

## ECO-VISION FOR SUSTAINABLE CITIES: INTEGRATING WATER, WASTEWATER, AND ENERGY IN LINE WITH NEW EU STANDARDS

Hosted by the Faculty of Mechanical Engineering, 5 Mikołajczyka Str., 45-271 Opole

- **Timeframe:** 23 – 27.06.2025 (plus online meetings two weeks beforehand)
- **Registration deadline:** 31.03.2025 (home university nomination sent to [a.frajtag@po.edu.pl](mailto:a.frajtag@po.edu.pl) required)
- **Location:** Opole University of Technology, Poland
- **Target group:** BSc & MA students of environmental sciences, chemical engineering, engineering management
- **Credits:** 3 ECTS
- **Language:** English
- **Fee:** free of charge

### OBJECTIVES AND DESCRIPTION

The programme aims to raise awareness and activate concern for the environment and climate change among young people in the EU. The main objective of the project is to increase knowledge about sustainable development in the water, wastewater and energy sectors. Participating students will be able to present their concept related to (storm) water management based on information from the course, which aims to support the achievement of the Sustainable Development Goals (SDGs) in support of the EU strategy to combat climate change. The project fulfils the priority of the European Union, which is to take care of people's natural environment changes (Environment and the fight against climate change). The inclusion of water and storm water management in the Environment and Climate Change priority is crucial, as storm water runoff can have significant environmental impacts and contribute to climate change-related challenges. Issue related to new EU rules to improve urban wastewater treatment and reuse will be discussed.

The project is also complementary to the development strategy of the beneficiary (Faculty of Mechanical Engineering), where one of the main objectives is to maintain knowledge transfer, expand the educational offer and participate in international projects. The participants of the projects are students from the partner universities. BIP combines both online and face-to-face learning experiences. Students will participate in complementary activities - lectures and workshops (including outdoor activities and case studies). To make the course programme more attractive, students will practice team building, project management and communication skills activities. Students will attend lectures and workshops delivered by internationally renowned faculty with the expertise required for this interdisciplinary project. Thanks to the international faculty, students have a unique opportunity to observe different points of view. They will be able to compare experiences based on differences in cultural and academic backgrounds.

At the beginning of the ECO-VISION BIP, participants are introduced to the topic of the SDGs. They will learn about the scope and interdependence of the 17 sustainability goals. The focus will be on the implementation of the SDGs to address environmental change. Participants will explore the Sustainable Development Goals related to water and energy in order to create their own storm water management project in line with the development of green infrastructure. Throughout the programme, participants work independently in groups on a real-world challenge. Various workshop formats and expert guidance support the approach to this task.

### METHODS AND OUTCOMES

The development of interdisciplinary curricula as well as innovative learning and teaching methods will be promoted, including online collaboration, project-based learning and case study-oriented project to solve

environmental problems.

Field trips are organized for students, providing practical insights that are highly beneficial, especially for those studying fields such as chemical engineering and environmental science. These trips offer valuable opportunities for students to witness real-world applications of their theoretical knowledge.

In addition to imparting specialized knowledge, the program places special emphasis on the development of competencies and 'soft skills' such as problem-oriented thinking, ability to present oneself and one's ideas, with a focus on project-based learning and performing in different cultural settings.

Three significant outcomes are planned to be reached as a result of the project:

- opening of new possibilities training for partner university students through introducing enhanced study methods focused on student individual contribution in the group work when preparing final oral presentation. The students will be given a unique possibility to broaden their knowledge through diverse study areas during various workshops, lectures. Apart from the standard forms of teaching students have the opportunity to gain hands-on experience on working in an international environment and therefore improve their communication and team building skills.
- focus on promotion and diffusion of the strengths and competitive advantages of European universities, encouraging student mobility and teacher's and researcher's cooperation.
- establishment of new cross-university alliances for future developments, such as dual degree, exchange programs and research networks. ECO-VISION allows participants to increase their qualification for positions in the field.

## **FIELD OF EDUCATION**

The BIP is aimed at students of environmental sciences, chemical engineering, engineering management

## **LEVEL OF STUDY**

The BIP is aimed at first and second degree students.

## **VIRTUAL COMPONENT TIMING**

A virtual component is an online meeting that will be held within two weeks before the BIP. The exact date and time of the virtual meeting will be specified later, after an agreement with partners.

## **VIRTUAL COMPONENT DESCRIPTION**

The online phase takes place before students arrive at OUTech. During the online phase, three meetings per week are planned, divided into modules covering topics such as the negative impact of climate change on water availability, an introduction to the Sustainable Development Goals, the EU strategy for the development of green infrastructure, and sustainable management practices. Additionally, students will have the opportunity to interact with invited speakers from selected industries via the OUTech online platform.

Participants in online modules will explore the relationship between sustainable development goals, climate change, and rainwater management. The focus will be on practical applications and innovative technologies, with an emphasis on community engagement to address the challenges posed by climate change.

**ERASMUS+ BLENDED INTENSIVE PROGRAMME**  
**ID: 2024-1-PL01-KA131-HED-000204613-1**

**BIP PARTNERS:**

University of Salerno - Italy  
Malta College of Arts Science and Technology- Malta  
KreativEU Alliance