



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Occupational Health and Safety [S1Eltech1>BHP]

### Course

Field of study

Electrical Engineering

Year/Semester

1/1

Area of study (specialization)

–

Profile of study

general academic

Level of study

first-cycle

Course offered in

Polish

Form of study

full-time

Requirements

compulsory

### Number of hours

Lecture

15

Laboratory classes

0

Other (e.g. online)

0

Tutorials

0

Projects/seminars

0

### Number of credit points

1,00

### Coordinators

dr inż. Aleksandra Dewicka-Olszewska

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### Lecturers

### Prerequisites

Student can define and describe Basic concepts and rules In the field of work organization and functioning and organizing of the safety system element. Student can plan and evaluate functioning of the safety system. Student can also interpret the results of observations. Student is aware of the importance of providing safety. Student is aware of the need of establishing security systems of the companies.

### Course objective

To familiarize students with rules, ordinances and regulations about health and safety at work. To acquaint students with the Basic issues of the methodology of human-oriented design as an operator and as an employee of machine service and other technical devices.

### Course-related learning outcomes

Knowledge:

1. Student has structured and theoretically founded knowledge of the construction and operation of transformers and electrical machines, has knowledge about the exploitation of technical systems.
2. Student knows and understand typical engineering technologies In terms of studying degree course, and is up to date about actual development trends.

3. Student has basic knowledge necessary to understand social, economical, legal and other non-technical conditioning of engineering activity, knows basic rules of ergonomics, health and safety and hazards in energy industry.

#### Skills:

Student can make a fault-finding analysis and evaluation of the functioning of existing electrical systems and devices, using appropriate methods and tools.

2. Student uses health and safety rules.

3. Student can assess helpfulness of the basic methods and tools, which provide to solve simple, practical engineering tasks, typical for electrotechnics and can choose and use appropriate methods and tools.

#### Social competences:

1. Student is aware of need to initiate activities for the public interest, understands the various aspects and effects of the electrical engineer's activity, including the impact on the environment, and related responsibility for decisions made.

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

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Forming rating: Grade based on participation in solving problem tasks (given on the next 4 lectures) and active participation in classes

Summary rating: written test

### Programme content

Basic concepts of occupational health and safety.

The subject and tasks of the occupational health and safety service in Polish legislation.

Legal and normative acts on occupational health and safety.

### Course topics

The basics of a system approach to safety: Safety and safety management, safety culture as the context of the safety system. The basics of system design theory. Safety models of systems. Hazards in the work and learning environment. The mechanisms of damage caused by technical objects. Estimating the chances of occurrence probabilities. Social and economical aspects of providing technical safety. The main principles of saving people who are electrocuted.

### Teaching methods

Lecture with multimedia presentation.

### Bibliography

#### Basic

1. Projektowanie ergonomiczne; Edwin Tytyk, Wyd. Naukowe PWN, Warszawa-Poznań, 2001.

2. Poradnik BHP. Tom I: Praktyka, prawo, narzędzia, Kołodziejczyk E. (red.), Wyd. Forum, sp. z o.o. , Warszawa, 2005

#### Additional

1. Makroergonomia; Leszek Pacholski, Aleksandra Jasiak, Wyd. Politechniki Poznańskiej, Poznań, 2011.

2. Podstawy ergonomii i fizjologii pracy; Jerzy Olszewski, Wyd. Akademii Ekonomicznej, Poznań, 1997.

3. Niezawodność człowieka w interakcji z procesem przemysłowym; Małgorzata Sławińska, Wyd. Politechniki Poznańskiej, Poznań, 2012

### 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