

Institute of Environmental Engineering



UNIVERSITY
OF ZIELONA GÓRA



INSTYTUT
INŻYNIERII
ŚRODOWISKA

Uniwersytet
Zielonogórski

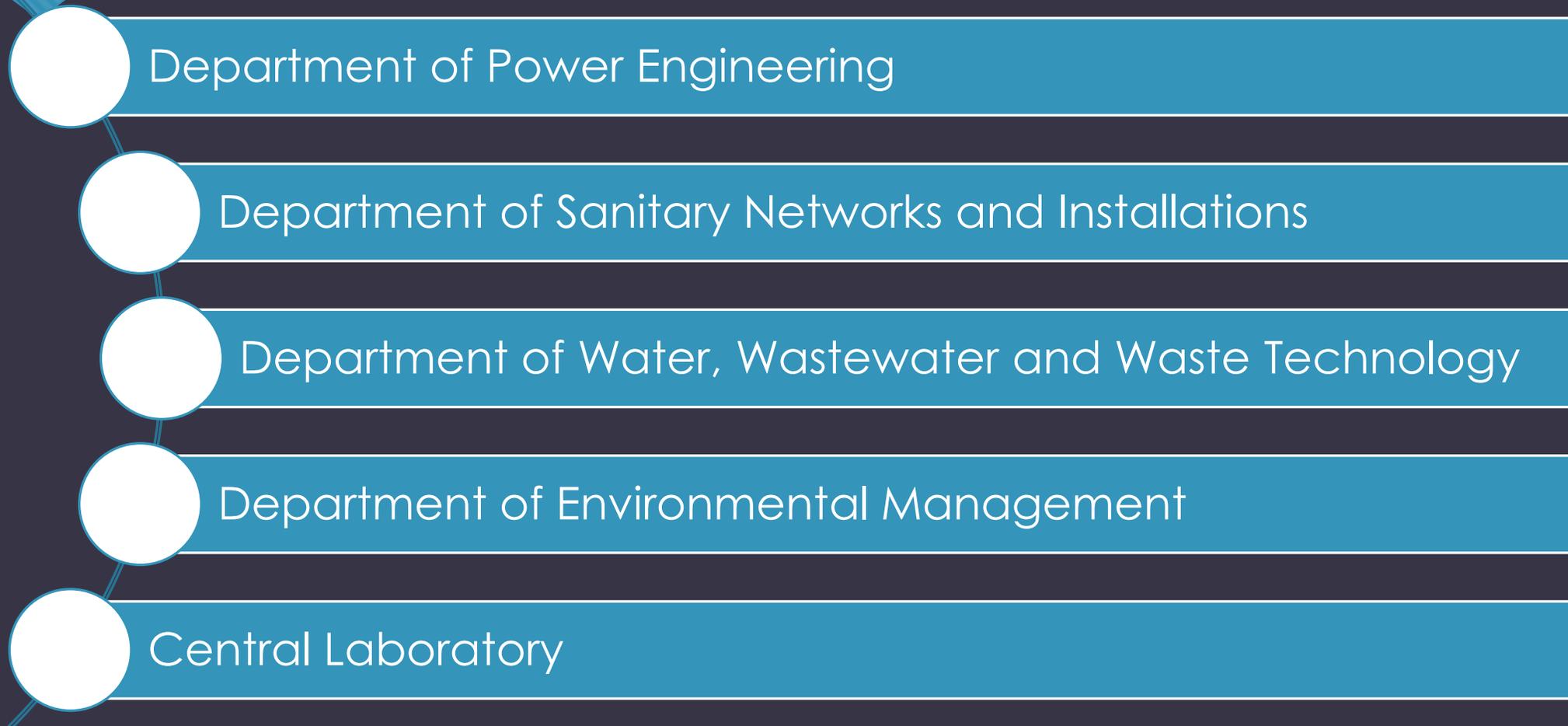


Who are we?

- Institute of a research and teaching character
- One of the oldest units at the University - the beginning of the Institute of Environmental Engineering dates back to 1975.
- The first organisational unit was the Department of Water Supply and Sewage and Waste Disposal.



