

SYLLABUS

Name: Monographic course – Work ergonomics

Name in Polish: Wykład monograficzny – Ergonomia pracy

Name in English: Monographic course – Work ergonomics

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 degree, Full-time
Term:	winter semester, academic year 2019/2020, sem. 2
Coordinator of course edition:	Prof. dr hab. Grażyna Płaza

Default type of course examination report:

Course pass

Language:

English

Course homepage:

<https://platforma.polsl.pl/roz/>

ECTS

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Short description:

The premise of the course is for the student to acquire knowledge and skills in ergonomics in the workplace, the role of ergonomics in Industry 4.0, defining the relationship between ergonomics and lean management, ergonomic diagnosis, the functioning of the body at work, the ability and possibility of adapting working conditions to human capabilities and needs, modifying and improving the workplace and working conditions, and improving team and individual work.

Description:

Introduction to ergonomics - historical background and division of ergonomics. The role of ergonomics in work and Industry 4.0. The combination of ergonomics and lean management. Ergonomic diagnosis. Physiology of work. Adaptability of working conditions to human capabilities and needs. Modification and improvement of the workplace of working conditions. Improvement of team and individual work. The role of material conditions in the workplace. Lecture 1. introduction to ergonomics 2. role of ergonomics in work and industry 4.0 3. physiology of work 4. material conditions of work 5. ergonomics of office work 6. ergonomic diagnosis.

Lecture – 10 hrs

Individual student work: 50 hrs

Bibliography:

Salvendy G. (Ed.), Handbook of human factors and ergonomics. John Wiley and Sons Inc. 2012.

<https://osha.europa.eu/en>

[https:// www.ciop.pl/en](https://www.ciop.pl/en)

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

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.

Matiringe R.K., **Płaza G.** (2022) Ergonomics vs economics in the construction logistics: a case study from the “Hexagon Construction” company in Poland. Production Engineering Archives, 28(4), 398-406.

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:

K2A_W01: to an in-depth degree - selected facts, objects and phenomena, as well as methods, theories and conditions pertaining to them explaining the complex relationships between them, constituting advanced general knowledge of mechanical engineering in connection with other disciplines

K2A_W02: the main development trends of the discipline of mechanical engineering in connection with other disciplines

Skills: can:

K2A_U01: use their knowledge - formulate and solve complex and unusual problems and innovatively perform tasks under unpredictable conditions by:
- appropriate selection of sources and information from them, making evaluation, critical analysis, synthesis, creative interpretation and presentation of this information,

- selecting and applying appropriate methods and tools, including advanced information and communication technology (ICT),
- adapting existing or developing new methods and tools
K2A_U13: be able to use a foreign language at the B2+ level of the Common European Framework of Reference for Languages as well as specialized terminology related to the field of study Management and Production Engineering

Social competence: is ready to:

K2A_K06: Create and develop patterns of appropriate behavior in the work and living environment, take initiatives, critically evaluate oneself and the teams and organizations in which he participates, and lead and take responsibility for the group

Assessment methods and assessment criteria:

Lecture

Pass - written colloquium (test)

Passing criterion: minimum 50% of correct

Practical placement:

Not applicable