

SYLLABUS

Name: Environmental protection and sustainable development
Name in Polish: Ochrona środowiska i zrównoważony rozwój
Name in English: Environmental protection and sustainable development

Information on course:

Course offered by department: Faculty of Organisation and Management
Course for department: Silesian University of Technology
Study level and form: Bachelor's degree, Full-time
Term: winter semester 2023/2024
Coordinator of course edition: Dr hab. inż. Jan Skowronek

Default type of course examination report:

Pass

Language:

English

Course homepage:

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

ECTS

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Short description:

The aim of the subject is to provide structured knowledge about the natural environment, natural resources, and rational principles of the management of these resources, as well as basic legal acts regulating the principles and methods of using the environment and its resources especially from the point of view of the sustainable development.

The program content includes the following topics: Ecology vs zoology. Natural resources. Raw materials. Basic legal acts in fields of environmental protection and resource management. Natural and technical hazards. Fundamentals of environmental engineering. Principles of the sustainable development

Description:

Lecture - 15 hours:

1. Ecology and zoology
2. Earth's natural resources
3. Mineral raw materials - impact on the environment of their exploitation and use
4. Legislation on environmental protection
5. Legislation in the field of natural resources management
6. Principles of the sustainable development

Laboratory - 15 hours:

1. Principles of resource and raw materials management
2. Repairing environmental damage
3. Circular economy
4. Natural and anthropogenic threats
5. Ecological disasters
6. Sustainable development

Design - 15 hours:

The student will prepare a presentation on a selected topic in the field of environmental protection, prevention or repair of environmental damage, legal requirements for a specific issue.

Bibliography:

Bhargava R. N., Rajaram V., Olson K., Tiede L.: Ecology and Environment. CRC Press, 2019.
Reid D.: Sustainable Development. An Introductory Guide. Routledge, 1995.

<p>Benton D., Hazell J., Hill J.: The Guide to the Circular Economy. Capturing Value and Managing Material Risk. Routledge, 2015.</p> <p>Wong M. H.: Remediation and Management of Degraded Lands. CRC Press, 1999.</p> <p>Misiólek A., Kowal E., Bień J.: Ekologia. PWE</p> <p>Gajdzik B., Wyciślik A.: Jakość, środowisko i bezpieczeństwo pracy w zarządzaniu przedsiębiorstwem. Wyd. Pol. Śląskiej</p> <p>Kania A., Nowosielski R., Spilka M.: Zarządzanie środowiskowe i systemy zarządzania środowiskowego. Wyd. Pol. Śląskiej</p> <p>Dobrzańska B., Dobrzański G., Kiełczewski D.: Ochrona środowiska przyrodniczego. PWN</p> <p>Lipińska D: Podstawy inżynierii środowiska. Wyd. Un. Łódzkiego</p> <p>Krystek J. (red.): Ochrona środowiska dla inżynierów. PWN</p>
<p>Learning outcomes:</p> <p>Knowledge:</p> <p>knows and understands</p> <p>Basic social, economic, legal, ethical and other non-technical conditions of engineering activity, including basic concepts and principles in the field of protection of industrial property and copyright. (K1A _W5)</p> <p>Skills:</p> <p>is able to:</p> <p>Make a critical analysis of the functioning of existing technical and technological solutions in production systems function, evaluate these solutions and suggest appropriate improvements and innovations in this regard (K1A _U5)</p> <p>Integrate and apply interdisciplinary knowledge from engineering and technical sciences incorporating principles and objectives of sustainable development to product life cycle management. (K1A _U10)</p> <p>Social competence:</p> <p>is ready for:</p> <p>Fulfilling social obligations, co-organizing activities for the social environment, initiating activities for the public interest, thinking and acting in an entrepreneurial manner. (K1A _K2)</p>
<p>Assessment methods and assessment criteria:</p> <p>The course is passed on the basis of:</p> <p>prepared and delivered presentation on a selected topic</p> <p>student activity during classes</p>
<p>Practical placement:</p> <p>Not applicable</p>