT, Warszawa 1997 5. Kowalski Z., "Ekologiczna ocean cyklu życia procesów wytwórczych (LCA), PWN, Warszawa 2007 6. Kozłowski S., "Przyszłość ekorozwoju", Wydawnictwo KUL, Lublin 2005 7. Górzyński J., "Podstawy analizy środowiskowej wyrobów i obiektów", WNT, Warszawa 2007 8. Lewandowski W.M., "Proekologiczne odnawialne źródła energii", WNT, Warszawa 2006 9. Obarska-Pempkowiak H., Gajewska M., Wojciechowska E., Hydrofitowe oczyszczanie wód i ścieków, PWN, Warszawa 2010
eResources addresses	

Example issues/ example questions/ tasks being completed

Work placement

Not applicable

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