



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Ergonomics Occupational health and work safety, Intellectual rights protection [S1AiR1E>BHPiOWI]

Course

Field of study

Automatic Control and Robotics

Year/Semester

1/1

Area of study (specialization)

–

Profile of study

general academic

Level of study

first-cycle

Course offered in

English

Form of study

full-time

Requirements

compulsory

Number of hours

Lecture

15

Laboratory classes

0

Other

0

Tutorials

0

Projects/seminars

0

Number of credit points

1,00

Coordinators

dr hab. inż. Beata Mrugalska prof. PP
beata.mrugalska@put.poznan.pl

Lecturers

Prerequisites

A student should have knowledge about the basic hazards to human health and life, be able to apply the knowledge they have learned throughout the entire study process and be able to take responsible action in an emergency.

Course objective

The lecture introduces the subject of ergonomics, i.e. the science of work. It discusses the issues related to the adjustment of tools, machines, environment and working conditions to the anatomical and psychophysical abilities of man. The issue of occupational safety will be also presented, including the occupational risk assessment on the examples of selected workstations in industry. It will also present the issues of protection of intellectual property. In order to obtain learning outcomes, the student will have to spend 30 hours, including 15 better hours in the form of lectures.

Course-related learning outcomes

Knowledge:

Has the basic knowledge necessary to understand the non-technical conditions of engineering activities and the process of automation and robotisation in industry and households; knows the basic principles of

occupational health and safety in industry [K1_W24 (P6S_WK)].

Knows and understands the basic concepts and principles of industrial property protection and copyright; is able to use patent information resources [K1_W26 (P6S_WK)].

Skills:

Is able to obtain information from literature, databases and other sources also in a chosen foreign language [K1_U1 (P6S_UW)].

Is able to perceive non-technical aspects, including environmental, economic and legal aspects when formulating and solving tasks involving the design of automation and robotics systems; is able to contribute to debate - present and evaluate various opinions and positions and discuss them [K1_U16 (P6S_WK)].

Is able to apply the principles of health and safety at work [K1_U19 (P6S_UO)].

Is able to plan and organise work - individual and in a team in accordance with the principles of health and safety at work [K1_U31 (P6S_UO)].

Social competences:

Is ready to critically assess his/her knowledge; understands the need for and knows the possibilities of continuous training - improving professional, personal and social competence, is able to inspire and organize the learning process of others [K1_K1 (P6S_KK)].

Is aware of the importance and understands the non-technical aspects and consequences of engineering activities, including their impact on the environment and the related responsibility for decisions; is ready to care for the achievements and traditions of the profession [K1_K2 (P6S_KR)].

Is aware of the responsibility for his/her own work and is ready to follow the rules of teamwork and take responsibility for jointly implemented tasks; is able to lead a small team, set goals and determine priorities leading to the realisation of the task; is ready to fulfil professional roles responsibly [K1_K3 (P6S_KR)].

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Two multiple-choice tests, in which at least one answer is correct (the answer is scored max. 1 point); in order to pass it, it is required to obtain at least 51% of all possible points in each test separately.

Programme content

Origins of ergonomics against the background of developments in technology and science. Component sciences and the nature of ergonomics. The human-technical object system and its environment.

Interpretation of the system as a workstation. Purpose and scope of ergonomic activity. Contemporary currents of ergonomic research. Problems related to organisation of workstations, taking into account ergonomic principles.

Fundamentals of the systems approach to safety. Basics of systems design theory. Systems safety models. Hazards in the working and learning environment. Mechanisms of damage caused by technical objects. Estimating the chances of occurrence of probability of events.

The concept of intellectual property. Basic regulations of copyright law. The concept of industrial property and forms of its legal protection. Plagiarism and piracy - legal consequences. Patent law, protection law and right of registration. Types of creative works and forms of their protection: invention, utility model, industrial design, trademark, geographical indications, topography of integrated circuits, rationalization application. Proceedings before the Polish Patent Office. European patent.

Course topics

none

Teaching methods

Presentation, movies with examples

Bibliography

1. Salvendy G. (ed.). 2012. Handbook of human factors and Ergonomics. John Wiley & Sons, Inc.
2. World Intellectual Property Organization. 2008. Intellectual Property Handbook. Reprinted version (available from: https://www.wipo.int/edocs/pubdocs/en/intproperty/489/wipo_pub_489.pdf)
3. Brown C. H. How to protect your intellectual property. Understanding Copyrights, trademarks, patents & trade secrets (free ebook).

Breakdown of average student's workload

	Hours	ECTS
Total workload	30	1,00
Classes requiring direct contact with the teacher	15	0,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	15	0,50