



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Ochrona własności intelektualnej, bezpieczeństwo i ergonomia pracy (Protection of Intellectual Property, Safety and Work Ergonomics)

	Course
Field of study	Year/Semester
Technologia chemiczna (Chemical Technology)	IV/8
Area of study (specialization)	Profile of study
-	general academic
Level of study	Course offered in
First-cycle studies	Polish
Form of study	Requirements
part-time	compulsory

		Number of hours
Lecture	Laboratory classes	Other (e.g. online)
10	0	0
Tutorials	Projects/seminars	
0	0	
Number of credit points		
1		

Lecturers	
Responsible for the course/lecturer: dr inż. Małgorzata Wejman	Responsible for the course/lecturer:
e-mail: malgorzata.wejman@put.poznan.pl	
PUT, Faculty of Engineering Management	
Institute of Safety and Quality Engineering	

**Prerequisites**  
Student has consolidate knowledge from natural science, mathematics and physics, taught in secondary school

### Course objective

Presenting basic issues concerning ergonomics and Occupational Health and Safety in modern companies and in everyday private life. Giving patterns for solving problems concerning the formation of conditions at work with use of, for example, diagnostics and reduction of occupational risk and designing ergonomic solutions. Presenting relations between technique, human well-being, ecology, economy and sociology. Acquainting students with principle legal regulations from the area of the copyright of the industrial property law and with procedures concerning inventions.



### Course-related learning outcomes

#### Knowledge

1. He has the general knowledge necessary to understand the social, economic, legal and other non-technical determinants of engineering activities. [K\_W16]
2. He has knowledge about 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 rules of the European Union regulation concerning the Registration, Evaluation, Authorisation and restriction of Chemicals (REACH).[K\_W18]
3. He has elementary knowledge of the protection of intellectual property and patent law. [K\_W19]

#### Skills

1. He can, in formulating and solving engineering problems, see the System and non-technical aspects. [K\_U09]
2. He can to assess the risks of unit operations in chemical and process engineering. [K\_U11]
3. Used regulations and complies with health and safety, work-related. [K\_U12]

#### Social competences

1. He is aware of the importance and understanding of the non-technical aspects and effects of engineering, including its impact on the environment and the liability of decision making. [K\_K02]

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Written multi-choice test after full cycle of lectures.

Attestation threshold: over 50% corrected answers.

Checking of attendance in lectures.

### Programme content

The genesis of the OSH and ergonomics issue. Objectives and tasks of the OSH activity and the ergonomic engineering. Systems of work protection in Poland and other countries. Legal documents connected with the OSH activity and ergonomic standards. Threats identification on workstations. Technical and organizational methods of reducing the excessive occupational risk. Systems human-to-technical object as an example of a workstation. The assessment of the physical workload. The assessment of the psychical workload. Anthropometric data in designing machines and workspace. Apparatus measurements and assessment of material parameters of the work environment. Examples of technical and organizational solutions for upgrading the safety and ergonomic quality of machines and work conditions.

The idea of copyright. Basic legal regulation of the copyright. The notion of industrial property and forms of its legal protection. The plagiarism and the piracy - legal effects. The 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, streamlining conclusion. Proceedings in the patent office the Republic of Poland. European patent.

### Teaching methods

Lectures with multimedial presentations.

Initiation discussions on themes connected with lecture subject.

### 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. Wejman M., Diagnozowanie środowiska pracy. Wydawnictwo Politechniki Poznańskiej, Poznań, 2012
4. Horst W., Ryzyko zawodowe na stanowisku pracy, Cz. I. Wyd. Politechniki Poznańskiej, Poznań, 2004
5. Koradecka D. (red.), Bezpieczeństwo pracy i ergonomia (2 vol.); Wydawnictwo Centralnego Instytutu Ochrony Pracy, Warszawa, 1999
6. Rączkowski B. BHP w praktyce. Wydanie XIV. Wyd. ODDK Gdańsk, 2014
7. Barta J., Markiewicz R., Prawo autorskie i prawa pokrewne. Wyd. Zakamycze, 2004
8. Szewc A., Jyż G., Prawo własności przemysłowej. Wyd. C.H. Beck, Warszawa, 2004
9. Branowski B., Metody twórczego rozwiązywania zadań projektowych. Wyd. NOT, Poznań, 1999

#### Additional

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



6. Pyrża A. (red.), Poradnik wynalazcy. Procedury zgłoszeniowe w systemie: krajowym, europejskim, międzynarodowym. Wyd. Urząd Patentowy RP, Warszawa, 2008
7. Kauffman A., Fustier M., Drevet A., Inwentyka. Metody poszukiwania twórczych rozwiązań. WNT, Warszawa, 1975
8. Ustawa z dn. 04 lutego 1994 r. o prawie autorskim i prawach pokrewnych.
9. Ustawa z dn. 30 czerwca 2000 r. Prawo własności przemysłowej.
10. Ustawa z dn. 16 kwietnia 1993 r. o zwalczaniu nieuczciwej konkurencji.

### Breakdown of average student's workload

	Hours	ECTS
Total workload	25	1,0
Classes requiring direct contact with the teacher	13	0,5
Student's own work (literature studies, preparation for pass) <sup>1</sup>	12	0,5

<sup>1</sup> delete or add other activities as appropriate