A.4.2. Promotion of student mobility

Student mobility within the **GREENES** project plays one of the key roles in the viability of this project. The importance is reflected in shaping students as future leaders of sustainable technologies and engineering solutions. Mobility allows students from different countries to learn about innovative educational methods, practical skills, and techniques to solve global environmental challenges. Through mobility, students learn in international environments, which gives them the opportunity to look at sustainability and green technologies from a global perspective and adapt their knowledge to the specifics of different regions.

Through transnational mobility, the GREENES project supports the development of skills such as intercultural communication, teamwork, and adaptation to new educational and work environments. These skills are essential for the engineers of the future who will work to solve complex environmental problems in collaboration with experts from different countries. In addition to academic knowledge, mobility allows students to build a professional network that can be useful throughout their careers, providing them with contact with experts in the fields of engineering, ecology and sustainable technologies.

Also, participation in the GREENES project through student mobility gives students the opportunity for practical work and learning through real projects in the field of sustainable development. For example, students can work on case studies related to renewable energy sources or energy-efficient systems in buildings, which equips them to apply the knowledge gained in real-world industrial settings. By developing such practical skills in multicultural teams, students are better prepared for the global labor market and can more easily adapt to the fluctuating demands of sustainable development.

Student mobility within the GREENES project not only contributes to their academic and professional development but also broadens their perspectives on the role of sustainability and innovation in the modern engineering sector, making them more prepared for the challenges of their future careers.

Within the framework of Activity A.4.2., Promotion of student mobility, the following are distinguished:

- Promotion of student and teacher mobility for the purpose of realization of teaching.
-Promotion of the transnational module in terms of opportunities for student and teacher mobility.
- Promotion of student and teacher mobility in order to implement practice.

1. Introduction

The promotion of student and teacher mobility is a key element in the process of internationalization of the partner institutions of the GREENES consortium. Through various promotional activities, the goals were to inform and motivate final year undergraduate students to apply for mobility, as well as to connect with the economy and promote master's studies. The campaigns were implemented during the periods when the application deadlines began (October and March), but also during the promotion of enrollment in master's studies.

2. Promotion objectives

- **The increase in the number of applications for mobility** puts the focus on students completing their undergraduate studies and opportunities to continue their education through mobility at international institutions.
- **Promotion of master's studies** aimed at informing students about the opportunities offered by

master's studies, with special emphasis on the benefits of participation in international mobility.

- **Connecting with the economy** through the engagement of business entities in projects that include the mobility of teachers and students, which contributes to mutual cooperation.
- **Visibility and engagement on social networks** based on the use of digital platforms to disseminate information and engage potential students and partners.

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3. Detailed review of activities

3.1. Campaigns during October and March 2023 and 2024

The campaigns during October and March 2023 and 2024 were aimed at final year undergraduate students who plan to apply for mobility. The deadlines for applying for mobility programs fall in these two months, so the campaign was tasked with encouraging students to inform themselves about the opportunities offered to them. A total of eight eighth campaigns.

Institution	Date	Number of attendees
ATVSS Nis	Open Day October 2023	approx. 500
	Call Promotion K131 10 .10.2023	25
	Promotion of the call K131 25.02.2024	26
	Promotion of the K131 call15.10.2024	21
	ECO Logic 2023	approx. 500
	ECO Logic 2024	approx. 500
GALLERY	Uklo Open Day Bitola (25.04.2023)	approx. 500
	K131 Call Promotion October 2023	45
	Promotion K131 poziva mart 2024	61
	K131 Invitation Promotion October 10, 2024	55
	UKLO Promotion of the Generation of Students 2024/25 Bitola (01.10.2024)	260
UNI MB	K131 Call Promotion October 9, 2023	35
	Promotion K131 poziva 11. mart 2024	18
	K131 Invitation Promotion October 8, 2024	22
Total	14	2568
students		approx. 320

3.2. Promotion of enrolment in master's studies

Campaigns during the promotion of enrollment in master's studies were aimed at increasing the number of applications for master's studies ATVSS Niš, with a special focus on the possibilities of international mobility, where the Greenes transnational module was in the foreground. Also, students were emphasized the importance of developing strategic partnerships between higher education institutions within the single European Higher Education Area, in the case of

Activities:

- **Public presentations and Open Days**
- Open Days were organized at ATVSS Niš, where students could get information about different master's degree programs.
- Sessions are intended for students of Master Applied Studies

3.4. Promotion on social networks

Instagram – Campaign in numbers

1. **Total number of posts:** 10 on the topic of mobility
2. **Content of posts:**
    - 4 Informative Posts on the Application Procedure
    - 2 Student Experiences (Images & Quotes)
    - 2 carousel announcements with mobility benefits
    - 1 video: What does a student's day on mobility look like
3. **Metrics:**
    - **Views (Reach):** 5000
    - **Total likes:** 260
    - **Shares:** 22
    - **New followers:** 107
4. **Most successful post:**
    - **Type:** Video "Student Testemonial"
    - **Views:** 650
    - **Likes:** 89

LinkedIn – Campaign in numbers

1. **Total number of posts:** 78
2. **Content of posts:**
    - 3 articles on the academic benefits of mobility
    - 2 posts with pictures of students and partner universities
    - 2 video interviews with students and professors
3. **Metrics:**

- **Views (Impressions):** 8,200
- **Total Likes:** 150
- **Shares:** 90
- **Clicks on links:** 120

BROCHURE

KA220-HED-E683AE00

Co-funded by
the European Union

Development of green energy competences for energy stability

Transnational Module

GREENES

Co-funded by
the European Union

Preface

The development of innovative content is a key activity necessary for the development and improvement of the situation within eight entities, in all three institutions: PC (Directives, Energy Potential of Waste, Sensor Systems), P1 (Combustion and Ecology, Energy and Environment), P2 (Modern Production Technologies and Modern Hydropower Plants). The aim of this activity was to integrate data on all study programmes, their objectives with substantive innovations in the field of green energy based on current directives and market requirements on the one hand, as well as existing capacities (infrastructure, facilities, workforce, workforce, etc.) in the field in all three countries. The virtual module, which includes the subjects of the EU Directive, Energy Potential of Waste, Sensor Systems, Energy and Ecology of Combustion, Production Technologies and Energy of Small Hydropower Plants, is of great importance in the context of the application of digital knowledge and skills in teaching content. This module contributes to the improvement of the field of environmental protection and energy through the integration of digital technologies at several levels. One of the key aspects of this module is the integration of digital tools, software, and platforms into the teaching content. The use of digital simulations, virtual labs, or data analysis software tools allows students to better understand concepts in each field. Interactivity is also an essential element of this module, allowing students to engage dynamically through online discussions, interactive exercises, and virtual field trips.

Green knowledge, skills and competencies required by students and current employees are defined within the framework of previous activities in this work package, they are defined through cooperation with partners from the economy and are aligned with their needs and experiences. This should result in long-term agreements between P1-P3 partners and companies/stakeholders on the ground. Seven courses have been selected and mutually aligned with their goals and outcomes in order to be one common module at the level of all three institutions and are the basis for further project activities within the K131 call

1. About the module

1.1. Objectives of the GREENES module

The aim of the transnational module developed within the framework of the GREENES project is to train students to:

- Implementation of digital tools for monitoring and managing waste management processes to improve performance and efficiency.
- Development of digital platforms for the analysis of the energy potential of waste and proposing appropriate thermal processes for obtaining energy from waste, taking into account the specifics of the field and technological possibilities.
- Integration of sensor systems into control processes to automatically collect data on process quality from the energy point, pollution levels and other relevant parameters for faster response and decision-making.
- The use of digital algorithms and analytical tools to assess the economic and environmental aspects of different renewable energy technologies from different sources

