SYLLABUS

Name: Monographic course
Name in Polish: Społeczna odpowiedzialność dla inżynierów
Name in English: Social responsibility for engineers

Information on course:

Course offered by department:	Faculty of Organisation and Management
Course for department:	Silesian University of Technology
Study level and form:	Master's degree/Bechelor's degree, Full-time
Term:	I semester 2023/2024
Coordinator of course edition:	Dr hab. inż. Patrycja Hąbek, prof. PŚ

Default type of course examination report:

Language:
English

Course homepage:
https://platforma.polsl.pl/roz/

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Short description:
Explore the vital role of engineering in shaping a sustainable future. The program delves into the core principles and practices that underpin the engineering profession's contribution to a more sustainable world.

Description:
Lecture 15h:

Key Topics Covered:

1. The Importance of Engineering Profession**:** Understand the pivotal role engineers play in addressing global challenges and driving innovation to improve the quality of life for all.
2. The Concept of Sustainable Development: Gain insight into the principles of sustainable development and how they apply to engineering projects and practices.
3. Sustainability Guidelines and Standards: Navigate the complex landscape of sustainability standards, regulations, and guidelines that guide engineering decisions.
4. Sustainability Principles for Engineers: Explore the fundamental principles and ethical considerations that engineers must embrace when designing and implementing sustainable solutions.
5. Sustainability Analysis Methods: Learn to evaluate and assess the sustainability of engineering projects using various analysis methods, tools, and metrics.

Bibliography:

1. Hąbek P.: Społeczna odpowiedzialność dla inżynierów, wyd. Politechniki Śląskiej, Gliwice 2016
2. Hąbek P., Wolniak R.: What Factors Affect the Quality of Sustainability Reports? The Case of Reports From Selected European Union Member States, Conference Proceedings of 15th International Multidisciplinary Scientific GeoConference. Ecology, Economics, Education and Legislation, Vol. III Albena, Bułgaria, STEF92 Technology Ltd., s.767-774, 2015, ISBN 978-619-7105-41-4, ISSN 1314-2704
3. Wolniak R., Hąbek P.: Reporting Process of Corporate Social Responsibility and Greenwashing, Conference Proceedings of 15th International Multidisciplinary Scientific GeoConference. Ecology, Economics, Education and Legislation, Vol. III Albena, Bułgaria, STEF92
4. Hąbek, P.; Lavios, J.J. Striving for Enterprise Sustainability through Supplier Development Process. Energies 2021, 14, 6256. https://doi.org/10.3390/en14196256
5. Hąbek, Patrycja, Lavios, Juan J. and Krupah, Edward. "How car producers are driving toward sustainable supplier development" Production Engineering Archives, vol.28, no.3, 2022, pp.268-278. https://doi.org/10.30657/pea.2022.28.33

6. Hąbek P.: The concept of using FMEA method for sustainable manufacturing, Systemy Wspomagania w Inżynierii Produkcji, Cross-border exchange of experience in production engineering using principles of mathematics, vol.6, iss.2, 2017, pp.49-55
7. Hąbek P., Lechowicz P.: Assessment of sustainable production practices The case of company from metal industry, in: MAPE Multidiscipl. Asp. Eng. Prod. 2019 vol. 2 iss. 1, s. 447-456
8. Crul M.R.M., Dieh J.C.: Design for Sustainability. A practical approach for developing economies. UNEP, http://www.d4s-de.org/manual/d4stotalmanual.pdf.

Learning outcomes:

Knowledge:
K2A_W01 At an in-depth level - selected facts, objects and phenomena, as well as methods, theories and conditions explaining the complex relationships between them and constituting advanced general knowledge in the field of engineering in relation to sustainable development concept.
K2A_W02 Main trends of development in the engineering profession in connection with sustainability.
Skills:
K2A_U13 Use a foreign language at the B2+ level of the Common European Framework of Reference for Languages and specialist terminology related to the field of study of management and production engineering.
Social competences:
K2A_K06 Creating and developing patterns of proper conduct in the work and life environment, taking initiatives, critically assessing him/herself, the teams and organizations in which he/she participates, as well as leading a group and taking responsibility for it.

Assessment methods and assessment criteria:

To pass the course, each student prepares a case study in the form of a ppt presentation and presents it to the group. The presentation is assessed in terms of content and form.

Practical placement: