Nazwa w języku polskim: Ocena ryzyka środowiskowego dla zdrowia człowieka
Nazwa w jęz. angielskim: *Environmental risk assessment for human health*

Dane dotyczące zajęć:
Information on course:

Jednostka oferująca: *Faculty of Energy and Environmental Engineering // dr hab. inż. Anna Mainka, prof. PŚ*

Język wykładowy / Language:

English

Strona WWW:

Skrócony opis / Short description:

The course provides fundamentals of identification, assessment, and management of environmental risks to human health. It covers exposure sources, environmental toxicology, methods of qualitative and quantitative risk assessment, and legal as well as regulatory frameworks in this field.

Opis: / Description:

Course contents
Lecture:
1. Introduction to environmental and health risk assessment. Definitions, importance, methodology.
2. Environmental risk factors: chemical, physical, biological – sources, exposure pathways, examples.
3. Basics of environmental toxicology and epidemiology. Dose–response relationships, risk indicators.
4. Hazard identification and exposure characterization. Qualitative and quantitative analysis methods.
5. Health risk assessment models. Application in the analysis of air, water, soil, and food quality.
6. Legal and regulatory frameworks in the EU and worldwide. WHO and EPA guidelines, EU legislation.
7. Risk management and risk communication. Case studies of selected environmental incidents.

Number of contact hours involving academic staff or other course leaders and students:
Lecture: 15 hours
Total number of hours: 15
Number of ECTS credits: 1

Literatura / Bibliography:

1. Rocha J, Oliveira S, Capinha C. Risk Management and Assessment; 2020.
2. Simmons DC, Dauwe R, Gowland R, et al. Understanding disaster risk: risk assessment methodologies and examples. In: Science for disaster risk management: Knowing better and losing less; 2017.
3. Sarigiannis DA. The exposome: A new tool for improved health risk assessment. In: Management of Emerging Public Health Issues and Risks: Multidisciplinary Approaches to the Changing Environment. Elsevier Inc.; 2018.
4. Bowman J, Buckett K, Marco P Di, Hana L, Langley A. Environmental Health Risk Management: Guidelines for assessing human health risks from environmental hazards; 2012.
5. Asante-Duah K. Public Health Risk Assessment for Human Exposure to Chemicals. Washington DC: Springer; 2017.
6. Kowalska M., Mainka A. Leksykon wybranych pojęć z zakresu zdrowia środowiskowego. Katowice: Śląski Uniwersytet Medyczny w Katowicach; 2024.
7. WHO, Environmental Health Criteria Series
8. EU and EPA legislation on risk assessment

Efekty uczenia się / Learning outcomes:

Knowledge: a student knows and understands
(1) the principles and methods of environmental risk assessment for human health (K1A_W5)
Skills: a student can
(2) identify and analyze complex problems related to human exposure to environmental factors (K1A_U7, K1A_U12)
Social competencies: a student is prepared to
(3) critical evaluation of information and conscious decision-making in the field of health risk reduction (K1A_K2)

Metody i kryteria oceniania / Methods and criteria of assessment:
1st option: min 50% attendance + presentation. 2nd option: Final test containing open or single/multiple-choice questions. Criterion for passing the course: 1st option – attendance to the lecture % of presence and one performed presentation (rate 50/50). 2nd option test score Regardless option 1 or 2 the criterions are: 90-100% 5.0 80-90% 4.5 70-80% 4.0 60-70% 3.5 50-60% 3.0

Przynależność do grup przedmiotów w cyklach:
Element of course groups in various terms:

Opis grupy przedmiotów Course group description	Cykl pocz. First term	Cykl kon. Last term
przedmioty obieralne studia stacjonarne stopień studiów – dowolny kierunek studiów – dowolny, semestr dowolny elective courses full-time degree - any field of study - any semester - any	2024/25	