1.2. Hint modula

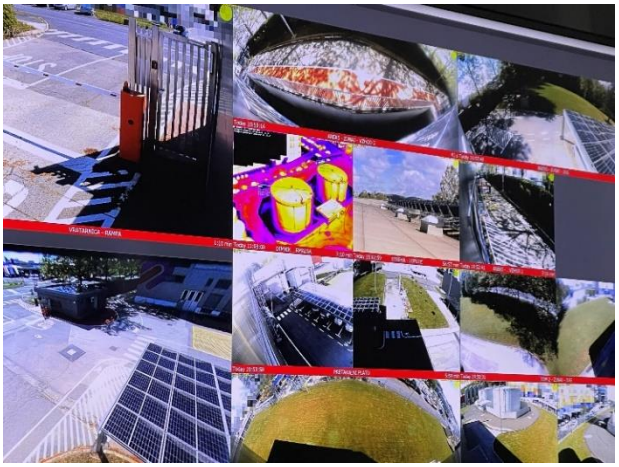
Outcomes of the module After completing the content of the courses, i.e. individual courses, students will expand their knowledge and skills and be trained to

- Understand and apply digital tools in waste management processes to effectively check, analyze, and improve system performance.

- Implement procedures for the implementation of digital platforms for the analysis of the energy potential of waste and the identification of the best thermal processes for converting waste into energy,

- Be competent in integrating sensor systems into process control processes to automatically collect data from energy sources, pollution levels, and other relevant parameters, as well as in analyzing this data to make informed decisions.

- Agile in the application of digital algorithms and tools to assess the economic and environmental viability of different renewable energy production technologies from different sources, with the aim of identifying the most optimal solutions that contribute to reducing environmental impact and improving energy efficiency.



C.0.1. DIRECTIVES AND STANDARDS IN THE ENVIRONMENT

Outcomes: Monitors and implements existing EU directives in the field of environmental protection, especially in the field of waste management, monitors and implements existing EU legislation in the field of environmental protection, especially in the field of waste management, monitors and implements existing standards in the field of waste management, the

European Green Deal, the Green Agenda for the Western Balkans, climate and energy targets for 2030. Apply standards for the implementation of the carbon footprint of higher education institutions. It's green digitalization.

ECTS: 6

Semester: **Winter**

C.0.2. ENERGY POTENTIAL OF WASTE

Outcomes: Perform a techno-economic analysis of the possible application of the treatment of controlled incineration of municipal waste for a specific area. propose the type of thermal process for obtaining energy from waste, depending on the specific situation, analyze pollutants and propose effective solutions to reduce the impact of pollutants on the environment from the existing energy treatment of waste, propose measures for the improvement of processes and facilities for the production of energy from waste. For a given situation, **movable grate incineration** is suggested as the most suitable thermal process due to its ability to cope with different waste compositions and proven efficiency in energy recovery. Monitors and implements legislation in the field of energy recovery from waste.

ECTS : 6

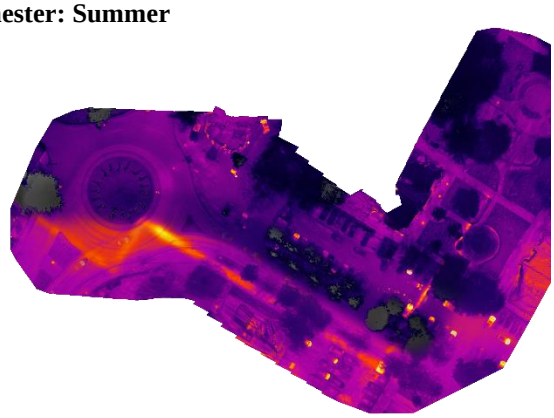
Semester: Summer

Waste to Energy

C.0.3. SENSOR SYSTEMS

Outcomes: Students' ability to apply sensor systems at different stages of the waste management process. Designing the structure of sensor systems Designs, supports and manages sensor systems at various stages of the waste management process. It increases the level of energy efficiency of the system and saves energy resources by using sensor systems. Implement the concept of digital management to save energy resources.

