COURSE DESCRIPTION CARD - SYLLABUS

Course name
Working safety [S2TCh2>BHP]

Course

Field of study
Chemical Technology

Year/Semester
1/1

Area of study (specialization)
Applied Electrochemistry

Profile of study
general academic

Level of study
second-cycle

Course offered in
Polish

Form of study
full-time

Requirements
compulsory

Number of hours

Lecture
4

Laboratory classes
0

Other
0

Tutorials
0

Projects/seminars
0

Number of credit points

0,00

Coordinators

dr hab. inż. Joanna Zembrzuska prof. PP
joanna.zembrzuska@put.poznan.pl

Lecturers

Prerequisites

Student should know the theoretical basis of occupational safety and health. Student should be able to pursue self-directed learning. Student should understand the need for further self-learning of others (students).

Course objective

To acquaint students with the basic principles of work in a chemical laboratory, practical ability of conducting an experiment in a safe way and working in a lab and getting acquainted with basis of substance management and prevention of chemical risks.

Course-related learning outcomes

Knowledge:
1. Knows the principles of safe work in a chemical lab. [K_W10]
2. The graduate has knowledge of the hazards associated with the implementation of chemical processes and knows the principles of risk assessment, knows the international conventions and EU directives on process safety, and knows the rules governing the organization of the market in chemical products (REACH). [K_W12]

3. The graduate knows the rules of environmental protection related to chemical technology and waste management [K_W8]

Skills:
1. The graduate has the skills and competencies necessary to work in an industrial environment and knows the principles of occupational safety and health. [K_U19]
2. The graduate can obtain necessary information from literature, databases and other sources related to chemical sciences, interpret them properly, draw conclusions, formulate and justify opinions. [K_U1]
4. The graduate can implement the proper management of waste by way of utilization and recycling. [K_U22]

Social competences:
1. The graduate is aware of the importance and understanding non-technical aspects and results of the engineer's job, including its environmental impact and the resulting responsibility for all decisions made.[K_K2]
2. The graduate can correctly identify problems and makes appropriate career choices, in accordance with professional ethics. [K_K3]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Completion of the course based on the test

Programme content

Issues concerning basic principles of work in a chemical laboratory, practical ability of conducting an experiment in a safe way and working in a lab and basis of substance management and prevention of chemical risks.

Course topics

The cycle of the OSH includes:
1. Basic principles of health and safety at work in laboratory
2. Related to exposure to chemical substances - identification and classification of hazards, familiarization with the construction and information contained in the Safety Data Sheets (in particular phrases of H and safety risk P),
3. Discussing the correct labeling of the packaging of a dangerous substance and dangerous preparation
4. Presentation of ways to reduce hazards, procedures for dealing with hazards in a student lab (spills, spills, oral or respiratory intoxication, chemical burns, fire, etc.);
5. Presentation of laboratory equipment with individual and collective protection measures
6. Discussion of proceedings in the event of an accident, breakdown or fire (first premedical aid, escape routes).

Teaching methods

lecture: multimedia presentation and discussion of examples

Bibliography

Basic:
1. R. Kowal, Bezpieczeństwo i higiena pracy przy stosowaniu substancji i preparatów chemicznych, Ośrodek Szkolenia PIP, Wrocław 2006.
2. P. Kowalski, Laboratorium chemii organicznej, techniki pracy i przepisy bhp, WNT, Warszawa 2008.
3. M. Wasilewski, W. Dawydow, Bezpieczeństwo w pracowni chemicznej, WNT, Warszawa 2009.
4. G. Gałuszka, Pierwsza pomoc w nagłych wypadkach, Tarbonus, Kraków-Tarnobrzeg 2009.
5. Aktualne akty prawne obejmujące zagadnienia związane z bhp i czynnikami chemicznymi w miejscu pracy
6. J.A. Young Ed., Safety in Academic Laboratories, Am, Chem. Soc., Washington DC, 2003

Additional:
Miesięczniki „Bezpieczeństwo pracy", „Atest"

Breakdown of average student's workload

	Hours	ECTS
Total workload	4	0,00
Classes requiring direct contact with the teacher	4	0,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	0	0,00