GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Technical Ergonomics, PG_00044768		
Field of study	Engineering Management		
Date of commencement of studies	October 2022	Academic year of realisation of subject	2024/2025
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	Part-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		

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	16.0	0.0	0.0	8.0	0.0	24

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	24	8.0	68.0	100

Subject objectives

Acquiring the knowledge of ergonomic methods and techniques that are needed not only by production organizers and
managers, but also designers of technical, organizational and IT solutions.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[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	The student has the ability to assess and designing work stations according to the principles of ergonomics	[SU1] Assessment of task fulfilment
[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		
[K6_U05] uses appropriate regulations, legal rules and normative systems in accordance with the principles of professional ethics in managerial activities	The student has the ability to assess and designing work stations according to the principles of ergonomics	[SU1] Assessment of task fulfilment
[K6_W12] has a basic knowledge of production management and occupational safety and ergonomics management, as well as information technologies necessary for engineering management	The student has knowledge about ergonomics of workstations	[SW1] Assessment of factual knowledge
[K6_W11] has the basic knowledge of mathematics, physics and chemistry necessary to solve technical problems	The student has knowledge about physical loads appearing in positions work.	[SW1] Assessment of factual knowledge

<table>
<tr><td>Subject contents</td><td>1. Ergonomics - introduction. Ergonomic system: people - technology - environment.
2. Analysis of physical load at work stations. Reduction of physical load at work stations.
3. Workspace design. Space requirements for typical workplaces.
4. Ergonomics and organization of computer-aided work.
5. Mental load at workstations - shaping the content of work. Methods of assessing mental stress at workplaces.
6. Analysis of the material work environment (1). Analysis of lighting conditions and electromagnetic fields in workplaces. Analysis of acoustic conditions, vibrations and microclimate and air pollution at workplaces.
7. Methods of occupational risk assessment at workplaces. System management of work safety in the enterprise.
8. Employer's obligations to ensure safe working conditions. Macroergonomics - shaping work organization and employer-employee relations.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td></td></tr>
<tr><td>Assessment methods and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>exam</td><td>60.0%</td><td>50.0%</td></tr>
<tr><td>project</td><td>60.0%</td><td>50.0%</td></tr>
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<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>• 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.
• Wykowska M. (2010). Ergonomia. Wyd. AGH, Kraków.</td></tr>
<tr><td>Supplementary literature</td><td>--</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
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<tr><td>Example issues/ example questions/ tasks being completed</td><td>--</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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