# COURSE DESCRIPTION CARD - SYLLABUS

Course name
Workplace Health and Safety [S2IChiP1>BHP]

## Course

Field of study
Chemical and Process Engineering

Year/Semester
1/1

Area of study (specialization)
Bioprocesses and Biomaterials Engineering

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 (e.g. online)
0

Tutorials
0

Projects/seminars
0

## Number of credit points

0,00

## Coordinators

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## Lecturers

dr hab. inż. Joanna Zembrzuska
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## 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 basic rules of safe and hygienic work in the process of educating a chemist (rules of safe work in a chemical laboratory, working with chemical substances). [k_w3, k_w8]
2. knows the basic principles of providing first aid and the rules of conduct in case of fire [k_w11]
3. is aware of the dangers that may occur during practical classes in chemical laboratories, can correctly identify the dangers [k_w3, k_w11]

2. is aware of the impact and importance of complying with the principles of safe and hygienic work on their own and others" safety [k_k2, k_k3]

Skills:
1. has the ability to assess threats, prevent them [k_u1, k_u11]
2. has the ability to act and behave appropriately in the event of an emergency [k_u11]
3. has the skills necessary to work in the laboratory in terms of health and safety rules [k_u09, k_u11]
4. has the ability to use safety data sheets of hazardous substances [k_u11]
5. correctly recognizes pictograms, which can be assigned the appropriate meaning [k_u11]
6. can provide first aid [k_u11]

Social competences:
1. is aware of and understanding the social aspects of the practical application of the acquired

## Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Learning outcomes presented above are verified as follows:
Stationary lecture: pass on the basis of the presence on lecture and graded a test to check the knowledge (pass from 51% correct answers).
If it is necessary to conduct a lecture in on line form - pass on the basis of the presence on on line lecture and graded a test to check the knowledge via the e-courses platform (credit from 55% of correct answers).

## Programme content

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, oral or respiratory intoxication, chemical burns, fire, etc.); Indoor exposure to radon and health risk associated with radon exposure;
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 |