



## Subject card

Subject name and code	HSE and Ergonomics in Work, PG_00055867						
Field of study	Power Engineering, Power Engineering, Power Engineering						
Date of commencement of studies	October 2023		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	1		Language of instruction			English	
Semester of study	1		ECTS credits			1.0	
Learning profile	general academic profile		Assessment form			assessment	
Conducting unit	Institute of Mechanics and Machine Design -> Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Ryszard Woźniak				
	Teachers		dr inż. Ryszard Woźniak				
Lesson types and methods of instruction	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		1.0		9.0	25
Subject objectives	Acquiring basic knowledge in the field of ergonomics and occupational health and safety.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K6_U03] has the preparation necessary to work in an industrial environment, applies the principles of occupational health and safety, can perform diagnostics of the regulation system of a simple energy facility	The student explains the concepts of ergonomics. It describes its goals and area of application. It is defined by the human - machine - environment system. Designs the human work environment taking into account the design principles. He uses various human models. It presents the safety and reliability of the human - machine - environment system. It presents the information ability of machines.	[SU1] Assessment of task fulfilment [SU5] Assessment of ability to present the results of task
	[K6_K03] is able to react in emergency situations, threats to health and life when using energy devices, is aware of the impact of engineering activities on the environment	The student explains the concepts of ergonomics. It describes its goals and area of application. It is defined by the human - machine - environment system. Designs the human work environment taking into account the design principles. He uses various human models. It presents the safety and reliability of the human - machine - environment system. It presents the information ability of machines.	[SK5] Assessment of ability to solve problems that arise in practice [SK2] Assessment of progress of work
	[K6_K02] is able to work in a group taking different roles in it, can think and act in an entrepreneurial way, is aware of responsibility for their own work and responsibility for teamwork	The student explains the concepts of ergonomics. It describes its goals and area of application. It is defined by the human - machine - environment system. Designs the human work environment taking into account the design principles. He uses various human models. It presents the safety and reliability of the human - machine - environment system. It presents the information ability of machines.	[SK5] Assessment of ability to solve problems that arise in practice [SK2] Assessment of progress of work
Subject contents	Definitions of ergonomics, its subject, purpose and application. Description of the human-machine system environment. The concept of sustainable development. Environmental management systems. Human model and its characteristics. Human possibilities and industrial processes. Human work environment - material conditions. Principles of human work environment design. Safety and reliability of the human - machine - environment system. Informativeness of machines.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Final test	50.0%	100.0%
Recommended reading	Basic literature	1. Koradecka D.: "Bezpieczeństwo pracy i ergonomia", tom I i II. CIOP, Warszawa, 1997. 2. Hempel L.: "Człowiek i maszyna - techniczny model współdziałania", materiały własne, 1984. 3. Wykowska M.: "Ergonomia", Wyd Akademii Górniczo-Hutniczej w Krakowie, Kraków, 1994.	
	Supplementary literature	-	
	eResources addresses	Adresy na platformie eNauczanie: Bezpieczeństwo pracy i ergonomia - W-15/Ć-0/L-0/P-0, WIMiO, ENERGETYKA, I st., sem. 01, stacjonarne, (PG_00041987), semestr zimowy 2023/2024 - Moodle ID: 31244 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=31244">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=31244</a>	
Example issues/ example questions/ tasks being completed	1) definitions of ergonomics 2) human models		
Work placement	Not applicable		