ECTS:summer
Semester: Summer



C0.4. COMBUSTION AND ECOLOGY

Outcomes: Types and characteristics of the combustion process of different fuels. To understand the energy assessment of the combustion process. Assessing the energy production and efficiency of the combustion process allows for a better understanding of calorific value, which is essential for optimizing fuel use. Implementing effective strategies to mitigate the environmental impact of combustion is vital for sustainable development. To reverse the harmful effects of combustion on the environment. It's green digitalization.

ECTS: 6
Semester:Summer

C0.5. ENERGY AND ENVIRONMENT

Outcomes: Predict the energy potential of the selected energy source, Recognize the sustainability of the selected energy source, Choose the right energy conversion technology that is beneficial for the environment, nature, and climate, Determine the techno-economic parameters of the selected energy conversion technology, Predict the environmental, natural and climatic impact of the selected energy conversion technology. Elaborate analysis of carbon dioxide of a certain energy conversion technology.

ECTS: 6
Semester: Summer

C0.6. MODERN PRODUCTION TECHNOLOGIES

Outcomes: Students will be able to demonstrate an understanding of the principles and application of computer numerical control (CNC) technology in the manufacturing process, as well as to find and apply elements of digitalization in CNC processes. Analytical Tools Sensor Systems Block Chain Technology. The student will be able to apply the principle of algorithmic thinking in the programming of CNC machines to improve processes and improve product quality. The student will be able to find and solve problems in CNC processes using digital tools for diagnostics and analysis of machine performance

ECTS : 6
Semester:Summer

C0.7. MODERN HYDROELECTRIC POWER PLANTS

Outcomes: The student will be equipped to identify and evaluate the key factors influencing the efficiency of hydropower plants while assessing their economic and environmental viability; additionally, they will be able to apply the principles of digitalization to improve monitoring and management processes in hydropower plants, ultimately optimizing performance, minimizing operating costs and promoting sustainable energy practices.

ECTS:6
Semester: Winter

GREENES

Co-funded by the European Union

|REPORT ON REALIZED STUDENT MOBILITIES

Report on the promotion of student mobility under Measure A.4.2

Students Milica Vasić and Jelisaveta Milutinović at the University of Maribor – Summer Semester 2023/24

1. Promotion of student mobilities for the purpose of teaching

Within the framework of the promotion of student mobility for the implementation of teaching, special attention is paid to highlighting the opportunities provided by international study exchanges for the improvement of knowledge and professional experience. Students Milica Vasić and Jelisaveta Milutinović participated in mobility at the University of Maribor during the summer semester 2023/24. Their participation in international courses enabled them to acquire new knowledge in the field of environmental protection and improve practical skills through interactive forms of teaching offered by the University of Maribor.

2. Promotion of the transnational module and mobility opportunities

During the students' stay, special attention was paid to promoting the transnational module as an innovative approach to studies in the field of environmental protection. The program of the University of Maribor includes courses that have enabled students to develop specific skills and knowledge that are aligned with the needs of the modern economy, thus creating added value for their further professional development.

3. Promotion of student mobility in order to realize internships

In addition to teaching activities, students had the opportunity to implement an internship that contributed to the development of their practical skills. This component of the mobility provided students with the opportunity to work in different laboratories and contact with experts in the field of environmental protection, thus gaining valuable experience that will be useful to them in their future professional engagements.

As part of the GREENES project, thanks to the cooperation with the partner from the economy, the company *Energetika Maribor*, students Milica Vasić and Jelisaveta Milutinović had the opportunity to further improve through practical activities and get acquainted with real challenges in the field of energy and environmental protection. This collaboration has enabled them to:

