SYLLABUS

Name: Occupational safety engineering Name in Polish: Inżynieria bezpieczeństwa pracy Name in English: Occupational safety engineering

Information on course:

Course offered by department:	Faculty of Organisation and Management	
Course for department:	Silesian University of Technology	
Study level and form:	Bechelor's degree, Full-time	
Term:	winter semester, academic year valid from 2023/2024, sem. V & VI	
Coordinator of course edition:	Prof. dr hab. Grażyna Płaza	

Default type of course examination report:	
Passing the course	
.anguage:	
English	
Course homepage:	
nttps://platforma.polsl.pl/roz/	
ECTS	
5 (3/3)	

Short description:

Occupational Safety Engineering course aims to provide the theoretical and practical training necessary for the development of practical skills, attitudes and behaviors essential to professional performance in the context of promoting Health and Safety in the Workplace.

Description:

This course aims to provide students with the necessary tools that allow them to develop the following structuring skills: planning and implementing the risk management system; characterizing the organization of the company in terms of the relevant elements for the management of prevention; designing, planning and developing the specific prevention and protection plans required by legislation, and the emergency plan; ensuring the integration of specific plans against accidents, evacuations and first aid; designing and developing professional risk assessment procedures, identifying risks associated with safety conditions, chemical, physical and biological risk factors and the organization and workload. Assess risks through appropriate methodologies and techniques (qualitative and quantitative) for the risks identified; value risks based on the comparison of the results obtained in the risk assessment with the previously established reference criteria, establishing priorities for action. Designing a safety and health plan; technically coordinating the activities of safety and hygiene in the workplace, ensuring the framing and the orientation technique of the professionals and the trainees of the field of safety and hygiene in the workplace. Introduction to occupational health and safety. Safety and occupational risk analysis; design and monitoring of technical work conditions; examining and identifying the circumstances of incidents and accidents at work; safety and health management systems at small and large industrial enterprises; hazard evaluation and risk analysis instrumentation techniques and computing tools available for risk analysis. Occupation physiology.

Forms of teaching, including the number of teaching hours: Lecture: 30 hours Exercises: 15 hours Laboratory: 15 Project: 15

Student's own work: Lecture - study of lectures for the test - 20 hours Exercises - literature analysis and preparation of presentations - 20 hours Laboratory: 30 hours Project: 35 hours

Bibliography:

Alli B.O. (2018) Fundamental principles of occupational health and safety. International Labor Office, Geneva.

Occupational safety and health professionals at the workplace level. (2023) International Labour Organization.

Senol, L., Ferhatoğlu, M. (2019). "Occupational Health And Safety In Businesses", International Social Sciences Studies Journal, 5(50): 6691-6700.

Płaza G. (2017) Zarządzanie bezpieczeństwem produkcji żywności w kierunku poprawy jakości produktu. W: Systemy Wspomagania w Inżynierii Produkcji. Sposoby i środki doskonalenia produktów i usług na wybranych przykładach. vol. 6, nr 8, 27-35. 11.

Płaza G., Ulfig K. (2017) Health risk to wastewater treatment plant and agricultural workers from pathogenic fungi in sewage sludge applied to land. Conference Proceedins vol. 7- Ecology, Economics, Education and Legislation; issue 52 – Ecology and Environmental Protection. 17th International Multidisciplinary Scientific Geoconference SGEM 2017, 29-June-5 July 2017, Albena, Bulgaria.

Płaza G., Ulfig K. (2018) Safety of commercially viable bio-based products: labelling and standardization. Zeszyty Naukowe Politechniki Śląskiej; seria: Organizacja i Zarządzanie z. 119, 227-241

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Płaza G., V. Achal, D. Kumari (2018) Microbiological risk assessment and bioprocess engineering. Proceedings of XV International Conference "Multidisciplinary Aspects of Production Engineering" MAPE, vol. 1, no. 1, pp. 233-239.

Płaza G., Kwiecień M. (2019) Zintegrowany wskaźnik BHP – narzędzie do oceny skuteczności zarządzania bezpieczeństwem pracy. W: Wybrane elementy zarządzania procesami produkcyjnymi. Brodny J., Wieczorek A. (red.) Wydaw. Politechniki Śląskiej, Gliwice, 65-88. Łukasiewicz O., **Płaza G**. (2023) Zastosowanie narzędzi informatycznych w zarządzaniu BHP na przykładzie przedsiębiorstwa branży kosmetycznej. Zarządzanie i Jakość, vol. 5, nr 2, s.154-168.

Learning outcomes:

KNOWLEDGE: knows and understands:

K1A _W3: Basic engineering processes and technologies in the life cycle of technical equipment, objects and systems and ways of solving typical engineering tasks, particularly in relation to the organization of production processes and production management.

K1A _W7: Fundamental problems of contemporary civilization relevant to the production engineering.

SKILLS: is able to:

K1A _U5: Make a critical analysis of the functioning of existing technical and technological solutions in production systems function, evaluate these solutions and suggest appropriate improvements and innovations in this regard.

K1A U9: Select and use appropriate techniques, skills and modern engineering tools.

SOCIAL COMPETENCE: is ready for:

K1A_K1: Critical evaluation of knowledge and received content, recognition of the importance of knowledge in solving cognitive and practical problems, and consulting experts in the event of difficulties in solving problems on their own.

Assessment methods and assessment criteria:

Lecture: credit by test

Grading criteria:

Lecture: credit on the basis of a test (closed questions). Ongoing control of knowledge during lectures, verification of knowledge of the subject - credit on the basis of a test. Obtaining at least 51% of the points from the test.

Exercises/laboratory: presentation thematically related to the lecture presented during the classes, activities during the classes and attendance at lectures

Project: submission of written work form practical part and attendance at lectures

Exam (sem. 6): test written colloquium (test)

Passing criterion: minimum 51% of correct answers

Practical placement:

Not applicable