



Subject card

Subject name and code	Work Safety and Ergonomics, PG_00039886						
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			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	3	Language of instruction			Polish		
Semester of study	5	ECTS credits			1.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Machine Design and Vehicles -> Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Ryszard Woźniak					
	Teachers	dr inż. Sławomir Sommer 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	4.0		6.0	25	
Subject objectives	Acquisition of basic knowledge in the area of work safety and ergonomics BPIE.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K6_U11] is able to analyse the operation of devices and compare the construction solutions applying usage, safety, environmental, economic and legal criteria	Student explains the concepts of ergonomics. Describes its goals and area of application. Defines the human - machine - environment system. Designs the human working environment taking into account the principles of design.			[SU3] Assessment of ability to use knowledge gained from the subject		
	[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	Student explains the concepts of ergonomics. Describes its goals and area of application. Defines the human - machine - environment system. Designs the human working environment taking into account the principles of design. Uses various human models. It presents the safety and reliability of the human - machine - environment system. Shows machine information			[SK2] Assessment of progress of work		
	[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	Student explains the concepts of ergonomics. Describes its goals and area of application. Defines the human - machine - environment system. Designs the human working environment taking into account the principles of design.			[SW1] Assessment of factual knowledge		

Subject contents	LECTURE Definitions of ergonomics, their purposes and application area. Description of man - machine - environment configuration. Conception of balanced development. Environmental management system. Model of man and it's characteristics. Man capabilities versus industrial processes. Environment of working man - circle conditions. Designs principles of environment of working man. Safety and reliable man - machine - environment configuration. Information acquisition of machines.		
Prerequisites and co-requisites	Knowledge of Physics (High School level).		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Midterm colloquium	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	No requirements	
	eResources addresses		
Example issues/ example questions/ tasks being completed	Biomechanical analysis of the process and the workplace. The physical capacity of the human body. System Diagram man - technical object.		
Work placement	Not applicable		