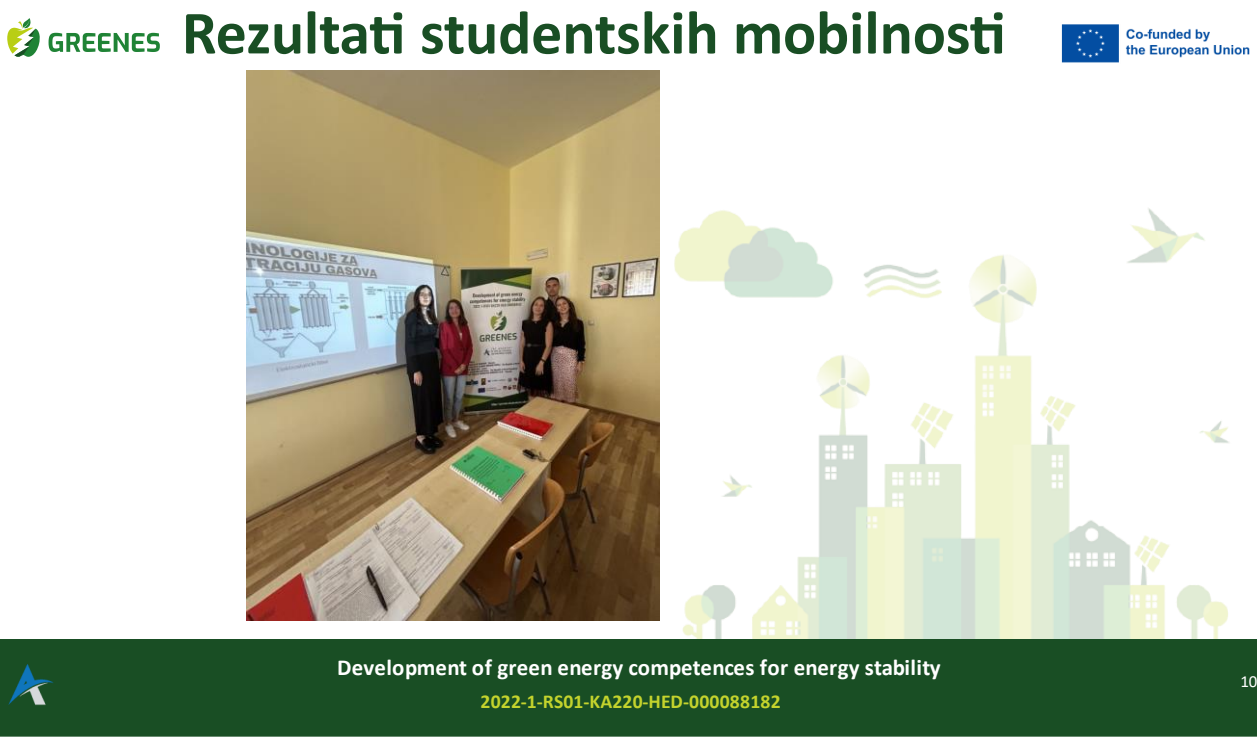
1. Practical workshops and training – They participated in trainings that included basic methods of energy resource management and technologies for improving energy efficiency.
2. Working on case studies – Working with experts from the company enabled them to gain insight into specific projects and apply theoretical knowledge to real case studies, thus gaining important experiences that are important for the development of their careers.
3. Introduction to green technologies – They had the opportunity to get acquainted with modern solutions in the field of green energy, such as solar power plants, biomass systems and other sustainable technologies used in the business of *Energetika Maribor*.

4. Mentoring and professional networking – Thanks to the cooperation with engineers and experts from the company, they have made contacts that are important for their further professional development, as well as for the exchange of knowledge between the academic sector and the economy.

This practical aspect of the GREENES project contributed to strengthening their professional skills and broadened their insight into current trends and industry needs, thus rounding off their academic education with practical experience.

Conclusion

The mobility of students Milica Vasić and Jelisaveta Milutinović within the exchange program at the University of Maribor significantly contributed to the realization of the educational goals of the project and the improvement of their academic and professional competencies.



Finally, students Milica Vasić and Jelisaveta Milutinović, after extensive experience in mobility at the University of Maribor and cooperation with the economic partner *Energetika Maribor*, successfully defended their master's theses at the Academy of Technical and Educational Applied Studies in Niš (ATVSS Niš) under the mentorship Dr. Boban Cvetanović. Their work reflects the knowledge and practical skills they have developed during this project, as well as their commitment to innovation in the field of environmental protection. With their work, they have proven that they are ready for the challenges of a future career in the sustainable development and energy efficiency sector, thus becoming an inspiration for their colleagues and future generations of students.