



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Occupational disease prevention [S2IBiJ1-JiEwBP>PCZ]

Course

Field of study

Safety and Quality Engineering

Year/Semester

1/2

Area of study (specialization)

Quality and Ergonomics in Work Safety

Profile of study

general academic

Level of study

second-cycle

Course offered in

Polish

Form of study

full-time

Requirements

elective

Number of hours

Lecture

15

Laboratory classes

0

Other

0

Tutorials

15

Projects/seminars

15

Number of credit points

4,00

Coordinators

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Lecturers

Prerequisites

The student has basic knowledge in the field of ergonomics and safety at work, is able to interpret the dependencies occurring in the human-technical object system, and also organize work taking into account the reduction of physical and mental burden for the human body. In addition, the student is aware of the social role of a technical university graduate and understands the legitimacy of activities in the field of health protection at work.

Course objective

Acquainting the student with theoretical and practical problems related to the impact of the work performed on human health, which should enable the acquisition of the ability to control the degree of harmfulness of working conditions and strive to minimize it in all situations related to the work performed.

Course-related learning outcomes

Knowledge:

1. The student has an in-depth knowledge of the development trends and good practices of occupational health and safety management in organizations, both locally and globally [K2_W04].
2. The student has an in-depth knowledge of the fundamental dilemmas of modern civilization,

including legal, political, economic, ethical and moral transformations related to safety engineering, quality, ergonomics and occupational safety, which affect the protection of workers' health and the proper prevention of occupational diseases [K2_W11].

Skills:

1. The student is able to properly select sources, including literature sources and information from them, as well as evaluate, critically analyze, synthesize and creatively interpret this information, formulate conclusions and comprehensively justify an opinion when presenting research results on the incidence of occupational and other work-related diseases [K2_U01].
2. The student is able to identify changes in requirements, standards, regulations, innovations and technical progress and economic reality and use them appropriately in solving problems in the area of safety engineering, quality, ergonomics and occupational safety concerning the prevention of occupational diseases [K2_U10].
3. The student is able to identify and recognize hazards in the work environment, assess their impact on the individual, the organization and its stakeholders, and identify methods of action aimed at minimizing the effects of occupational health hazards [K2_U13].

Social competences:

1. The student correctly identifies and resolves dilemmas related to safety in the work environment, understands the need to make the public aware of the need for the formation of pro-health attitudes and safe behavior, both in and outside the work environment [K2_K02].
2. The student is prepared to reliably perform professional roles resulting from current economic and social needs, taking into account the principles of occupational safety and health, with emphasis on the prevention of occupational diseases [K2_K06].

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Formative assessment:

Lecture: knowledge is verified by short tests after the third and sixth didactic unit, concerning the solution of the problem task. Passing threshold: 51%.

Exercises: skills and social competences are verified by issuing partial grades resulting from working in teams, rewarding activity and solving problems independently. Passing threshold: 51%.

Project: assessment of the various stages of projects. Passing threshold: 51%.

Summative assessment:

Lecture: knowledge is verified through an examination covering the basic concepts related to human functioning in the work environment, including occupational health problems, methodology of diagnosing these problems, issues of prevention of occupational diseases and legal qualification of an occupational disease. Passing threshold: 51%.

Classes: average of partial grades. Passing threshold: 51%.

Project: assessment from the plan of preventive activities prepared by students (in the context of occupational diseases) in the workplace. Passing threshold: 51%.

Rating scale:

91-100 5
81-90 4,5
71-80 4
61-70 3,5
51-60 3.

Programme content

Biological and socio-economic determinants of health. Analysis of contemporary occupational hazards affecting employees' health. Theoretical and practical aspects of preventive activities in the work environment.

Course topics

Lecture: Health: historical outline, evolution of concepts, contemporary approaches (biomedical, holistic, A. Antonovsky's model of salutogenesis, homeostasis vs. homeodynamics). Health determinants according to Marc Lalonde. Fundamentals of the physiology of the human body. Selected issues of

biomechanics and anthropometry. Occupational disease as a medical and legal concept. The impact of harmful and burdensome factors in the work environment. Analysis of risks at the workplace. Occupational disease: the process of diagnosis and adjudication. Occupational diseases resulting from the impact of harmful factors in the work environment. Overview, morbidity distribution, change trends. Occupational diseases caused by the way work is performed. Ergonomic risk factors. Work-related health conditions. Work environment pathologies as a threat to mental health. Stress and its consequences, addictions in the workplace. Health prophylaxis and prevention of occupational diseases. Popularization of the concept of health promotion in the workplace. Shaping the safety culture. Exercises: Lalonde Health Areas Concept. Quality of life - Quality of life in Europe. Occupational diseases caused by harmful factors and the way the work is done. Scenario of preventive actions and actions promoting the prevention of occupational diseases in the workplace. Health prophylaxis. Popularization of the concept of health promotion in the workplace. Project: practical problem of the prevention of occupational diseases on selected examples.

Teaching methods

Lecture: multimedia presentation illustrated with examples, informative lecture, seminar lecture. The lecture is conducted using distance learning techniques in a synchronous mode. Acceptable platforms: eMeeting, Zoom, Microsoft Teams. Exercises: multimedia presentation illustrated with examples, practical exercises, talk, exposing methods (film, show), panel discussion, simulating expert debates, case study, brainstorming. Project: multi-media presentation, case study.

Bibliography

Basic:

1. Sadłowska-Wrzesińska J., Lewicki L., Podstawy bezpieczeństwa i zdrowia w pracy, Wydawnictwo WSL, Poznań 2018.
2. Sadłowska-Wrzesińska J., Lewicki L., Wypadki przy pracy i choroby zawodowe, w: Sadłowska-Wrzesińska J., Lewicki L., Istotne aspekty BHP, Wydawnictwo WSL, Poznań 2014.
3. Horst W.M., Wprowadzenie do diagnozowania sposobu wykonywania pracy. Wybrane zagadnienia fizjologii, biomechaniki i antropometrii, Wyd. Politechniki Poznańskiej, Poznań 2012.

Additional:

1. Nejman Ż., Brenk M., Wnuk S., Jakość życia a miernik odpowiedzialności spółek giełdowych, Katedra Zarządzania Politechniki Łódzkiej, Łódź 2015.
2. Czernecka W., Including occupational risk assessment in the workstation description sheet as a factor contributing to increasing the risk perception of employees [w:] Proceedings of the 39th International Business Information Management Association Conference (IBIMA), 30-31 May 2022, Granada, Spain, IBIMA Publishing 2022, s. 132-138.
3. Wejman M., Higiena pracy, Wyd. Politechniki Poznańskiej, Poznań 2012.
4. Horst W., Issues of safety and health at work in times of crisis, Publishing House of Poznan University of Technology, 2013.

Breakdown of average student's workload

	Hours	ECTS
Total workload	100	4,00
Classes requiring direct contact with the teacher	45	2,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	55	2,00