



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Ergonomics and safety

Course

Field of study

Construction and Exploitation of Means of Transport

Area of study (specialization)

Level of study

Second-cycle studies

Form of study

full-time

Year/Semester

2/3

Profile of study

general academic

Course offered in

Polish

Requirements

compulsory

Number of hours

Lecture

15

Laboratory classes

Other (e.g. online)

Tutorials

Projects/seminars

Number of credit points

1

Lecturers

Responsible for the course/lecturer:

Marek Zabłockiemail:

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Responsible for the course/lecturer:

Jarosław Gabryelskiemail:

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Prerequisites

Basic knowledge in the field of machine science, machine building, human sciences. The ability to think logically, use information obtained from the library, the Internet, standards, catalogs. Understanding the need to acquire transferred knowledge

Course objective

Gaining knowledge on the importance and use of ergonomics in professional activity

Course-related learning outcomes

Knowledge

1. Has knowledge of the principles of safety and ergonomics in the design and operation of machines and the threats that machines pose to the natural environment
2. Is aware of the civilization effects of technology



Skills

1. Can estimate the potential threats to the environment and people from the designed working machine and vehicle from a selected group
2. Can communicate on specialist topics with diverse audiences

Social competences

1. Is ready to critically evaluate the knowledge and content received
2. He is ready to fulfill social obligations, inspire and organize activities for the social environment

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Passing the course on the basis of a test

Programme content

Basic concepts, the genesis of ergonomics as a scientific discipline, legal protection of human; Place of ergonomic design in the methodology of technical design in machine building (requirements in the process of technical design) Anthropotechnical and social engineering system, somatic and receptor relations in the system; Analysis of anthropometric, biomechanical and psychological features and support of design work in ergonomics: traditional approach and the use of CAD systems, Motion Capture devices or 3D scanning. ..: ergonomics for the elderly, ergonomics of extreme work, ergonomics of free time and sports (design criteria, requirements, standardization); Examples of knowledge integration in ergonomic design: typography and its importance for the design of signaling and control devices; construction and applied canons of the human body; designing forms of technical objects with the use of real research of somatic and receptor features of the human body; Development trends of design for the needs of ergonomics

Teaching methods

informative lecture (conventional with practical examples of the application of the discussed methods and conversational elements)

Bibliography

Basic

1. Górska E. .: Ergonomia, Wyd. Warsaw University of Technology, Warsaw 2002.
2. Product ergonomics. Ergonomic principles of designing industrial products, collective work edited by J. Jabłoński, Poznań University of Technology Publishing House, Poznań 2006.
3. Pacholski, L. .: Ergonomics, Poznań University of Technology Publishing House, Poznań 1986.
4. Tytyk E. .: Ergonomic Design, PWN Scientific Publishing House, Warsaw-Poznań 2001.



Additional

1. Słowikowski J .: Methodological problems of ergonomic design in machine building, Wydawnictwo Centralny Instytut Ochrony Pracy, Warsaw 2000.
2. Winkler T .: Computer-aided design of anthropotechnical systems, WNT, Warsaw, 2005.

Breakdown of average student's workload

	Hours	ECTS
Total workload	15	1,0
Classes requiring direct contact with the teacher	9	0,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) ¹	6	0,0

¹ delete or add other activities as appropriate