

| <b>STUDY MODULE DESCRIPTION FORM</b>  |   |  |
|---|---|--|
| Name of the module/subject<br><b>Protection of Intellectual Property, Safety and Work Ergonomics</b>  |   | Code<br><b>1010701121011121636</b>                     |
| Field of study<br><b>Chemical and Process Engineering</b>   | Profile of study (general academic, practical)<br><b>(brak)</b> | Year /Semester<br><b>1 / 2</b>                         |
| Elective path/specialty<br><b>-</b>   | Subject offered in:<br><b>Polish</b>                            | Course (compulsory, elective)<br><b>obligatory</b>     |
| Cycle of study:<br><b>First-cycle studies</b>   | Form of study (full-time, part-time)<br><b>full-time</b>        |  |
| No. of hours<br>Lecture: <b>1</b> Classes: <b>-</b> Laboratory: <b>-</b> Project/seminars: <b>-</b>   |   | No. of credits<br><b>1</b>                             |
| Status of the course in the study program (Basic, major, other)<br><b>(brak)</b>  |   | (university-wide, from another field)<br><b>(brak)</b> |
| Education areas and fields of science and art<br><b>technical sciences</b>  |   | ECTS distribution (number and %)<br><b>1 100%</b>      |
| <b>Responsible for subject / lecturer:</b><br><br>dr inż. Małgorzata Wejman<br>email: malgorzata.wejman@put.poznan.pl<br>tel. +48 61 665 3406<br>Faculty of Engineering Management<br>ul. Strzelecka 11 60-965 Poznań   |   |  |
| <b>Prerequisites in terms of knowledge, skills and social competencies:</b>   |   |  |
| 1   | <b>Knowledge</b>  | Basic knowledge from secondary school.                 |
| 2   | <b>Skills</b>   | Analysis of interdisciplinary problems.                |
| 3   | <b>Social competencies</b>                                      | Independent thinking and working in a group.           |
| <b>Assumptions and objectives of the course:</b><br>-Acquainting the students with basic health and safety regulations and ergonomics in modern industrial companies, as well as in non-professional life. Teaching some practical skills how to solve problems connected with development of working conditions inter alia, assessment and limitation of an excessive occupational risk, ergonomic diagnosing and designing the solutions which escalate safety and ergonomic quality of working conditions. Disclosing system dependencies between technology, human welfare, ecology, economy, sociology. Humanization of technology as the cause of establishing constructive and organizational solutions. Acquainting the students with current and fundamental legal regulations of copyright as well as industrial property and exploratory procedures, along with heuristic techniques which endorse innovation. |   |  |
| <b>Study outcomes and reference to the educational results for a field of study</b>   |   |  |
| <b>Knowledge:</b>   |   |  |
| 1. Has elementary knowledge of chemical industry machines? lifecycle. - [-]   |   |  |
| 2. Has the basic knowledge that is necessary to understand the determinants of non-technical engineering activity in a household and an industry; is familiar with the basic principles of occupational health and safety in the industry. - [-]  |   |  |
| 3. Has an elementary knowledge of the intellectual property protection and patent law. - [-]  |   |  |
| <b>Skills:</b>  |   |  |
| 1. Can obtain information from literature, databases, and other sources; has skills of self-learning in order to improve and update the professional competence. - [-]  |   |  |
| 2. In formulating and solving tasks which involve the design of devices, a student can detect their non-technical aspects, including environmental, economic and legal. - [-]   |   |  |
| 3. Is able to apply the principles of health and safety at work. - [-]  |   |  |
| <b>Social competencies:</b>   |   |  |
| 1. Has an awareness of and understands the non-technical aspects of consequences regarding engineering activity, including its impact on the environment and the related responsibility for the decisions. - [-]  |   |  |

| <b>Assessment methods of study outcomes</b>   |                      |      |
|---|----------------------|------|
| -The final test.  |                      |      |
| <b>Course description</b>   |                      |      |
| <p>-Genesis of problematic aspects in the area of health and safety and ergonomics. Tasks and objectives of health and safety as well as ergonomic engineering. Legal foundations for activities in the realm of health and safety. Human-technical object system as a representation of a workplace. Threats identification in workplace related to the chemical industry. Methods of occupational risk assessment in a workplace. Technical and organizational ways of limiting an excessive occupational risk. Assessment of physiological workload. Assessment of mental workload. Anthropometrical data in machines design and workspace. Instrument measurements and assessment of material parameters in working environment. Examples of technical and organizational solutions which boost safety and ergonomic quality of machines as well as working conditions.</p> <p>The concept of intellectual property. Basic regulations concerning copyright. The notion of industrial property and its forms of legal protection. Plagiarism and piracy, legal consequences. Patent law, protection law, registration law. Types of creative work and forms of their protection, invention, utility model, trade mark, geographical indications, topography of integrated circuits, innovative proposal. Procedures in Patent Office of the Republic of Poland. European Patent Office. Marketing strategies of industrial property. Heuristic methods of improving exploratory skills.</p> |                      |      |
| <b>Basic bibliography:</b>  |                      |      |
| <ol style="list-style-type: none"> <li>1. Tytyk E., Butlewski M., Ergonomia w technice (Ergonomics in technology); Wydawnictwo Politechniki Poznańskiej, Poznań, 2011</li> <li>2. Koradecka D. (red.), Bezpieczeństwo pracy i ergonomia (2 tomy) (Occupational safety and ergonomics); Wydawnictwo Centralnego Instytutu Ochrony Pracy, Warszawa, 1999</li> <li>3. Rączkowski B., BHP w praktyce. Wydanie XII. Wyd. ODDK Gdańsk, 2009</li> <li>4. Barta J., Markiewicz R., Prawo autorskie i prawa pokrewne (Copyright and related rights). Wyd. Zakamycze, 2004</li> <li>5. Szewc A., Jyż G., Prawo własności przemysłowej (Industrial property rights). Wyd. C.H. Beck, Warszawa, 2004</li> </ol>   |                      |      |
| <b>Additional bibliography:</b>   |                      |      |
| <ol style="list-style-type: none"> <li>1. Branowski B., Metody twórczego rozwiązywania zadań projektowych ( Methods of creative solutions in solving project tasks). Wyd. NOT, Poznań, 1999</li> <li>2. Nowak E., Atlas antropometryczny populacji polskiej (Anthropometric atlas of Polish population); Wydawnictwo Instytutu Wzornictwa Przemysłowego, Warszawa, 2000</li> <li>3. Tytyk E., Projektowanie ergonomiczne (Ergonomic design); Wydawnictwo Naukowe PWN, Warszawa, 2001</li> <li>4. Własność przemysłowa w działalności gospodarczej (Industrial property in business activity). Przewodnik dla małych i średnich przedsiębiorstw (red. Marianna Zaręba). Wyd. Urząd Patentowy RP, Warszawa, 2003</li> <li>5. Wzory przemysłowe w działalności małych i średnich przedsiębiorstw (Industrial designs of small and medium-sized enterprises) (opracowanie: Dobosz E., Gędek M., Podgórska A.), Wyd. Urząd Patentowy RP, Warszawa, 2005</li> </ol>   |                      |      |
| <b>Result of average student's workload</b>   |                      |      |
| Activity  | Time (working hours) |      |
| 1. Participation in lectures  | 15                   |      |
| 2. Preparation for test   | 5                    |      |
| <b>Student's workload</b>   |                      |      |
| Source of workload  | hours                | ECTS |
| Total workload  | 20                   | 1    |
| Contact hours   | 15                   | 1    |
| Practical activities  | 0                    | 0    |