



## Subject card

Subject name and code	Work Safety and Ergonomics, PG_00040064						
Field of study	Mechanical Engineering, Mechanical Engineering						
Date of commencement of studies	October 2020	Academic year of realisation of subject			2022/2023		
Education level	first-cycle studies	Subject group			Humanistic-social subject group Subject group related to scientific research in the field of study		
Mode of study	Part-time studies	Mode of delivery			at the university		
Year of study	3	Language of instruction			Polish		
Semester of study	5	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. Sławomir Sommer				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	8.0	0.0	0.0	0.0	0.0	8
	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	8		1.0		16.0	25
Subject objectives	Acquiring basic knowledge in the area of occupational safety and BPiE ergonomics.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K6_K02] understands ex-technical aspects of the activities included in the profession of a mechanical engineer, among others its social impact and influence on the condition of an environment; is aware of the responsibility connected with the decisions made in connection with engineering activity	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	[SK2] Assessment of progress of work
	[K6_U11] is able to analyse the operation of devices and compare the construction solutions applying usage, safety, environmental, economic and legal criteria	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
	[K6_W12] possesses basic knowledge necessary to understand the ex-technical conditions of engineering activity, possesses basic knowledge on management, including quality management and running commercial enterprise, within the range of protection of intellectual property and patent law; knows general principles of creating and developing forms of individual entrepreneurship and basic HSE rules applicable to machine industry	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	[SW1] Assessment of factual knowledge
Subject contents	LECTURE 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	Knowledge from the subject of Physics (in the scope of high school).		
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	Nie ma wymagań	
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		