



## Subject card

Subject name and code	Work Safety and Ergonomics, PG_00040064						
Field of study	Mechanical Engineering						
Date of commencement of studies	October 2021		Academic year of realisation of subject		2023/2024		
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		e-learning		
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. Sławomir Sommer				
	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: 8.0						
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	Gaining basic knowledge of ergonomics and occupational health and safety.						

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 concept of ergonomics. It describes its goals and area of application. It defines the human - machine - environment system. Designs the human work environment taking into account the principles of design. Uses different human models. It presents the safety and reliability of the man - machine - environment system. It shows the informativeness 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 concept of ergonomics. It describes its goals and area of application. It defines the human - machine - environment system. Designs the human work environment taking into account the principles of design. Uses different human models. It presents the safety and reliability of the man - machine - environment system. It shows the informativeness 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 concept of ergonomics. It describes its goals and area of application. It defines the human - machine - environment system. Designs the human work environment taking into account the principles of design. Uses different human models. It presents the safety and reliability of the man - machine - environment system. It shows the informativeness of machines.	[SW2] Assessment of knowledge contained in presentation
Subject contents	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 its 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
	End 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	No requirements	
	eResources addresses	Adresy na platformie eNauczanie: Bezpieczeństwo i higiena pracy, WiMiO, Mechatronika, I st., stacjonarne, (PG_00055368), semestr zimowy 2023/2024, prowadzący: dr inż. Sławomir Sommer - Moodle ID: 31242 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=31242">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=31242</a>	
Example issues/ example questions/ tasks being completed	1) definitions of ergonomics  2) human models		
Work placement	Not applicable		