



Subject card

Subject name and code	Technical Ergonomics, PG_00044769						
Field of study	Engineering Management						
Date of commencement of studies	October 2021	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	3	Language of instruction			Polish		
Semester of study	5	ECTS credits			4.0		
Learning profile	general academic profile	Assessment form			exam		
Conducting unit	Department of Informatics in Management -> Faculty of Management and Economics						
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. inż. Marcin Sikorski					
	Teachers	prof. dr hab. inż. Marcin Sikorski dr inż. arch. Karolina Krause-Brykalska					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	0.0	15.0	0.0	45
	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	45	8.0	47.0	100		
Subject objectives	Acquisition of knowledge of ergonomics methods and techniques that are needed not only to the organizers and production managers, and designers but technical, organizational and information technology.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K6_W07] knows the basic conditions concerning norms and standards covering particular areas of the organization's functioning, including in particular those concerning technical resources and processes	Has knowledge about organization of work according to principles of ergonomics			[SW1] Assessment of factual knowledge		
	[K6_W11] has the basic knowledge of mathematics, physics and chemistry necessary to solve technical problems	Has knowledge about physical workload.			[SW1] Assessment of factual knowledge		
	[K6_W12] has a basic knowledge of production management and occupational safety and ergonomics management, as well as information technologies necessary for engineering management	Has knowledge about occupational ergonomics			[SW1] Assessment of factual knowledge		
	[K6_U08] analyses engineering and managerial solutions in decision-making processes, taking into account pro-quality and pro-environmental aspects, as well as safety of work processes	Has ability to evaluate and design workplaces according to principles of ergonomics			[SU1] Assessment of task fulfilment		
	[K6_U05] uses appropriate regulations, legal rules and normative systems in accordance with the principles of professional ethics in managerial activities	Has ability to evaluate and design workplaces according to principles of ergonomics			[SU1] Assessment of task fulfilment		

Subject contents	<p>Ergonomics of physical work. Methods of physical workload analysis.</p> <p>Principles of workspace design.</p> <p>Methods of workspace design.</p> <p>Reducing physical workload.</p> <p>Evaluation of mental workload.</p> <p>Cognitive workload analysis. Human reliability assessment.</p> <p>Ergonomics guidelines for computer-supported work.</p> <p>Ergonomics requirements for software and information systems.</p> <p>Design and evaluation of work environment: industrial acoustics.</p> <p>Design and evaluation of work environment: lighting, microclimate, electromagnetic fields.</p> <p>Ergonomic evaluation of industrial machinery and workplaces.</p> <p>Occupational risk assessment.</p> <p>Safety management in industry.</p> <p>Employees' duties and responsibilities in providing safe working conditions for the personnel.</p>											
Prerequisites and co-requisites	Subject: Organization of Work Processes											
Assessment methods and criteria	<table border="1"> <thead> <tr> <th data-bbox="453 1270 794 1301">Subject passing criteria</th> <th data-bbox="799 1270 1141 1301">Passing threshold</th> <th data-bbox="1145 1270 1492 1301">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="453 1308 794 1339">written exam</td> <td data-bbox="799 1308 1141 1339">60.0%</td> <td data-bbox="1145 1308 1492 1339">50.0%</td> </tr> <tr> <td data-bbox="453 1346 794 1377">project</td> <td data-bbox="799 1346 1141 1377">60.0%</td> <td data-bbox="1145 1346 1492 1377">50.0%</td> </tr> </tbody> </table>			Subject passing criteria	Passing threshold	Percentage of the final grade	written exam	60.0%	50.0%	project	60.0%	50.0%
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written exam	60.0%	50.0%										
project	60.0%	50.0%										
Recommended reading	Basic literature	<ul style="list-style-type: none"> • Górska E. (2007): Ergonomia - projektowanie, diagnoza, eksperymenty. Wyd. Politechnika Warszawska, Warszawa. • Olszewski J.(1993): Podstawy ergonomii i fizjologii pracy. Akademia Ekonomiczna, Poznań. • Lewandowski J.(1995): Ergonomia. MARCUS, Łódź. 										
	Supplementary literature	<ul style="list-style-type: none"> • Wykowska M. (2010). Ergonomia. Wyd. AGH, Kraków. • Kamińska-Żyła M.(1996): Ergonomia stanowiska komputerowego. Wyd. AGH Kraków. 										
	eResources addresses											
Example issues/ example questions/ tasks being completed												
Work placement	Not applicable											