The structure of Institute:



We teach:

Environmental Engineering (I, II, III cycle *)

Power Engineering (I cycle)

Intelligent Urban Systems (I cycle; interdepartmental studies)

* Ist cycle – 7 semesters, IInd cycle – 3 semesters

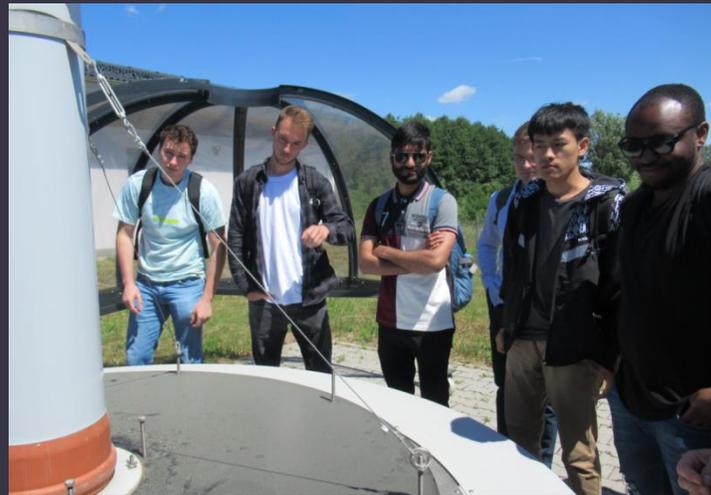
What do we teach?

Design of water, sewage, gas and district heating networks, installations

Design, modernisation and optimisation of environmental engineering and energy facilities
(water and wastewater treatment plants, landfills, heating and cooling systems)

Environmental monitoring: water, wastewater, waste, soils, air
(physico-chemical, microbiological testing)

What do we teach?



We have modern research laboratories



We have modern research laboratories



We are experienced in international projects



HYDROSTRATEG.I-001T/22,
Comprehensive monitoring
system for surface water quality
and coastal areas by means of a
multi-sensor system using
hyperspectral cameras,
04.10.2023 - , €1.078 milion

UMO-2018/29/Z/ST10/02986
Nitrogen circulation in urban
space: a new economic
approach (UNCNET) to meet the
challenges of climate change,
2019-04-01 - 2022-03-31, €1.510
million

CIRCULARITY/50/Dairy Mix/2022,
Multi-criteria assessment, decision
support and management tools
for sustainable mixed closed-
loop farming systems for dairy
production (DairyMix), 01.03.2022
- 28.02.2025, €225,000.

SUSAN/II/MILKEY/02/2020,
Decision support system for
sustainable and GHG-optimised
milk production in key European
areas, 2020-01-01 - 2022-12-31;
€2.0 million.

SUSAN/II/MELS/01/2020,
Reducing greenhouse gas
emissions from livestock
systems (MELS), 2020-01-01 -
2022-12-31; €1.530 million.

Modern energy storage methods
in the Spree-Neisse-Bober region,
Cross-border Cooperation
Programme INTERREG V-A
Brandenburg - Poland 2014 -
2020, 2020-01-01 - 2022-06-30;
€610,000

We collaborate with local companies



Since 2018, we have been researching the development of an innovative soil fertiliser and plant stimulant preparation, Florahumus, which is a concentrate of humic acids extracted from brown coal.



Research has confirmed the effectiveness of the preparation as an improver of soil water retention and soil characteristics important for water migration in the soil profile and soil fertility.

We collaborate with local companies



Determination of the fractional and morphological composition of municipal waste generated in Poland: in large cities (>50,000 inhabitants) (MD), small towns (<50,000 inhabitants) (MM) and rural areas (W).



Research commissioned by Institute of Environmental Protection - National Research Institute (IOŚ_PIB), Warsaw, 2021

We do work in a field!



We do work in a lab!



Future ideas and cooperation



Zielona Góra - Green & Smart City of the future

Construction and implementation of an innovative integrated technical and IT system to improve the quality of life of the inhabitants of Zielona Góra by implementing the Smart City concept in key sectors of the city's operation.



Bioenergy future (biomethane and biohydrogen)

Development of a highly efficient technology for two-stage hydrogen-methane fermentation of waste (bio-waste, food waste, industrial waste, agricultural waste).

Future ideas and cooperation



Innovative hydrogen mini-hub for domestic and technological needs

Complete know-how in the field of turnkey hydrogen mini-hubs, with the possibility to offer operation and service provision in an 'Energy as a service' model



Zero Emission House

A modern, environmentally friendly, zero-emission house with low running costs. User-friendly. Innovative energy battery solution adapted to the power of photovoltaic cells providing the building with energy independence + V2G.

We look forward to working with you!



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