COURSE DESCRIPTION CARD - SYLLABUS

Course name
Protection of intellectual property, safety and work ergonomics [S1TCh2E>OWI,BiEP]

Course

Field of study
Chemical Technology

Year/Semester
4/7

Area of study (specialization)
–

Profile of study
general academic

Level of study
first-cycle

Course offered in
English

Form of study
full-time

Requirements
elective

Number of hours

Lecture
15

Laboratory classes
0

Other
0

Tutorials
0

Projects/seminars
0

Number of credit points

1,00

Coordinators

dr inż. Małgorzata Wejman

Lecturers

Prerequisites

Basic knowledge in the field of secondary school. Ability to analyze interdisciplinary problems, practical application of theoretical knowledge in the conditions of work and everyday life.

Course objective

Familiarize students with the basic legal regulations in the field of copyright, industrial property law and inventive procedures in force in the Republic of Poland and the EU. Familiarizing students with the basic issues of ergonomics and occupational health and safety. Providing patterns for solving problems related to shaping working conditions through, for example, diagnostics and reducing occupational risk and designing ergonomic solutions. Showing the connections between technology, human well-being, physiology, ecology, economy and sociology.

Course-related learning outcomes

Knowledge:
Student:
- has general knowledge necessary to understand the social, economic, legal and other non-technical conditions of engineering activity [K_W16];
- has knowledge of the risks associated with the implementation of chemical processes and the

principles of risk assessment, knows international conventions and EU directives in the field of technical safety, and knows the principles of the organization of the chemical products market (REACH) [K_W18];
- has elementary knowledge in the field of intellectual property protection and patent law [K_W19].

Skills:
Student:
- can, when formulating and solving engineering problems, perceive their systemic and non-technical aspects [K_U09];
- is able to assess the risks arising from unit operations of chemical and process engineering [K_U11];
- applies legal regulations and observes health and safety rules related to the work performed [K_U12].

Social competences:
Student:
- is aware of the importance and understanding of non-technical aspects and effects of engineering activities, including its impact on the environment and the related responsibility for decisions [K_K02].

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Multiple-choice written test after completing the OWI lecture series and the OHS and ergonomics series.
Passing threshold: over 50% of correct answers.
Controlling attendance at lectures.

Programme content

Issue related to protection of intellectual property, safety and work ergonomics.

Course topics

The concept of intellectual property. Basic regulations of copyright law. The concept of industrial property and forms of its legal protection. Plagiarism and piracy - legal consequences. Patent law, protection law and registration law. Types of creative works and forms of their protection: invention, utility model, industrial design, trademark, geographical indications, topography of integrated circuits, rationalization application. Proceedings before the Patent Office of the Republic of Poland. European patent.
The origin of the issues of ergonomics (ergonomic engineering) and the goals and tasks of occupational health and safety. Labor protection systems in Poland and other countries. Legal acts related to occupational health and safety and ergonomic standards. The man-technical object system as an illustration of the workplace. Identification of hazards at workstations. Technical and organizational ways to reduce excessive occupational risk. Assessment of the physiological workload. Assessment of mental workload. Anthropometric data in the design of machines and workspaces. Instrument measurements and assessment of material parameters of the working environment. Examples of technical and organizational solutions improving the safety and ergonomic quality of machines and working conditions.

Teaching methods

Lecture with multimedia presentation.

Bibliography

Basic:
1. Tytyk E., Bezpieczeństwo i higiena pracy, ergonomia i ochrona własności intelektualnych, Wydawnictwo Politechniki Poznańskiej, Poznań, 2017.
2. Tytyk E., Butlewski M., Ergonomia w technice, Wydawnictwo Politechniki Poznańskiej, Poznań, 2011.
3. Horst W. (red.), Ergonomia z elementami bezpieczeństwa i ochrony zdrowia w pracy (4 tomy), Wydawnictwo Politechniki Poznańskiej, Poznań, 2011.
4. Koradecka D. (red.), Nauka o pracy - bezpieczeństwo, higiena, ergonomia. Pakiet edukacyjny dla uczelni wyższych, (8 tomów), Wydawnictwo Centralnego Instytutu Ochrony Pracy, Warszawa, 2000.
5. Michniewicz G., Ochrona własności intelektualnej, Wydawnictwo C.H. BECK, 2022.
6. Barta J., Markiewicz R., Prawo autorskie i prawa pokrewne, Wydawnictwo Zakamycze, 2004.

Additional:
1. Górska E., Tytyk E., Ergonomia w projektowaniu stanowisk pracy. Podstawy teoretyczne, Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa, 1998.
2. Górska E., Diagnoza ergonomiczna stanowisk pracy. Oficyna Wydawnicza Politechniki Warszawskiej, 1998.
3. Nowak E., Atlas antropometryczny populacji polskiej, Wydawnictwo Instytutu Wzornictwa Przemysłowego, Warszawa, 2000.
4. Własność przemysłowa w działalności gospodarczej. Przewodnik dla małych i średnich przedsiębiorstw (red. Marianna Zaręba), Wydawnictwo Urzęd Patentowy RP, Warszawa, 2003.

Breakdown of average student's workload

	Hours	ECTS
Total workload	25	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)	10	0,50