COURSE DESCRIPTION CARD - SYLLABUS

Course name
Ergonomics [N1ZiIP2>ERG]

Course

Field of study
Management and Production Engineering

Year/Semester
3/5

Area of study (specialization)
–

Profile of study
general academic

Level of study
first-cycle

Course offered in
Polish

Form of study
part-time

Requirements
compulsory

Number of hours

Lecture
8

Laboratory classes
0

Other
0

Tutorials
0

Projects/seminars
8

Number of credit points

2,00

Coordinators

Lecturers

Prerequisites

The student should have knowledge of the operation and organization of enterprises, production or service plants. He/she should be aware of the risks in the workplace and be able to identify them. The student should be able to use regulations and normative acts.

Course objective

The aim of the course is to familiarize students with issues related to the ergonomic organization of workplaces, workload and loads from work environment, as well as ergonomic diagnosis of workplaces.

Course-related learning outcomes

Knowledge:
The student knows the ergonomic requirements for machines and working environment.
The student knows the methods of ergonomic diagnosis and workplace design.
The student knows the scope of the given discipline and contemporary trends in this area.

Skills:
The student is able to identify hazards and assesss occupational risks in the workplace.
The student is able to assess the influence of work and factors occurring in the work environment on the employee and to evaluate the usefulness of the methods used for the assessment.

The student knows how to use regulations and normative acts to optimize solutions improving ergonomics of the workplace.

Social competences:
The student is aware of the role of the individual in solving the issues of ergonomic shaping of the working environment and makes efforts to convey, in a commonly understood way, his knowledge and skills in order to improve the working conditions.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Knowledge acquired as part of the lecture is verified on the basis of the final test during the last class in the semester. The test consists of 20 single-choice questions. In each question, 1 point is obtained for the correct answer. Passing threshold: 50%. Assignment of grades to percentage ranges of results: <90-100> very good; <80-90) good plus; <70-80) good; <60-70) satisfactory plus; <50-60) satisfactory; <0-50) unsatisfactory.
The knowledge and skills acquired during the project classes are verified by the presentation of the project developed by the students (in groups) and a discussion about the work.

Programme content

1. Basics of ergonomics, objectives and tasks, directions of action and areas of expertise
2. The man in the work process - the basic ergonomic system.
3. Ergonomic workplace organization
4. Ergonomic diagnosis of workplaces.
5. Occupational risk assessment

Course topics

Lecture:
Directions of action and areas of specialization in ergonomics, ergonomic engineering, latest directions of development. The man in the work process - the basic ergonomic system, working environment, working position, working conditions, working room. Ergonomic workplace organization, health problems related to ergonomic workplace organization. The workload of a man, assessment methods. Ergonomic diagnosis of workplaces (diagnostic procedures). Work environment burden, methods of assessment of selected physical factors. Occupational risk assessment, methods of assessment. Supervision and control of working conditions in Poland.
Project:
Ergonomic diagnosis of a selected workplace (hazard analysis, analysis and assessment of physical load, mental load, analysis and design of workspace, analysis and shaping of the working environment, analysis and assessment of occupational risk). Development of a plan to improve the working conditions of the selected workplace according to ergonomic knowledge.

Teaching methods

Lecture: multimedia presentation illustrated with examples.
Project: presentation of a project developed by students (in groups), solving practical problems, searching for sources, teamwork, discussion.

Bibliography

Basic:
Górska E., Diagnoza ergonomiczna stanowisk pracy, Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa, 1998 r.
Górska E., Ergonomia, Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa, 2015 r.
Tytyk E., Projektowanie ergonomiczne, PWN, Warszawa - Poznań, 2001 r.
Wojsznis M., Ergonomia - ocena stanowisk pracy, Wydawnictwo Politechniki Poznańskiej, Poznań 2018.

Additional:
Główczyńska – Woelke K., Ocena ryzyka zawodowego, 2009,
Rozporządzenie Ministra Pracy i Polityki Społecznej z dnia 6.06.2014 r. w sprawie najwyższych

dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy (Dz. U. z 2014 r. poz. 817).

Marek K., Choroby zawodowe, Wydawnictwo Lekarskie PZWL , Warszawa, 2003.

Markiewicz L., Fizjologia i higiena pracy, Instytut Wyd. CRZZ, Warszawa, 1980.

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
Classes requiring direct contact with the teacher	16	0,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	34	1,50