



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Health and safety work [S1Elmob1>BHP]

### Course

Field of study  
Electromobility

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

dr inż. Aleksandra Dewicka-Olszewska  
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### Prerequisites

Student have basic knowledge of physics and electrical equipment. Student is aware of the need to broaden competences and is ready to cooperate within the team.

### Course objective

Acquisition of knowledge by students the field of removing or reducing risks related to technical processes in the working environment, including: electricity effects on the human body and the resulting risks resulting from electrical equipment use. Mastering the basics safety of anti-exposure and fire protection.

### Course-related learning outcomes

Knowledge:

Student knows the principles of safe and ergonomic use of devices and installations used in hybrid and electric vehicles and the infrastructure used to power and charge them.

Student have the basic knowledge which is necessary to understand the social, ethical, economic, ecological, legal and other non-technical conditions of engineering activities.

Skills:

Student is able formulating and resolving electro mobility tasks, to take account of their systemic and non-technical aspects, including environmental, economic and legal aspects.

Student can plan and organize work an individual and in a team (including drafting and implementing a work schedule to ensure that the deadlines are met), apply health and safety principles and work in teams of an interdisciplinary nature.

Social competences:

Student is aware the importance of his own work and the need to observe the principles of professional ethics. Is ready to submit to the principles of teamwork and to take responsibility for jointly performed tasks, as well as to take care of the achievements and traditions of the engineering profession.

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

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Formal assessment:

- based on the discussion of the material learned during previous lectures; attendance at lectures is rewarded.

Summary evaluation:

- written test.

The following criterion is used for the final grade:

- a) 91 - 100% (5.0);
- b) 81 - 90% (4.5);
- c) 71 - 80% (4.0);
- d) 61 - 70% (3.5);
- e) 50 - 60% (3.0);
- f) below 50% (2.0).

### 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

Lecture topics related to the basic concepts of occupational health and safety. Work environment factors of greatest importance in the power industry. Electromagnetic fields natural and derived from technical devices as a factor of threat to human health. The impact of work-induced noise electrical equipment on the work environment. Basic legal acts regarding work safety in the power industry. The impact of electric current on the human body. Rules of conduct in case of electric shock. First aid for electric shocks.

Organization of work on electrical devices. Work safety during operation, maintenance, repairs, renovations and construction of electrical equipment.

### Teaching methods

Lectures with multimedia presentation

### Bibliography

Basic

1. Projektowanie ergonomiczne; Tytyk E., 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.
3. Pojazdy hybrydowe i elektryczne; Schmidt T., Wyd. Komunikacji i Łączności, Warszawa, 2018.
4. Ocena ryzyka zawodowego przy eksploatacji urządzeń elektroenergetycznych; Daszczyński M., Energetyka, 1/2005.
5. Ryzyko zawodowe w spółkach dystrybucyjnych energii elektrycznej; Studenski R., ODDK, Gdańsk, 2001.

Additional

1. Wpływ poziomu niezawodności na poziom bezpieczeństwa pracowników; Daszczyszak M., Przegląd Elektrotechniczny 1/2005.
2. Samochody elektryczne; Fic B., Wydawnictwo i handel książkami KaBe, Krosno, 2019.
3. Podstawy ergonomii i fizjologii pracy; Olszewski J., Wyd. Akademii Ekonomicznej, Poznań, 1997.
4. Niezawodność człowieka w interakcji z procesem przemysłowym; Sławińska M., Wyd. Politechniki Poznańskiej, Poznań, 2012.

### Breakdown of average student's workload

	Hours	ECTS
Total workload	28	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)	13	0,50