GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Safety at work, PG_00060839		
Field of study	Chemical Technology		
Date of commencement of studies	October 2023	Academic year of realisation of subject	2023/2024
Education level	first-cycle studies	Subject group	Obligatory subject group in the field of study
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish
Semester of study	1	ECTS credits	2.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Polymer Technology -> Faculty of Chemistry		
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. inż. Janusz Datta	
	Teachers	prof. dr hab. inż. Janusz Datta dr hab. inż. Błażej Kudłak prof. dr hab. inż. Żaneta Polkowska dr inż. Marcin Włoch dr inż. Izabela Frąckiewicz dr inż. Paulina Kosmela dr inż. Ewa Głowińska Paulina Wiśniewska dr hab. inż. Justyna Łuczak	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	15.0	0.0	0.0	30

E-learning hours included: 0.0

Learning activity and number of study hours

Learning activity	Participation in didactic classes included in study plan	Participation in consultation hours	Self-study	SUM
Number of study hours	30	2.0	18.0	50

Subject objectives

Familiarizing students with the issues in the field of work safety.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_U12] applies the principles of health and safety at work	The student uses the principles of safe work in laboratories and process halls and is able to assess chemical hazards and apply the principles of occupational health and safety to them in a specific case	[SU1] Assessment of task fulfilment
[K6_W12] knows the chemical nomenclature in Polish and specialized terms related to chemical technology	The student uses knowledge of specialized terms related to chemical technology, including designations related to hazards in the workplace.	[SW1] Assessment of factual knowledge
[K6_K03] is aware of the responsibility for his/her own work and is ready to follow the rules of teamwork and take responsibility for the tasks performed jointly	The student responsibly carries out the assigned tasks, including the use of the principles of safe work in laboratories and technological halls.	[SK5] Assessment of ability to solve problems that arise in practice

Subject contents

Issues within the subject:

1. National and international regulations on occupational safety and health.
2. Hazards in the workplace, including during work in laboratories.
3. Personal protective equipment, protective clothing, work clothes.
4. Material safety data sheets for chemicals. Signs related to hazards (pictograms).
5. Effects of hazards, including ways to minimize and prevent hazards in the workplace.
6. Safety procedures prevailing in the workplace (including process hall).
7. General principles of working with apparatus of the chemical industry.
8. Principles of safe work with various machines of the chemical industry.
9. Hazards in the workplace, including during process hall work - causes, consequences and methods of prevention.
10. Measurement of harmful factors at workplaces.
11. Selected examples of accidents at the workplace in the chemical industry/laboratory. Solving situational/workstation problems.
12. Monitoring of safe work.
13. Organization of work in a team hierarchy of competence in the field of work safety.
14. Management of safety at work and risks.
15. Assessment methods and calculation of occupational risk assessment.

Accidents in the workplace first aid.

Prerequisites and co-requisites

Passed health and safety training for students beginning their education at PG

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
laboratory completion	50.0%	50.0%
test	50.0%	50.0%

Recommended reading

Basic literature

1. ACT of June 26, 1974 Labor Code, Journal of Laws. 1974 No. 24 item 141

2. Marek Wasielewski, Wiktor Nikołajewicz Dawydow, Bezpieczeństwo w pracowni chemicznej, Wydawnictwa Naukowo-Techniczne, Warszawa 2008

3. Rączkowski B., BHP w praktyce, oddk Gdańsk, 2022 i wydania wcześniejsze

4.Firkowski A., Religa P., ,,Bezpieczeństwo pracy z substancjami i preparatami chemicznymi, Uniwersytet Technologiczno-Humanistyczny w Radomiu, Radom 2009

5. Collective work/Praca zbiorowa, BHP w firmie Bezpieczeństwo i higiena pracy od A do Z, Wydawnictwo: Wiedza i Praktyka, 2022

Supplementary literature

1. Regulation of the Council of Ministers of September 2, 1997 on the service of occupational safety and health.

2. Skowroń J., Zapór L., Pośniak M., Szewczyńska M., Lisowski A., Czynniki chemiczne w środowisku pracy, Centralny Instytut Ochrony pracy, Państwowy Instytut Badawczy, 2006

3. Michalik J. S., Poważne awarie chemiczne, Centralny Instytut Ochrony pracy, Państwowy Instytut Badawczy, 2007

4. Michalik J. S., Zapobieganie poważnym awariom przemysłowym, Centralny Instytut Ochrony pracy, Państwowy Instytut Badawczy, 2005

eResources addresses

Uzupełniające

Adresy na platformie eNauczanie:

BEZPIECZEŃSTWO PRACY - Moodle ID: 32820
https://enauczanie.pg.edu.pl/moodle/course/view.php?id=32820

Example issues/ example questions/ tasks being completed

Theoretical issues: regulations for safe work. Knowledge of the designations of basic hazards in chemical laboratories, material laboratories or process halls. Legal regulations on safe work. Rules of conduct in case of danger (including fire, chemical contamination, biological contamination) in the workplace.

Laboratory issues: the ability to analyze the data sheet of chemical substances (toxicity of chemicals, determination of toxicity); design of procedures to be followed in case of a) fire, b) failure of water and sewage system, c) biological contamination, d) electrical system; measurement of noise in technological halls, measurement of concentrations of selected harmful factors. Calculation of occupational risk - determination of consequences and probability of danger.

Work placement	Not applicable

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